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*May it flourish & prosper, May it continue to im-
prove the Art for which it ^{was} instituted, to the utmost
of its Wishes, and be the Means under Providence,
of alleviating the Pains & Evils of Life, & promoting
the Happiness of Society by suppressing Quackery, &
rendering the Business of the Profession as perfect as
the Nature of Things, admits*

*and may each Individual of the Society, and
every other Gentleman here present, enjoy Health
and Prosperity, In the pleasing consciousness that
He has contributed somewhat to the advancement &
improvement of the public Welfare*

DR. EDWARD A. HOLYOKE,

FIRST PRESIDENT OF THE MASSACHUSETTS MEDICAL SOCIETY.

W. B. K. Sketched the above portrait of him at the public dinner given in his honor by the Faculty
of Boston School, and various, on his Centennial Birthday, August 13, 1823.

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PLATES ILLUSTRATIVE OF DR. WARREN'S ARTICLE ON THE PATHOLOGY OF CARBUNCLE
OR "ANTHRAX."

FIG. 1.



FIG. 2.

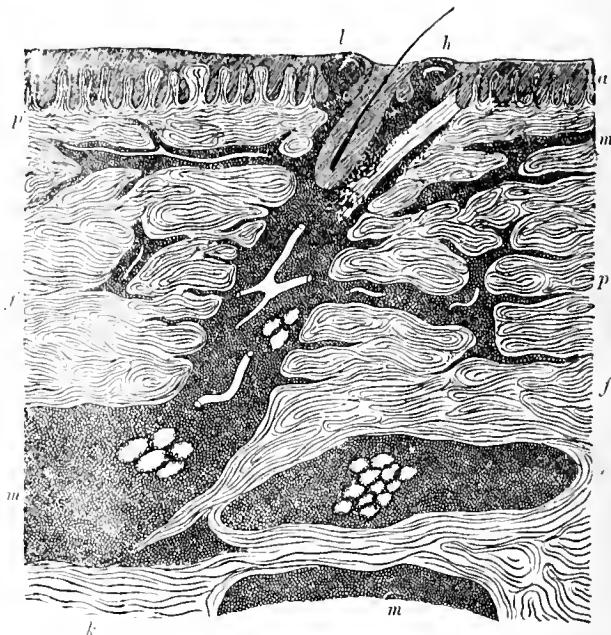


FIG. 3.

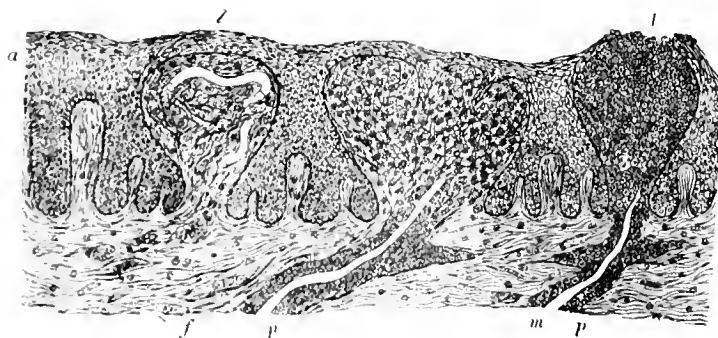
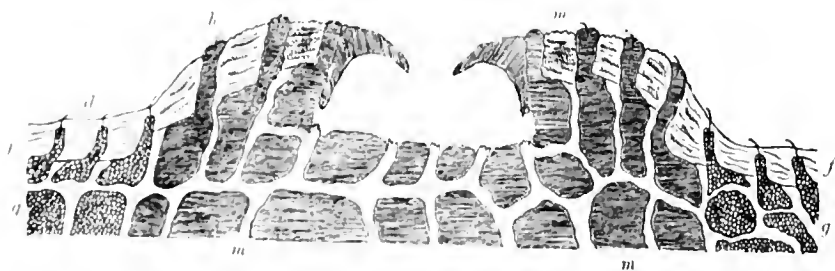


FIG. 4.



a Epidermis. *b* Erector pili muscle. *c* Fat column. *d* Sudoriparous gland. *e* Cutis vera. *f* Subcutaneous adipose tissue. *g* Hair. *h* Perivascular lymph spaces. *i* Connective tissue. *k* Distended papilla. *m* Purulent infiltration.

FIG. 1. Section of skin from the back of an adult, showing column adiposa and lanugo hair, magnified about eight diameters.

FIG. 2. Skin from carbuncle, showing the cell infiltration and the mode of formation of the large pustules, magnified about twenty diameters.

FIG. 3. Section from papillary layer, showing the development of the small pustules in the papillae. (Hartnack objective 6.)

FIG. 4. Diagram of carbuncle, actual size. The shaded portion shows the parts infiltrated with pus.

Original Articles.

THE ISLES OF SHOALS AS A SUMMER RESORT FOR THE INVALID, AND AS PRESENTING A SPECIMEN OF ONE OF THE THREE CLIMATES OF NEW ENGLAND.

It is a misnomer to speak of the climate of New England, when in reality it has at least three, namely, oceanic, sea-shore, and inland; each one distinct from the other two, and producing different effects upon man, whether in health or disease.

PRELIMINARY REMARKS UPON THE THREE CLIMATES.

In this paper I shall allude in a most general manner to each one of them, but my chief object will be to bring out, so far as I can do so in this brief article, the beauty, deliciousness, and healthfulness of the climate found at the Isles of Shoals during the summer and early autumn months. I have been for some years a visitor at Appledore (the island earliest used as a sanitarium), and I know of no place more invigorating or more calming to one wearied in mind or body than is found there from early morning until late at night during the whole of the above-named season. Moreover, I know of no place which from its position so many miles from the coast, and at the east

and south fully open to the Atlantic, and with easy communication twice daily with the main-land, presents such an almost unique specimen of one of these three climates, namely, the "*ocean climate*."¹

I hope that, even with this partial account of these climates, I may prevent some of the unhappy mistakes frequently made by physicians and the laity in their choice of places of residence for their patients or their friends.

Invalids or those in health, who come from the far West or South for relief to any real or imaginary ill or mere fatigue, rush vaguely into what they hope to find the curative New England climate. For example, persons having throat or lung difficulties are often ordered by physicians in the West and South to seek the bracing and healing *climate* of New England. Such persons take up their residence in one of the many sea-side hotels and boarding-houses, which line the whole of the New England coast. Nothing can be more unfortunate, for such places almost always do harm to pulmonary patients, though they may renovate or restore persons suffering from other diseases. I have never known a cough to grow less upon our shore. I always take any such patients from the shore, and send them either inland or to the Shoals.

The following diagram explains these climates better, I think, than any more elaborate description:—

THE THREE CLIMATES OF NEW ENGLAND AND THEIR CHARACTERISTICS DURING THE SUMMER.

	GENERAL CHARACTERISTICS.	SUBDIVISIONS.	WHERE FOUND.
OCEAN.	Temperature very equable; <i>rarely sudden changes</i> ; never very hot or very cold. The atmosphere has a peculiar <i>blandness</i> as the predominant characteristic. It is non-stimulating, but rather quieting; rarely enervating. Residence there is like going to sea, without the discomforts of a voyage; soothing, and at times curative, in pulmonary diseases.	No subdivisions possible except those caused either by higher or lower latitude, or by the relative distances of the places from the sea-coast. The Isles of Shoals must, from their position, ever give the best type of a New England ocean climate.	The Isles of Shoals, — <i>purest</i> representative of New England. Monhegan, etc., off Penobscot Bay, higher latitudes, less accessible. Nantucket, too much influenced by Gulf Stream.
SEA-SHORE.	Temperature <i>much more variable</i> ; frequent changes from intense heat to chilliness. The atmosphere has little of the pure ocean blandness, but it varies with the wind. It is at times highly stimulating; at others it debilitates. There is, in fact, from the very nature of the position, a constant contest going on between the ocean and inland climates at every sea-shore residence, always hurtful in pulmonary disease.	No subdivisions, except from latitude and more or less exposure to the sea-breeze, by means of trees, etc., modifying the climate in certain localities.	All sea-side residences, from northernmost point of Maine to the most southern capes and shores of Massachusetts and Rhode Island.
INLAND.	Temperature of medium equability; at times very hot; rarely, if ever, so chilly as the sea-shore; never so bland as the oceanic, because it has no mass of ocean water enveloping it. It braces often; it enervates, at times, under the intense heat, except in the higher mountainous regions; often very soothing; and at certain places absolutely preventive of hay asthma, and beneficial in other lung diseases.	(1.) <i>Low and damp</i> ; bad for all phthical patients, and not healthy for any human being. (2.) <i>Medium and dry</i> . This includes the greater part of New England. (3.) <i>Mountainous</i> . These again may be divided into (a) the open to the sunlight, as Conway, White Mountains; (b) the closed-in valleys, (c) parts in White Mountains where hay asthma cannot exist.	(1.) Interior of the States. (2.) Interior of the States. (3.) White Mountains. (a.) Conway, etc. (b.) Profile House Valley; ² (c.) At Bethlehem and a part of adjacent territory hay asthma is unknown.

¹ There are other islands off the mouth of the Penobscot, for example, Monhegan and Matinicus, etc., all of which may eventually be equally the resort of the traveler, but at present they are virtually inaccessible. Nantucket, being so much farther south, and so influenced by the Gulf Stream, cannot be compared with any of the others. Mt. Desert and all islands so near the coast practically belong to the coast in their climatic characters.

² Whilst preparing this paper a patient appears. For some time he had been inclined to bronchitis, with asthmatic attacks. Last

summer, feeling desirous of resting from overwork in business in this city, he left home, and stopped at night at the Profile House in the White Mountains, intending to stay there. That very night, after feeling oppressed, he had an asthmatic attack. He remained there but two days, all the time becoming worse. Then he left, and though relieved, by getting away, he has never been quite well of his cough and tendency to asthma. He considered that the fact of the Profile House being shut out from the sun till late in the forenoon, and from which the sun departs early, was the cause of his pulmonary trouble.

7	603	N. W. & N. Very fine	N. W. Clear.	723	80	S. Very fine.	723	76	S. S. W. Very fine.	S. W. Fine.	72	71	S. W. by S. Very pleasant	S. W. Fine.	703
8	671	N. E. Clearing.	N. E. Fine.	683	72	N. E. Very fine.	693	76	E. Fine.	S. W. Very fine.	66	71	E. by S. Fine.	E. Fine.	703
9	673	N. W. Fine.	N. W. Clear.	684	72	N. E. Fine.	694	76	S. W. Very fine.	S. W. Fine.	66	71	E. by S. Fine.	E. Fine.	703
10	679	N. W. by S. Hazy and fine	N. W. Clear.	685	82	N. W. by N. Fine.	695	76	S. W. by S. Light rain.	S. W. Fair.	70	71	S. W. by S. Fine.	E. Fine.	703
11	693	N. W. by E. Some clouds.	S. E. Clear.	686	82	N. W. by E. S. Fine.	696	76	S. E. S. Pleasant.	S. E. Fine.	70	71	S. S. W. Pleasant.	E. Fine.	703
12	693	N. & E. Cloudy.	S. E. Cloudy.	711	82	N. W. by S. Fine.	721	76	S. E. E. Cloud and sun.	S. E. Cloudy.	70	71	N. W. by W. Fine.	E. Fine.	703
13	693	N. W. Very fine.	N. W. Fine.	712	82	N. W. by S. Very fine.	722	76	S. E. S. Hazy	S. W. Fair.	70	71	N. W. by W. Fine.	E. Fine.	703
14	655	N. W. by S. Light rain.	N. W. Clear.	697	82	N. W. by S. Very fine.	707	76	N. W. by N. Cloudy.	S. W. Fair.	70	71	N. W. by S. Very fine.	E. Fine.	703
15	643	N. W. Clear.	N. W. Clear.	698	70	N. W. by S. Pleasant.	708	76	N. W. by N. Fine.	S. W. Fair.	66	71	N. W. by S. Pleasant.	E. Fine.	703
16	59	N. W. Very fine.	N. W. Fine.	699	70	N. W. by S. Some clouds	709	76	N. W. by S. Fine.	S. W. Fair.	66	71	N. W. by S. Very fine.	E. Fine.	703
17	61	N. E. Hazy; fine.	N. W. Fine.	699	70	N. W. by S. Fine.	709	76	N. W. by S. Fine.	S. W. Fair.	66	71	N. W. by S. Very fine.	E. Fine.	703
18	60	N. W. & W. Fine.	N. W. Clear.	699	70	N. W. by S. Fine.	709	76	N. W. by S. Fine.	S. W. Fair.	66	71	N. W. by S. Very fine.	E. Fine.	703
19	64	S. Cloudy but clearing.	S. Fair.	699	70	N. W. by S. Fine.	709	76	N. W. by S. Fine.	S. W. Fair.	66	71	N. W. by S. Very fine.	E. Fine.	703
20	68	N. W. Hazy.	N. W. Rain	699	70	N. W. by S. Fine.	709	76	N. W. by S. Fine.	S. W. Fair.	66	71	N. W. by S. Very fine.	E. Fine.	703
21	66	N. W. Fog.	S. E. Foggy	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
22	68	N. W. Fine.	N. W. Fine.	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
23	68	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
24	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
25	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
26	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
27	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
28	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
29	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
30	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
31	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
32	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
33	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
34	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703
35	73	N. W. Clear and beautiful.	N. W. Clear	733	74	N. E. Foggy.	743	76	N. E. Foggy.	S. E. Foggy.	72	71	N. W. by S. Fine.	E. Fine.	703

A proper consideration of the diagram will demonstrate the variability of the coast climate. That fact entirely unfits it for throat and pulmonary diseases, which need, above all things, a bland, equable climate. That of the interior or of the Shoals, in other words, a purely inland or an ocean climate, would be far preferable. Patients recovering from debilitating, non-pulmonary disease and dyspepsia and its hosts of ills may also be benefited under any of these climates. A daily sea bath, which one can enjoy upon our seashore or at the Shoals, is worth a journey of a thousand miles to any of these classes of disease except pulmonary. The warm, open, and dry hills and mountains of our inland climate will relieve them, and this same climate often proves of immense advantage to early pulmonary disease, sometimes, though rarely, removing slight physical signs, often soothing and enabling the patient to *live* longer and with less suffering.

JOURNEY TO THE SHOALS AND SIGHT-SEE-
ING.

My chief object, as I have said, in preparing this paper is not to discuss the values of these three climates, but simply to point them out, and to devote myself to bringing out before the profession and laity of the land the unsurpassed deliciousness of the climate of the Isles of Shoals. If in the middle of a "heated term" in midsummer one gets demoralized in body and mind, and longs to escape from heat and mosquitoes in the city or country, let him seek "the Shoals." In a few days from any part of the land, and a few hours only from any part of New England, he can do so. Let him therefore forthwith shut up his books, and take the nearest railroad or steamboat for Portsmouth, N. H. Arriving there, a short drive or walk (and most persons walk) will bring him to the wharf, where twice daily a bright little steamer will be ready to receive him. Already as he sits upon the deck, and before leaving the wharf, he feels invigorated by the coolness of the atmosphere. He is then about two and a half miles away from the ocean. As he steams down the rapidly running Piscataqua, he will see, while passing the Navy Yard, several dismantled men-of-war lying in peace. They worked well during our late terrible fratricidal but unavoidable fight, and now are at rest. Below the Navy Yard, he will notice various remains of half-built and now decaying forts, which will forcibly remind him how much money has been uselessly spent by the United States on works of no value whatever. On the left, at Kittery, is pointed out the spot where Sir William Pepperell formerly owned immense estates, and whence he sailed as commander in chief of the kings forces for the storming of Louisburg, in 1745.

As the steamer approaches the mouth of

the river, the traveler will feel the cool air of the Atlantic entering his lungs in full draught, and bringing a delightful renewed strength mingled with sense of repose and of freedom from the city turbulence and wearisome perpetual work, or perchance from the dull monotony of country life which he has but just quitted.

In less than half an hour after leaving the wharf, the swell of the Atlantic is felt at the mouth of the river; and if the weather be calm and a gentle, favorable breeze be prevailing, one can anticipate a delightful trip to the islands. They are just visible on the horizon, about seven miles off. If, however, the weather be cloudy and tempestuous, with a strong east wind, it will be well for those liable to be sea-sick to look out for trouble in that respect. An hour and a half or two hours being thus passed either in a delightful excursion or perhaps (but very rarely) the reverse, the steamer reaches Appledore.

FIRST ASPECT, ETC., OF THE SHOALS.

The islands "look," as one writer says, "stern, bleak, and unpromising, yet they are enchanted islands," and there is "an indescribable influence in their atmosphere, hardly to be explained, but universally acknowledged."¹ There are, at low tide, nine of them. The largest (Appledore) contains four hundred acres. Star Island, the next in size, has one hundred and fifty. On these two only were formerly villages. They carried on before the Revolution an active commerce with Europe. The names of two others, namely, Londoners and Malaga, indicate the same fact. People resident at or near Portsmouth would reply to the question, "What news from England?" that the weather had been so bad they had "had no communication with the Shoals, and could not accurately say." Now all is changed. The town at Appledore was deserted by the orders of Massachusetts during the Revolution, as the English cruisers compelled the inhabitants to be neutral. The antiquary can still find remains of cellar walls. The village at Star Island yielded only to modern improvements, and a few years ago all, but one inhabitant, sold their premises to a company for hotel purposes. To the accommodation of invalids and travelers, the Shoals are now dedicated. A steamer plies between Appledore and Star Island. Each island has a large, well-conducted hotel, most admirably managed by the Leighton Brothers & Co.

The islands are so far out upon the Atlantic that the land breeze may be said never to reach them in its intensity.

The Appledore House is the older and more simple hotel; that at Star Island has a lovelier situation and is more fashionable. Appledore is generally occupied by families which have congregated there, and having once tasted the effects of the climate return there every year, and usually occupy the same rooms. They come from all parts of the country, but chiefly, of course, from New York and New England. The simplicity of the earlier times prevails more there than at Star Island only so recently changed from its village state into fashionable life. The small steamer, running as it does every quarter of an hour between the islands, enables friends to visit friends very easily, though living far apart.

THE CLIMATE OF THE SHOALS.

It is very difficult to describe their climate or its effects. Every visitor, after a few days' residence, is in-

¹ Among the Isles of Shoals, John Thaxter Houghton, Mifflin & Co. 1859.

clined to use the language of hyperbole when alluding to the wonderful blandness and uniformity, mingled with a peculiar clearness and cleanness, so to speak, of the atmosphere, which prevails there from early morning until late at night. There are very few insect tormentors, such as infest the inland and coast. The dreadful east wind of the coast seems unknown there; for although the wind may come from the east, it never has that peculiar "goose flesh" chilliness, which we notice when on the sea-coast. As one sits upon the long piazza of Appledore some bright, sunny morning in summer, and feels the soft sweet air touch his cheeks, while he inhales it in all its purity, he can readily imagine the effect of it upon body and mind to be similar to that which poets describe as produced upon the lotus-eaters who, when indulging in their favorite food, forget even their country. The visitor tends to feel at peace with all mankind, and to forget the troubles that have beset him on the continent. Mere existence is a supreme delight. He watches the surging of the sea, the perpetual swaying of the Atlantic waves upon the granite-bound border of the island. If he be young he may try to see the magnificence of the sunrise over the Atlantic. If older and more sedate, he still can enjoy extremely the superb sunsets over the New England coast. Every one seems to revel in a present enjoyment of a real comfort of body and soul, such as he has never felt before.

In using this strong language I do not deem myself as indulging in a poetical license, but merely stating, as it were, a simple scientific fact. I have never breathed anything like it in this country or in Europe.

In confirmation of these statements, I am allowed to quote the following letter, written by a gentleman at my request. The writer is a wise, practical, man, and constantly occupied, when not at the Shoals, as the head of an extensive business house in one of our large cities. I deem his testimony very valuable, because he has tried the *three climates*, which I have laid down as the climates of New England, and he has found none of them equal to that of the Shoals.

"DR. HENRY I. BOWDITCH:

"DEAR SIR,—In accordance with your request I would say that an inland climate, especially in mountainous districts, has always been exhilarating to me, and except in very high altitudes, like Mt. Washington, or in the vicinity of the Rocky Mountains, where I am troubled with a shortness of breath, I always find quicker recuperation, and I enjoy the country better than the sea-shore.

"When I first came to Boston the climate of the sea-shore was very depressing to me, and seemed to bring with it a sense of loneliness and general depression. Twenty-five years ago I had a bronchial difficulty, with a slight cough; the sea-shore was then very trying. Since then, my general health being better, it has not troubled me so much, but I have always an instinctive dread of the sea-shore. While at the Shoals for the two seasons that I have spent there the atmosphere has seemed to me *neither exhilarating nor depressing, but very pleasant.*"

I italicize the last words because they seem to express my own feelings, only in a more quiet, philosophical style.

WHAT CASES SHALL WE SEND TO THE SHOALS?

I reply, *Any* case, whether functional or organic, I think may be sent there without *evil* result. Of

course, I do not include any *totally hopeless* cases of *far advanced* organic disease. Although I have never seen pulmonary difficulties absolutely cured there, they have been relieved and quieted,—a circumstance which I have never met at the sea-coast. Mild (non-tubercular), simple bronchitis I should advise to be sent there, with hope of permanent relief. Early phthisis receives no harm. Sometimes strength is gained. One person with hay asthma (autumnal catarrh), and the only patient with that disease I have met there, had been for many years wholly relieved of her severer symptoms, and only occasionally did she have the slightest dyspnea, when the west wind had been blowing from over the land, from the coast, for several days in succession. For her the Shoals acted as well as Bethlehem, or any of the places in the White Mountains and elsewhere at which hay asthma is virtually annihilated.¹

Persons recovering from any acute disease would do well to try the Shoals. Some nervous complaints, dependent on debility or overwork, may be almost sure of benefit. Dyspeptics will find fresh air and pleasant exercise in the yachting and rowing afforded there. On one of the islands, occupied solely by fishermen, is one of the prettiest of beach bathing places. There the water is deep and clear. The shore shelves off gradually over a white bottom. One can see to the depth of twelve or twenty feet with perfect distinctness. It is now wholly unused by travelers. Other beaches can be found on other islands. Within fifty years I believe that all the habitable portions of all the islands will be studded with hotels and private villas. These latter will belong to rich men, who, seeking for comfort and for coolness and blandness of climate during the summer, will go there as to almost the only place in this country, where such qualities of climate can uniformly be found.

I adjoin records of the weather kept last summer, at the Shoals and at the Navy Yard at Portsmouth, from which one can judge still more clearly of the characters of the two climates. An examination of the record by days will show how little change takes place at the Shoals.

The temperature there generally ranged between 60° F. and 80° F. Once or twice only did it rise to 80° F., and once in September it fell to 57° F. United with these records are others procured for me, by the courtesy of E. G. Pierce, Esq., postmaster at Portsmouth, from the records kept at the Navy Yard during the same time.

The comparison of these records day by day will give a graphic idea of the difference between the two climates (ocean and coast). Especially I would draw attention to the last two columns, namely, those showing the variations of the daily temperature, and the mean daily temperatures.

THE PATHOLOGY OF CARBUNCLE OR "ANTHRAX."²

BY J. COLLINS WARREN, M. D.

A GREAT deal of confusion has arisen owing to the unfortunate application of one name, anthrax, to two entirely different diseases. The existence of an inflammatory mass in the skin, in each case accompanied by gangrene and constitutional disturbance, which

might terminate fatally, led many authors to confound the affections, and although at the present time the fact is well recognized that the fever of a malignant pustule is a specific one, and that of carbuncle merely pyæmic or septicæmic, the names are still largely common to both in most languages. Anthrax, the term originally given to the specific fever of animals, may be translated into murrain or splenic fever (English), *milzbrand* or *carbunkel* (German), and *charbon* (French). Malignant pustule is the name given to the last named disease, when occurring in man, by English and German writers, and occasionally by the French, although *charbon* covers both in the language of the latter. Anthrax is still used by veterinary surgeons as the scientific name for the specific fever, but it is not used in this sense by the prominent surgical writers³ of to-day, who employ it to designate the local inflammation of the skin under consideration. The English "carbuncle" is synonymous with "anthrax." It is a term not employed by the French; by the Germans it is used indiscriminately to denote either disease.

The current authority on surgical pathology⁴ thus describes carbuncle: Anatomically it resembles a group of several furuncles lying close together. Its origin and first stage are the same as in furuncle; that is, the death of a small portion of the skin (perhaps a cutaneous gland) seems to be the starting-point and centre of the inflammation. "Soon a number of white points form near each other, and the swelling, redness, and pain in the periphery increase in some cases so much that the carbuncle may attain the size of a soup-dish; and while the detachment of the white plugs of skin goes on in the centre the process not unfrequently extends in the periphery. . . . After the loss of the plugs of cutis, the skin appears perforated like a sieve. . . . But even when most intense, the process is almost always limited to the skin and subcutaneous cellular tissue. . . . You will have already noticed that the process of formation of furuncles and carbuncles differs from the inflammations with which you are already acquainted by the constant and peculiar death of portions of the skin. Of course, this must be induced by an early, perhaps primary, occlusion of small arteries; possibly of the vascular net-work around the sebaceous glands. . . . This limitation to the skin and subcutaneous cellular tissue is very characteristic of fibrinous (diphtheritic) inflammations; so that on this account, as well as from the hard infiltration and necrosis of the tissue once infiltrated, I do not hesitate to consider carbuncle as a diphtheritic inflammation of the skin. . . . Kochman thinks that carbuncle as well as furuncle originally develops from a sweat gland or from several adjacent glands. J. Neumann distinguishes between carbuncles from sweat glands and from cellular tissue." In Neumann's book I find no such distinction.

In the *Nouveau Dictionnaire de Médecine et de Chirurgie* it is defined as an inflammation of the subcutaneous cellular tissue, with a tendency to mortification of the skin. The author believes that the affection begins ordinarily in the cellular tissue lying between the fascia and the skin. It differs only from a furuncle in the extent and depth of its inflammation. In Holmes's *System of Surgery* it is also described as attacking the subcutaneous tissue and involving the skin.

³ Gross, Ashurst, Thomas Smith (Holmes System), Koranyi (von Pitha and Billroth). *Nouveau Dictionnaire*.

⁴ Billroth, *Lectures on Surgical Pathology*, American edition, page 283.

¹ Autumnal Catarrh, Hay Fever, by Morrill Wyman. Hurd and Houghton, 1872.

² Communicated to the Boston Society of Medical Sciences.

Mr. Ledwick¹ gives the following summary of views on the pathology of this affection: "There is much discrepancy of opinion in relation to the precise seat of this disease at its commencement. Rokitsansky² believes the affection has its origin in the deep layer of the corium, involving the areolar tissue—deep layer of and subsequently extending to the subcutaneous structure. Brodie³ remarks that the disease may commence in the elongations of the cellular membrane. . . . Dupuytren⁴ believes that the dermoid prolongations of the areolar tissue, which become strangulated, are the peculiar localities of the disease, accounting thus for the cribriform suppuration of the skin and subsequent sloughing; whilst Hunter⁵ insists that its source is always tegumentary, and spreads to the cellular tissue. . . . Nélaton⁶ teaches that an anthrax is rather subcutaneous than cutaneous. I have not the least hesitation in affirming that the primary hardening is subcutaneous, spreading, as the disease advances, from the deep to the superficial surface of the skin, which ultimately participates in the gangrenous affection." Mr. Collis,⁷ writing on this point, says it is essentially an inflammation of the dense fascia in which the superficial areolar tissue is implicated, as in furuncle, and also the deep, as in phlegmonoid erysipelas.

Dupuytren appears to have had the most accurate knowledge of the anatomy of the part affected, and hence the clearest views as to the seat of the disease. He defines anthrax as an inflammation of several bundles of cellular tissue contained in the areolar spaces of the skin. These spaces are formed by the interlacing of bundles of fibrous tissue, and the cellular tissue contained in them is frequently filled with "fatty fluid." They have a cone shape, the base being at the lower border of the skin and resting on a layer of cellular tissue, the apex terminating in a number of little holes directed obliquely in the skin.—easily demonstrated in a specimen which has been macerated for some time. Anthrax consists, he thinks, in an inflammation of these bundles of cellular tissue, and is found where they are most perfectly developed.

A glance at the anatomy of that portion of the skin where carbuncle most frequently occurs, namely, that of the upper dorsal region, will serve to explain many of the striking peculiarities of this affection. In the first place, the skin is extremely thick; probably thicker than at any other portion of the body. It forms a solid mass of dense fibrous tissue, well calculated to sustain burdens or to protect a comparatively defenseless portion of the body. The great bulk of the cutis vera necessitates certain important modifications of contained and contiguous structures. The hair follicles, being those supporting downy hair only, and therefore shallow, project but a short distance into the uppermost layers of this mass of fibre; and there would be no communication with the subcutaneous adipose tissue were it not for oblique columns of fat which extend from below to their bases. These fat columns, or *columnæ adiposæ*, which I have described elsewhere,⁸ are found beneath each hair folli-

cle, are of about the same width, — perhaps a little broader, — and contain, besides loose connective tissue fat cells and vessels, the coil of a sweat gland suspended midway in the shaft. (Figure 1, *e*.) There are generally two horizontal branches to this cleft (*p*) in the skin, and I have already shown how an injection mass forced in from below may ramify through the whole thickness of the cutis, forming quite a delicate net-work, and marking out the anastomosing system of lymphatic channels. At the point where these columns open into the parts immediately below this dense sheet of cutis we find a broad band of fibrous tissue (*k*) given off from one side and extending down obliquely into the subcutaneous structures, to be attached finally (tendon like) to the fascia, beneath which lie the muscles. These fibrous bands interlace one another in various directions; are very different in character from the delicate "cellular tissue" underlying other portions of the skin, and form a dense net-work, which holds firmly in place the tough hide to which it is attached. (Figure 4.) In the interstices there is the usual loose connective tissue, which is largely occupied by fat cells. Dissecting students are familiar with the toughness of this subcutaneous layer, as also any surgeon who has once attacked a lipoma in this region with the vain hope that it was going to "shell out" easily (*g*). It will be observed that the alveoli formed in the mesh-work, although having a comparatively limited communication with the neighboring subcutaneous structures, have a tolerably direct, though narrow, medium of communication with the surface through the fat columns, which chimney like are placed directly above them. These columns are evidently none other than the "holes" alluded to by Dupuytren, who, so far as I am aware, is the only observer who has in any way suspected their existence.

The characteristic features of the carbuncular swelling are its broad, flat, indurated base, the cribriform surface of the skin, and the honey-combed appearance of the subsequent crater. These appearances I have had an opportunity of explaining by the microscopical examination of large sections of skin and subcutaneous tissue removed from the borders of several specimens of carbuncle.

The earliest changes seen at the extreme periphery are scattered collections of wandering cells in the subcutaneous adipose tissue, and as we approach the centre we find clusters of these cells in the *columnæ adiposæ*. These cells appear to follow some of the numerous natural channels of the tissue in their progress, probably the lymphatics. There is nowhere any well-defined boundary to the inflammatory tissue. As we proceed inwards the cells become more numerous, until the entire subcutaneous tissue is occupied by them; at this point the columns of the skin are already filled at their bases with the round cells, while a few rows of cells extend to the apex. When we come to the point where the columns are entirely filled with cells we begin to observe an infiltration of other portions of the skin, which are reached through the lateral horizontal clefts branching on either side from the columns midway from base to apex. (Figure 2.) In these clefts we usually see a blood-vessel, around which lie the cells in abundance; by finer subdivision of the clefts (*p*) the cells penetrate interstices of the fibrous tissue both upward and downward, until the whole of the deeper portions of cutis vera is completely infil-

¹ Dublin Quarterly Journal, vol. xxii, p. 493.

² Rokitsansky, Pathological Anatomy, vol. iii, p. 85.

³ Brodie's Lectures on Pathology, page 392.

⁴ Dupuytren, Clinique chirurgicale, t. iv, p. 111.

⁵ Hunter on Inflammation, page 372.

⁶ Nélaton, Clinique chirurgicale, page 36.

⁷ Dublin Quarterly Journal, vol. xlviii, p. 76.

⁸ Boston Medical and Surgical Journal, April 19, 1877.

trated (*m*). A thin, superficial layer still remains intact.¹ Meanwhile the inflammatory cells, having reached the apex of the column, are brought to a momentary halt, but soon find their way to the superjacent papillæ around the edges of the hair follicles and along the borders of the erector pili muscle. By this time the column has been much distended and elongated, the whole cutis having become swollen. The adipose tissue has entirely disappeared, (*m*) and later also the hair follicle and muscle, all that is left being the hair shaft, which is now seen projecting and forming a prominent pustule. It is at this point, therefore, that the pus first appears upon the surface. (Figure 2, *h*; Figure 4, *h*, *m*.)

At this stage of development of the carbuncle the papillæ of the skin covering the tumor present appearances which deserve special attention. (Figure 3.) At those points where cell infiltration is most abundant a change of shape is occasionally noticed, the upper part of the cone becoming greatly distended, so that the narrowest portion of the papilla is its base, the cone being converted into a balloon-shaped figure (*h*). A more minute observation shows that papillæ thus affected contain a number of wandering cells, and that the meshes of their loose tissue are distended with fluid; they have the appearance of being oedematous. The adjacent layers of the rete mucosum are greatly compressed by this swelling, and in some instances the interjacent projections of the deep layers of the rete are nearly obliterated, several neighboring papillæ thus becoming united to form a single large one. Usually, however, we find that the number of cell elements in the papillæ gradually increase, until it becomes packed solid with small round cells, which obscure all other structures. The blood-vessels, if seen, are filled with red blood corpuscles, which are also found at times in considerable numbers in other parts of the papilla. At this stage we find that the fundus of the polypoid structure presents itself above the level of the surface, the epidermis forming but a thin layer above, or being represented by a few adherent crusts and scales. The final stage in the development of this series of changes is an actual giving way of the epidermal covering, and an escape of the contents of the papilla. Should the epidermal covering continue firm the contents of the papilla undergo retrograde changes, and we find, in fact, many containing a shrunken mass of detritus, the anatomical structures of the part having been completely destroyed. In short, we have here an example of the mode of development of the minuter form of pustule which is found scattered in such profusion over the surface of the carbuncle. The cutis beneath these pustules is unusually well supplied with wandering cells, and in specimens treated with picricarmin we find also most perfect examples of the division of the fixed or the epithelial cells of the connective tissue. (Figure 3, *f*.) Indeed, in no other tissue can the various stages of the inflammatory changes of connective tissue be studied to better advantage. So far as I am aware no such description of the development of certain forms of pustules has ever been given, but the appearances described are too constant and correspond too accurately with the pustules seen on the surface of the specimens examined to admit of other interpretation. In the ordinary acceptance of the term, it

may be objected that these collections of pus in the papillæ should be regarded as genuine pustules, as they are not the result of a purely isolated and local process, but are merely the terminal points at which pus makes its escape from the skin through which it has forced its way from below, as in the case of the channels already described. That many so called pustules in other localities may, however, be formed in this way will be a point for future investigations to determine.

Finally, as the inflammatory process continues, the spaces between the bundles of fibres of the cutis are much enlarged, and the fibres themselves seem to be partially absorbed; the tissue becomes so brittle that it crumbles readily under the razor. By this time the plug of cells occupying the column has softened to a semi fluid mass, and is retained in place only by a thin layer of cuticle, which still forms a covering to what has now become a large pustule. (Figure 4, *h*, *m*.) In the subcutaneous tissue the cell infiltration has spread from one alveolar space to another, while the tendon-like bands of fibrous tissue appear to be but slightly affected (*m*); in fact, the cells do not penetrate them at all, but when the surrounding parts are melted into pus they form the undetached masses of sloughing tissue which hold down at first the integument, and favor spreading in a lateral direction, and at a later stage give to the crater its honey-combed appearance.

In specimens of carbuncle of the lip sections taken from various portions showed the same tendency to a diffused cell infiltration of the structures.

The papillæ in this case also are worthy of notice, although naturally diverse in shape and size, and crowded between large hair follicles, their alteration by the inflammatory process is evident. In some cases the papillæ are distended by a mass of small round cells, and where this cell infiltration is most marked we find extensive ecchymoses at the apices of the papillæ, showing that considerable disorganization of the tissue at that point has taken place.

In the light of these observations it seems unavoidable to abandon the old view that a carbuncular inflammation is one originating or developing itself in a number of adjacent foci, and to conclude that we have a more or less rapidly spreading phlegmonous inflammation of the subcutaneous cellular tissue, we might say a *purulent infiltration*, the characteristic appearances being produced by the anatomical peculiarities of the part affected. In confirmation of this view, attention may be called to the fact that the more distantly removed from the region where the structures described exist in their most highly developed form, the less typical is the appearance of the disease. When seated upon the anterior aspect of the body there is little to remind one of its striking characteristic. On the other hand, when an abscess, that is, a circumscribed collection of pus, forms in the dorsal region, a protective barrier of cells is thrown around the accumulating pus, there is no infiltration of the tissue, and the pus reaches the surface by pressure upon the superjacent integument, which, softened by inflammatory changes, melts slowly away before it. There is in such a case no injection of certain structures with pus, as in carbuncle, and the characteristic appearances of the latter affection fail to show themselves. The cribriform appearance is also not typically developed where the skin is thin and the columns do not exist, as in carbuncle of the lip. The pus then leaks through, so to speak, only at one or

¹ In making injections of Prussian blue by pressure from below against the under surface of a portion of normal skin, I found great difficulty in forcing the mass into the upper fourth of the cutis, although the injection ran well below.

more accidentally less-resisting spots, taking as a route one of the lymph spaces of the cutis, and reaching the surface through a papilla.

HABITUAL DRUNKENNESS.¹

BY THEODORE W. FISHER, M. D. HARY.

THE preceding cases are sufficient to show the chief characteristics of the class of habitual drunkards with which I have to deal. It has been the custom for twenty years, at least, to send selected cases of this class to insane hospitals in this State. The McLean Asylum, being a corporate institution, has usually declined to admit them. The trustees of state hospitals, while recognizing the annoyance their presence causes among more manifestly insane patients, in various ways, have always received and attempted to retain them long enough to effect an improvement, if not a cure. Individual trustees of most of the hospitals, Danvers included, have frequently requested the commitment of habitual inebriates in whom they had some personal or humane interest. The trustees of the Danvers Hospital have, however, recently asked the committing authorities not to recommit certain cases of habitual periodical and dangerous drunkards to that asylum. The claim is not made that these cases were not insane when committed. If the state hospitals should all be closed to this class of patients, a certain risk to the public safety would result, since cases of mania from drink could not be brought into court on a charge of drunkenness. No delirious or temporarily insane person is in condition to plead to an indictment. Delirium tremens being a self-limited disease of a few days' duration, and capable of exact diagnosis, persons having it can be safely sent to Deer Island or Tewksbury for treatment. Mania from drink, on the contrary, is of indefinite duration, and, the diagnosis being more difficult, some judicial process is desirable before commitment.

The State Board of Health, Lunacy, and Charity, last summer, issued blank forms to physicians throughout the State, requesting information on the hereditary influence of the use of alcohol. I am informed that the replies have been few and unsatisfactory; partly from negligence, no doubt, and partly from the lack of complete family histories. The form of the questions requires numerical answers in most instances, and classification of cases as excessive, occasional, periodical, or habitual drinkers. A person may have been each in turn, and doubt would naturally arise as to his proper place in the catalogue. The periodical drunkard is, by the terms of the circular, alone considered insane, while most authorities on the subject regard dipsomania as acute, periodical, or chronic, and insanity may coexist with any form of habitual drunkenness. To avoid the difficulty of tabulating cases, I sent brief statements of the essential facts in as many cases as were sufficiently complete to be of any value, and I would suggest to other physicians to do the same, and hereafter to make such full inquiries in all cases as the circular calls for.

My observation shows that certain defects occur in the descendants of habitual drunkards with greater or less frequency. These are: (1.) All the forms of drunkenness enumerated. (2.) Nearly all the known

forms of insanity. (3.) All degrees of congenital mental weakness from slight moral deficiency to complete idiocy. (4.) Various forms of nervous disorder, such as epilepsy, hysteria, chorea. (5.) Certain bodily defects, as blindness, deaf-mutism, scrofula, and phthisis. The comparative frequency with which these diseases are preceded by ancestral inebriety is important, but not easy to determine, as well as the occurrence of defects in the descendants of drunkards. The questions of the State Board were intended to bring out the negative as well as the positive evidence, and to show how many such descendants escape. The constitutional diseases and defects of body and mind in children which so often succeed drunkenness in parents, in the experience of many physicians, naturally go a long way to convince them of a direct causal relation.

Other questions of the circular related to the origin of drunkenness itself. In how many cases was it hereditary? In how many due to moderate drinking, to wine on the table, to physicians' prescriptions, to the use of beer, or to grief and depression or excitement? The latter question is especially important, going as it does to the root of the matter in many cases. So intimate is the relation between inebriety and mental depression that periodical cases sometimes appear to consist in a genuine *folie circulaire* exhilaration, excitement, and indulgence in drink, with maniacal symptoms as a result; being followed by depression and exhaustion, with an interval of sobriety, and after a brief period of irritability by mania, depression and sobriety again. It is certain that grief and depression are often direct causes of an attack of drinking. Insanity of a melancholic type is sometimes met with in the immediate ancestry or among brothers and sisters of an inebriate, suggesting strongly a common origin of the habit and the disease in an inherited neurotic constitution.

I will give with some detail one more case, interesting from a medico-legal point of view. A suit was brought two years ago in the Massachusetts Supreme Court by Jason L. Blodgett against his divorced wife, Major Jones, now on the Board of Police Commissioners of Boston, and Drs. Fisher and Youngman, for a conspiracy to imprison him in the Taunton Lunatic Hospital on the false charge of insanity; also for assault and battery in causing his arrest; and for taking his property, ruining his business, and causing great damage to his reputation and feelings; for all of which damages to the extent of \$15,000 were claimed. His legal adviser at first was William H. Towne, who afterwards called to his assistance Edward Avery. The defendants were represented by Edward P. Brown. At the first trial the plaintiff's petition was dismissed for informality and illegal contents. Major Jones was excused, as having had nothing to do with the particular commitment complained of, the plaintiff having been sent to Taunton twice; and Mrs. Blodgett, having been his wife at the time of the alleged offense, could not be proceeded against. This left the two physicians standing alone; and, after six months, the case was called again, unexpectedly, at the close of the summer vacation, when police officers, who were important witnesses, were absent. The wife, whose testimony was almost absolutely essential to the defense, had hidden herself from her divorced husband in the far West, and could not be compelled to attend or obtained as a witness without great expense. The plain-

¹ Concluded from vol. ciii., page 636.

tiff told a story, based on his confused recollection of events, and deliberately false in some parts, which was contradicted by the defendants, who offered to put in as the basis of their certificate information received upon "due inquiry," as well as the result of personal examination. This hearsay testimony, though required by law as part of the foundation of the certificate, was not admitted in its support at this time, and, the wife being absent, essential facts were kept out of evidence. The rulings of Judge Endicott were in every other way favorable to the defendants. The jury disagreed, as the foreman afterwards stated to Major Jones, by permission of the court, — nine for the defendants and three for the plaintiff, on the question of "lack of due inquiry" only. No suspicion of a conspiracy was entertained by any jurymen.

The case was again called last spring, the wife still being absent. The plaintiff, with one or two unimportant exceptions, was his own witness, and made the same or similar false statements as before, showing clearly on the stand to medical observation the unreliable and irresponsible nature of his mental operations. The case was classified as dipsomania on all the certificates offered, of which there were three. The following is a brief sketch of the plaintiff's history: —

At the time of the trial he was a man about forty years of age, of evidently neurotic constitution, impulsive, excitable, with a loose way of expressing himself, said to have been characteristic of him from youth. One witness testified that he had always been given to telling untruthful and inconsistent stories. He was reported to have had an aunt who was insane. His father was a clergyman, and both his parents died in his early youth of consumption, leaving him in charge of his relatives. He was a bad and irregular scholar, though quick-witted enough for mischief. At the age of puberty he showed a proneness to premature vicious conduct of various kinds. He is said to have begun to drink by sprees at the age of fifteen years. He had some good traits and impulses, but was early the slave of his appetites, and was cursed with a craving for drink. His sister says he was a good brother when sober, but a "perfect devil" when drunk.

He was in frequent trouble on account of his scrapes, both in the country and in Boston, until the war broke out, when he enlisted. Having previously lost the sight of one eye, it was still further injured by a thorn, and was enucleated. He was then put on an army freight train as conductor or brakeman, and continued to serve until the close of the war. After the war he was employed on railroads at the West, leading a life of active dissipation, according to his own admission to a witness. In 1875 he came to Boston, claiming to have reformed, and that he was the possessor of a large sum of money. In this belief a widow of the former proprietor of certain Turkish baths in Boston — herself being the owner at that time — married him. His fortune proved mythical, and his wife was obliged to pay for his wedding suit and for the wedding journey; she gave him a gold watch, and supported him ever afterwards, except for the small value of his services in the baths. He obtained control of all her property, and in a very short time developed a tendency to drink by sprees, in which he was ugly, violent, and dangerous, threatening his wife in particular. He was seldom seen drunk in the ordinary way, but was exalted and maniacal, acting more or less automatically, and failing to remember his conduct and

conversation afterwards. It is but charitable to suppose that this accounted for his wholesale denial of numerous facts testified to by a score of witnesses on the stand. In a year or two he had spent all his wife's property and destroyed her business by his drunken conduct.

My attention was first called to him October 12, 1875, by Dr. A. N. Blodgett, his wife's physician, but not related to either party. Dr. Blodgett, being in attendance on the wife, found the husband in a state of delirium from drink, in which hallucinations of snakes in his bed were prominent. He thought he saw the devil in the looking-glass; threatened to kill his wife; threw furniture violently about the room; and did not recognize Dr. Blodgett, but violently assaulted him several times. Policemen were called, and he was taken to the tombs. The next morning application was made by Dr. Blodgett to the Board of Directors for Public Institutions for his commitment to Taunton as insane. Having learned his previous history, I agreed that he might be a dipsomaniac, but, the present attack resembling in some of its features delirium tremens, advised that he should be sent to Deer Island. He did not have a perfect attack of that disease, and was discharged in two or three days, apparently rational.

He was again arrested January 31, 1876, for violent conduct while drunk, and released on promise of good behavior, but was rearrested the same day, fined three dollars and costs for being drunk, ten dollars and costs for assault on a female employee at the baths, and was bound over for six months to keep the peace. Was sent to jail, and Major Jones, as bail commissioner, signed the bond on which he was released. June 24, 1876, was arrested again, but let off on promise of good behavior. Again, on November 8, 1876, he was arrested as insane. Complaint having previously been made to the board of directors, I was sent with Dr. Youngman to interview Blodgett. Learned that he had been very violent at the baths, smashing up furniture and frightening bathers and employees. Found him at home, an officer bringing him up from the cellar, where he had retreated, having an axe in his hand. His wife had fled from the house, and the other inmates were locked in their rooms. He was in a very ugly, sullen mood, having been drinking heavily. He denied, as was his custom, ever drinking to excess or using violence to any one. He had recently had a spasm of religious interest; went into a prayer-meeting at the Young Men's Christian Association, and offered any brother twenty-five dollars to convert him. A member went home and prayed with him, but was turned out by Blodgett because he "didn't pray worth a damned cent"! No sign of delirium tremens was present at this time, and it was determined to send him to Taunton as a dipsomaniac, with a view to a sufficiently long detention for his improvement or cure. He made no objection and asked for no hearing, thus acquiescing in his commitment.

Having remained at Taunton a few weeks, he was discharged on application of his counsel, Mr. Towne, and was sober and well behaved for a considerable period after it. He admitted, in an interview with Major Jones, his irresistible disposition to drink, and that he presumed the allegations of violence were true, but that he did not remember what occurred at certain periods of his drinking spells. He had also cou-

sulted a relative in reference to some cure for his entire loss of self-control in reference to drink. He joined the church of which his wife was a member, and behaved well till August, 1877. From August to December he had three sprees, in which his conduct was erratic and violent. For instance, he would rush down Washington Street in the evening with a roll of bills in his hand, flourishing them about, and followed by a crowd of men and boys. He would buy a pie, order a hack, and send the pie home alone in the hack. On several occasions he used vulgar, profane, and threatening language to ladies at his wife's boarding-house. December 10, 1877, complaint having been made to the board of directors, he was examined at his boarding-house by Dr. Youngman and myself. We found him in bed, nervous and confused, as if from a prolonged debauch. I talked with him half an hour, explained to him my theory of his case, told him I thought nothing but prolonged detention would do him any good; that as he had improved after a few weeks in Taunton a year would do him still more good. He denied drinking more than was good for him, but said he would stop at once if we would not certify in his case. I told him if he was arrested again for violent conduct I should certify. This interview, he testified, was only a few minutes long, and he could remember but one thing that was said. Two days after he was arrested at the baths for furious conduct towards his wife and other ladies, and for trying to kick over a hot stove. He was sent to Taunton December 12, 1877, and asked for no hearing at this time.

Remaining in Taunton about three months and a half, he was discharged March 26th, and rearrested for throwing a bottle at some one at the baths March 30th, four days after. The next morning he showed very little effect from liquor when seen at the tombs, the period of indulgence having been brief. He demanded a hearing at once, and a certificate *pro forma* having been signed to bring his case before Judge McKim, he was released on promising good behavior. In April a libel for divorce was filed by his wife, alleging brutal and violent conduct, with gross and frequent intoxication. Blodgett appeared in the anteroom of the supreme court in his usual peculiar condition, insulted several ladies there with obscene talk, undertook to conduct his own defense, and harangued the court in such strange and familiar language that the judge told him he must be either drunk or crazy, and granted the divorce. His wife then left him for the West, in a penniless condition, and he soon found a lawyer willing to take his suit against the alleged conspirators. This idea of a conspiracy was, I think, in part a vague delusion growing out of imaginary wrongs, and in part a foolish attempt to rehabilitate his fortunes and revenge himself at the same time by a suit against his assumed enemies. A few weeks before the final trial he was arrested for drunkenness in Waltham, and boasted, in his loose way, of the immense business he was doing, and of the money he was going to make out of the doctors.

At the last trial, before Judge Lord, the preceding facts and many others of similar import were proven. Twenty policemen testified to Blodgett's habits of drunkenness, eccentricity, and to his violent actions. They all agreed that he was different from ordinary drunkards in his talk and conduct, and was regarded as crazy and dangerous when in liquor. This opinion

was sustained by many other witnesses who knew him well, and by his own confessions to Major Jones, as well as his appearance on the stand. He there denied in a wholesale way all excessive drinking and all acts of violence, only to be contradicted by many reliable witnesses. He might, perhaps, truly have said that he remembered no acts of violence, as I have no doubt his conduct was automatic. Judge Lord allowed the facts obtained by "due inquiry" to be testified to in full, the other side failing to object.

A number of experts were called by the defense. Drs. Walker, Brown, Gage, Russell, Denny, Jelly, Folsom, Channing, Day, Blodgett, Fisher, and Youngman gave their definitions of dipsomania and testified to the propriety of treating it in hospitals for the insane, in the absence of other special institutions. These gentlemen substantially agreed in affirming the existence of such a disease and in the necessity of so treating it.

The plaintiff called on his behalf Drs. Henry G. Clark, J. P. Treadwell, and Horace Chase. Dr. Clark thought a dipsomaniac must be a person who on drinking a single glass must inevitably go on to complete intoxication. He thought Blodgett did not fall within this definition. He was obliged to admit, however, that he had recently said that Blodgett was "crazy drunk" and properly sent to Taunton, but was kept too long; and that he had certified within three months in the case of a dangerous dipsomaniac committed to Danvers. Dr. Treadwell gave his views at length, and thought the part of the testimony he had heard did not warrant calling Blodgett a dipsomaniac. Dr. Chase's testimony I did not hear.

Judge Lord's charge to the jury was satisfactory in every way to the defense, and was an admirable statement of the rights and liabilities of physicians certifying in cases of insanity. It deserves reproduction as a whole, but I will give only a very brief abstract of it. Judge Endicott had said in substance at the previous trial that it was evident from the testimony that there was such a disease as dipsomania; that the line between it and ordinary vicious drinking was a narrow one, which only qualified medical men could safely draw; and that a lunatic hospital was a proper place for its treatment. Judge Lord, however, told the jury to reject the technicalities of the doctors, and charged that if mental un-soundness of any kind existed it was an end of the case; that if physicians honestly believed the party to be insane, although they may have been misled or mistaken, they were not responsible. They were obliged by law to make "due inquiry" of the parties most likely to possess the facts relating to insanity, and nearest by ties of relationship or affection to the patient; but they could not take sworn evidence in the case, and must act according to their best judgment upon the facts obtainable. Their certificate was not required by law to be under oath, and was merely the necessary means of bringing the case into the jurisdiction of the proper court, after which they were not responsible for the action of the court, unless it could be shown that they willfully gave false testimony, or grossly and criminally neglected to inquire into the facts of the case. In the words of the court, "If capable physicians should act recklessly, disregarding the rights of the party, and send him off to a hospital without any evidence at all, then they would be responsible. But if, on the other hand, they made the inquiry which the circumstances of the particular case

called for, then although subsequent events may show that that inquiry might have been pursued further, if they acted in good faith, that is their protection." The jury returned a verdict for the defendants.

I have thus presented some of the most troublesome cases coming under my official observation. It is my duty to make as good a diagnosis as circumstances will permit, and advise as to their disposal. The habitual drunkard is often a dilemma with three horns. He may be treated as a pauper, a criminal, or a lunatic. As a pauper he cannot be forced into an almshouse against his will. As a criminal he cannot be tried when delirious, and can only be fined small sums for drunkenness, or committed on the testimony of friends who think him insane. If application be made for his commitment as a lunatic, he stands on his legal rights as a drunkard. The victims of opium eating, though in the same category as the dipsomaniac, can be more easily committed to an asylum, because there is no other legal method of restraint, the opium habit not having yet been made a crime; yet opium eating does not produce that dangerous condition which alcohol does.

The provisions of the English habitual drunkards act are too well known to be again referred to here. That some legal provision is demanded in this State for the proper restraint of habitual drunkards hardly admits of discussion. I will close by quoting again from Balfour Browne, who as a lawyer is not open to the suspicion of a leaning to the medical side of the question. He says,¹ "Looking at the subject from an ordinary common-sense view, we believe that, as in many cases it can be proved that an individual has lost entire control over his actions, in certain relations of which incessant drunkenness is the significant fact, and as to deprive such a person of liberty for a season is to do him no wrong, but rather the compulsory right of making him abstain from what day by day gains an ascendancy over him, and day by day renders ultimate recovery and useful citizenship less and less possible, it is well to resort to restraint in cases in which these facts are capable of being proved." He says,² "It is well known that the law of England has a superstitious respect for the liberty of the subject, and this respect has stood in the way of many most useful reforms." He cites the principle of state education and sanitary reform as examples. He says, "It is calculated that there are about sixty thousand lunatics in England and Scotland, and that there are not less than six hundred thousand habitual drunkards. And it is believed, upon such evidence as can be procured, that not less than fifty or sixty thousand lives are lost annually in England through accidents and diseases caused by the abuse of intoxicating liquors; and yet England will not tie the hands of those suicides, because alcohol is a slow poison." He further remarks, "One thing is certain, and that is that long-continued habits of intemperance, even when they do not induce insanity, almost invariably render the individual incapable of managing his own affairs with any efficiency, and it would seem to be reasonable and in conformity with the expressed opinions of physicians in all countries to restrain individuals thus affected, and in this way give certainty of ultimate recovery. . . . Those persons who shut their eyes to the close connection which exists

between disease and crime are careless observers. Those who, while they legislate for the latter, ignore the existence of the former are careless legislators."

REPORT ON OBSTETRICS.

BY W. L. RICHARDSON, M. D.

THE USE OF TINCTURE OF IODINE IN CASES OF POST-PARTUM HÆMORRHAGE.

DR. W. E. FOREST (New York) gives¹ the account of three cases of post-partum hæmorrhage, which were promptly checked by the use of intra-uterine injections of the tincture of iodine. In two of these all the ordinary means employed in such cases had previously been tried and failed. He believes that the iodine controls the hæmorrhage, not by coagulating the blood as is the case with the solution of the persalts of iron, but by exciting uterine contractions. The blood is subsequently expelled in a liquid form, and thus the danger is avoided of a mass of hard clots being left behind, which is so liable to decompose and thus expose the patient to the danger of puerperal septicæmia. Even when injected in the uterus in its full strength the tincture of iodine has never been known to be followed by any bad results. Its injection into the uterus has never in his practice failed to at once arrest the hæmorrhage. He advises the intra-uterine injection of equal parts of hot water and tincture of iodine, and should there be any signs of a recurrence of the hæmorrhage an injection of the undiluted tincture should be used.

THE OCCURRENCE OF CERTAIN ACUTE DISEASES DURING PREGNANCY.

As regards the relations existing between the puerperal state and typhoid fever, Professor Gusserow contributes² some interesting facts. The occurrence of typhoid fever among pregnant women is comparatively rare. At Basle, among 1420 typhoid patients, only 18 were pregnant. At Vienna, out of 1852 cases, 24 were pregnant. Of the cases at Basle 83 per cent. aborted; while at Vienna only 58 per cent. As to the cause of the abortion no definite reason can be assigned. Professor Gusserow examined a large number of the fetuses obtained from patients who had the fever but was unable to find any pathological changes which were indicative of the fetus having had typhoid fever *in utero*. There seemed, therefore, no doubt but that the high temperature of the mother had a great influence in producing the abortion. From his own observations, confirmed by those of other observers, Professor Gusserow concludes that there can be no doubt but that the life of the child is placed in danger if the maternal temperature exceeds 102° F. The danger is very great if it exceeds 101° F., and the prognosis for the child is fatal if it reach 106° F. The longer the temperature of the mother keeps at a high figure the greater the danger to the child. As a rule, the greatest number of deaths of the fetus occur during the second and third weeks of the fever. It is not, however, necessary for the child to die for an abortion to take place. If the maternal temperature is maintained for several days above 104° F. uterine contractions begin, and the fetus is

¹ Medical Jurisprudence of Insanity, page 219.

² *Ibid.*, page 374.

¹ New York Medical Record, September 4, 1880.

² Berliner Klin. Wochenschrift, 17, 1880.

expelled. In some few cases Professor Gusserow was unable to trace any direct connection between an elevation of the maternal temperature and the starting up of uterine contractions. In all these cases there was a well-marked chill, followed by a sudden elevation of temperature. As regards the prognosis to be given in cases of an abortion occurring during the course of a typhoid fever, the writer claims that it must depend entirely on the period of pregnancy and of the fever at which it occurs. During the first three months of pregnancy a profuse post-partum hæmorrhage is liable to occur; while during the later months the course of the delivery may be normal. As regards the patient, her chances are better the earlier the abortion occurs during the fever. If it take place at the height of the fever the prognosis is very unfavorable. In all such cases puerperal septicæmia is apt to follow the expulsion of the fetus. Since the great danger to be feared is a marked elevation of the maternal temperature, Professor Gusserow strongly advocates the use of cold baths in all cases of typhoid fever occurring in pregnant women, and he strongly opposes the premature induction of labor with a view either of relieving the mother or saving the child.

As regards the occurrence of measles during pregnancy, Dr. C. E. Underhill considers¹ it a very rare combination, owing probably to the fact that most women are protected by a previous attack during their childhood. When, however, it does occur during pregnancy it must give rise to a very serious prognosis. Measles is most fatal when it comes on soon after the delivery, those women who are confined during the course of the disease standing a much better chance.

Dr. Ringe contributes² a most valuable monograph on the general ætiological relation existing between acute infectious diseases and the occurrence of abortion. He states that pregnancy may be interrupted by any acute disease, but that this is not the usual rule. He agrees with Gusserow that a high maternal temperature (107.5° F. to 108° F.) or even a temperature of 104° F., if long continued, is sure to be fatal to the child. A very important question is whether these diseases may be transmitted from the mother to the child through the placenta. Ringe claims that infection of the fetus from the mother's blood is proved only in cases of variola, although it is very probable that it does occur also in scarlet fever, measles, chicken-pox, and the different forms of malarial fever. He considers, however, that the danger of the death of the fetus being occasioned by direct transmission of the disease from the mother is very slight. As regards the treatment in these cases he advises the employment of every known means to reduce the maternal temperature, the use of stimulants which shall excite the heart to increased action, and thus hasten the circulation, and that such tonics and diet should be given as shall keep the blood of the mother in the very best possible condition.

REST AFTER DELIVERY.

Since Dr. Goodell, of Philadelphia, published a paper strongly advocating the shortening of the period of rest for women after delivery the tendency among the profession has been to follow the practice adopted at the Preston Retreat. Dr. H. J. Garrigues, of New

York, in an excellent article³ on the subject takes the opposite side of the question, and insists upon it that the patient should be kept lying quietly in bed, alternately on her back and sides, until the uterus has contracted sufficiently to be hidden behind the symphysis, and also until all raw surfaces in the generative canal are covered with granulations or healed. Carefully conducted examinations of the uterus made by different observers, all show that the greatest diminution in the size of the womb takes place during the second week after delivery. The puerperal uterus is anteverted and anteфлекed, and, by keeping the woman on her back, the return of the organ to its normal position is best favored. According to Dr. Garrigues it takes about two weeks for the uterus to recede from the anterior wall of the abdomen and to return to the pelvic cavity. In the sitting posture the circulation is more or less impeded, and the process of involution is necessarily retarded. The writer also strongly advocates the use of vaginal injections of a one per-cent. carbolic acid solution twice a day during the process of involution.

ANTISEPTIC TREATMENT OF LABOR.

Professor Stadfeldt (Copenhagen) gives⁴ an account of twelve cases of labor to illustrate the advantages to be derived from the use of disinfecting intra-uterine injections. He also alludes to the results obtained in the Lying-In Institution of the Copenhagen University by the use of these antiseptic precautions. From 1875 to 1879 out of 5098 women confined only 44 died of puerperal septicæmia, or one in 116. He advises the washing out of the vagina before delivery, the delivery of the patient under carbolic spray, and the subsequent use of carbolized intra-uterine injections. He uses the spray the moment the fetus begins to appear at the vulva, and continues it until the labor is over, and any tears which may have been produced are united by suture. The subsequent intra-uterine injections are to be used in large quantities, and the strength should be about three per cent. He does not believe that it is necessary to use these after all cases of labor, but only when the operator has been obliged to use instruments or to introduce his hand within the vulva. They should of course be used whenever a portion of the membranes, however small, has been left behind in the uterus.

Reports of Societies.

PROCEEDINGS OF THE NEW YORK ACADEMY OF MEDICINE AT ITS REGULAR MEETING, DECEMBER 16, 1880.

THE RELATION OF THE OVARIES TO THE BRAIN AND NERVOUS SYSTEM.

At the semi-monthly meeting of the Academy on the 16th of December, Dr. Alexander J. C. Skene, of Brooklyn, professor of diseases of women in the Long Island College Hospital, read a paper with the above title. The various problems connected with this important and interesting subject, he said, he had no hope of solving, but he would at least make some humble efforts to enter upon their investigation and elucidation. In the first place he alluded to the physiological relations of the ovaries to the other sex-

¹ Obstetrical Journal of Great Britain, July, 1880.

² Volkmann's Klin. Vorträge, 174.

³ American Journal of Obstetrics, October, 1880, page 845.

⁴ Centralblatt für Gynäkologie, 1880, page 7.

ual organs, and discussed the connection between ovulation and menstruation. The conclusion which he arrived at was that the independence of the two which seemed to have occasionally been observed was the rare exception, and not the rule. "All that we know of the influence of the ovaries in this particular," he said, "points to the probability that these organs are the prime movers in the sexual system." In treating of the regular sequence of actions in this connection, he pointed out certain analogies in the processes of nutrition and the functions of the nervous system.

He then quoted Maudsley on the important influence which the ovaries exerted on the brain and nervous system, and said that with the weight of such authority to support him he was quite ready to agree with Virchow in the statement that it is the ovaries which give to woman her peculiar characteristics of body and mind. There are certain capabilities of the brain which, he believed, were never developed in the absence of the ovaries, and he had himself seen two instances in which, the ovaries being lacking, the women were of a decidedly masculine type. Some authors were opposed to this view. Thus, Goodell had stated that the influence of the ovaries was greatly overestimated. Beyond sterility and the absence of menstruation, he thought that the removal of the ovaries did not render the individual any the less a woman. Peaslee, Battey, and others were of the same opinion. The evidence presented by cases in which Battey's operation had been performed, however, instead of being uniform, varied greatly in different instances. In one case of Dr. Thomas's the sexual feeling, which before had been passive, became aggressive after the operation, while in one of Dr. Pallen's, on the other hand, an excessive sexual excitability and an uncontrollable desire for self-pollution were cured by the operation. In considering the condition of those in whom the ovaries had been removed we should not forget to make certain allowances for the force of habit from long exercise in the system. It was easy for a person who had become blind to talk intelligently of the appearance of surrounding objects, but it was impossible for an individual who had been born blind to form any correct conception of the same. If the uterus and vagina were wanting, and yet the ovaries were present and well developed, the individual would undoubtedly be a perfect woman so far as all the distinctly feminine characteristics were concerned. Perhaps the strongest point in favor of the importance of the office performed by the ovaries was the fact that they sometimes took the place of the uterus, as demonstrated by the phenomena of vicarious menstruation and abdominal gestation.

The emotions depended to a considerable extent on the sexual organs, and the ovaries, on the other hand, were greatly affected by the emotions. Thus, grief, anger, or fear not infrequently arrested menstruation, and, in all probability, ovulation. Again, if the ovaries were imperfectly developed or functionally inactive, the brain and nervous system were not fully and normally developed. In twelve out of sixteen women, whose cases he had studied in an insane asylum, he had found that there was something wrong about the ovaries; and hence he had come to the conclusion that defects in the ovaries were an important element in the causation of insanity, although he did not lose sight of the unquestionable influence of hereditary tendencies also in this connection. In these cases the

mental derangement had made its appearance about the age of puberty, and nutrition had not been materially affected, but still it was possible that the sexual imperfections were merely a part of a general inferior development.

Derangements of menstruation had been justly charged with causing nervous disorders of greater or less severity, but there was much still to be learned in regard to this point. Thus, the subject of ovarian dysmenorrhea was by no means clear. The character and location of the pain seemed to indicate the ovaries as the seat of trouble, the pain being of an aching character, and seldom intermittent. It might precede the menstrual discharge, and generally continued through it and for a short time after its cessation. Pain in the ovaries at the menstrual period, and not at other times, was a recognized condition. The trouble was presumed not to be of an inflammatory nature from the fact that the pain was not constant, and that there was no tenderness of the ovaries on palpation. When the pain preceded the menstrual flow, it was probably connected with the function of ovulation.

Diseases of the ovaries in which there was a neoplastic element did not usually affect the brain or nervous system; and this was, perhaps, because they were, as a rule, unilateral and not accompanied by pain. Inflammatory affections of these organs, on the contrary, had a very marked influence on the nervous system. Dr. Skene said that he had seen all varieties of uterine disease present without producing any such effect; but he had seldom observed any serious disease of the ovaries (other than neoplastic in character) in which this was not involved to a very considerable extent. Ovaritis and displacements of the ovaries were the affections which most frequently caused cerebral and nervous disturbance. In the condition known as ovaritis it had not, indeed, been clearly made out that there was actual inflammation of the organ; but as certain characteristics of the inflammatory process elsewhere were observed, it was advisable to employ the term for the sake of convenience, at all events. When ovaritis was present, pain on defecation, especially if the bowels were at all constipated, was a very common symptom. This pain was of a different character from that due to hemorrhoids or fissure of the anus, and somewhat resembled intestinal colic. In many cases nausea and hysterical symptoms were also produced by the act of defecation, and these were apt to be more marked if the left ovary was the one affected. Prolapse of the ovaries, as a rule, gave rise to the same symptoms. This displacement was generally due to displacement of the uterus; but so long as the ovaries were not tender, and their relations to surrounding organs were not materially altered, the condition might occasion but little trouble. In different cases of prolapse of the ovaries, the amount of suffering experienced varied very greatly, and this, Dr. Skene thought, was due to the difference in the condition of the organs. When there was laceration of the cervix uteri, with eversion, the ovaries were frequently affected, and when a displacement once commenced it was very apt to be progressive.

Pelvic peritonitis accompanied with ovaritis afforded some evidence as to the influence the ovaries exerted upon the nervous system. If there was pelvic peritonitis without ovaritis, there was little or no cerebral or nervous disturbance; but if the ovaries were in-

volved, a marked effect upon the brain was frequently noticed. He had seen four cases of acute mania coming on in the course of pelvic peritonitis, and in three of them had discovered distinct evidence of ovarian disease. When the local trouble had come to an end, the mania and all other mental symptoms completely and finally disappeared. He had also seen two cases of cancer of the uterus in which acute mania had occurred. For a long time there was no mental disturbance whatever; but when, at length, the broad ligaments became affected (and consequently the ovaries), there was much more pain and nervous excitability, and finally mania supervened. In one of these cases he had had the opportunity of making a post-mortem examination, and had found one of the ovaries completely surrounded by cancerous deposit, although it was not determined whether the organ itself was actually the seat of disease. The other ovary it was impossible to distinguish in the disintegrating cancerous mass which occupied the portion of the pelvis in which it would be normally treated. Dr. Noeggerath had found, from a large number of autopsies, that lesions of the ovaries were very frequent; but, unfortunately, we knew comparatively little of diseases of these organs, or how to diagnosticate and treat them.

Dr. Skene then alluded to Charcot's researches in regard to hysterio-epilepsy, and regretted that so unfortunate a term had been chosen to designate the affection, since the uterus was, as a rule, not at all diseased. The condition of the ovaries in such cases was of great importance, but up to the present time was but little understood. The fact that sudden pressure on the ovarian region sometimes arrested the convulsions showed that ovaritis was probably not present. Dr. George Engelmann, of St. Louis, in his paper on hysterio-neuroses, published in the second volume of the transactions of the American Gynecological Society, had presented the most rational discussion of the subject that had yet appeared; but he was not willing to subscribe to Dr. Engelmann's statement that in all these cases there was disease of the uterus. If the uterus and ovaries were both affected, it rendered it more difficult to determine just where the origin of the disease lay.

In any case of cerebral or nervous disturbance it was necessary to determine, *first*, whether the ovaries were affected, and, *second*, how far the affection of the nervous system was dependent on this. The influence of displacements of the ovaries it was easy to make out; but this was not true of other conditions of the organs. The diagnosis of ovarian dysmenorrhœa also was usually not difficult; but to trace such grave disorders as epilepsy and nymphomania to the condition of the ovaries was a very different matter. To do this satisfactorily, and, by removing the ovaries, put an end to the disease, was one of the greatest successes that could crown the gynecological surgeon; but to attribute the affection to the condition of the ovaries, and then, after having removed the organs, find that there was no improvement whatever, was one of the greatest failures that could be met with in the whole domain of medicine and surgery.

The uncertainty in diagnosis which belonged to affections of the ovaries had been fully demonstrated in the various cases in which Battey's operation had been performed. When the symptoms appeared only at the time of menstruation, however, the diagnosis was usually easy. Pelvic pain and tenderness, independent

of the ovaritis, were sometimes mistaken for evidences of ovaritis. These might be due, for instance, to the presence of the remains of old inflammatory processes in the pelvis; and the true diagnosis was sometimes accompanied with very considerable difficulty. In some cases, again, the most serious nervous disturbances seemed to be caused by the pressure of old inflammatory adhesions upon the ovaries, although the organs themselves were free from disease. This was well shown in a case related by Dr. Battey at the late meeting of the American Medical Association, in which he opened the abdomen to perform the operation known by his name, but found the adhesions so numerous and firm that he desisted from removing the ovaries. Afterwards the patient's condition was very materially improved, however, and this would seem to be explained by the fact that during the operation Dr. Battey had broken up the adhesions to such an extent as to remove a great part of the pressure from the ovaries.

It was not necessary to say much on the subject of treatment on the present occasion. It was one in which the gynecologist and the neurologist were equally interested, although the tendency unfortunately was to treat one phase of the trouble exclusively. The great majority of cases required both local and general treatment. For amenorrhœa due to defective ovarian influence the best local treatment (and not infrequently the only one required) was electricity. In ovarian neuroses and congestion and irritation of the ovaries this agent was generally beneficial, but in inflammatory states and displacements its effects were disastrous. Other local measures which might be employed were blisters and the application of iodoform, tincture of iodine, etc. As to general remedies, the bromides were of great service in many cases, and Dr. Skene's custom was to give them in full doses until their constitutional effects were observed; after which he thought it best to give them intermittently and in much smaller doses. Conium was used in the same way. It was a matter of great importance, however, that the patient's strength should be kept up by the administration of suitable tonics at the same time. Opium, chloral, and alcohol often afforded great relief; but of course it was necessary to give them with great caution, on account of the danger of the patient's becoming habitually addicted to their use.

Dr. Skene brought his paper to a close by the narration of a few cases illustrating some of the points touched upon in it. The first was one in which the uterus was rudimentary, but the ovaries perfectly developed, and the sexual characteristics consequently normal. The second was one of dysmenorrhœa, due to diseased ovulation. In the third menstruation was attended with marked and peculiar nervous symptoms, and it was found that the left ovary was enlarged and prolapsed. In the fourth there was prolapse of the ovaries in connection with retroversion of the uterus, and the nervous symptoms which were apparently due to the condition promptly disappeared when it was relieved by local measures, without any resort to constitutional treatment. The fifth case was one of epilepsy associated with inflammation of the ovaries, in which the pain ceased when menstruation commenced.

In the discussion which followed the reading of the paper Dr. Allan McLane Hamilton spoke of organic diseases of the nervous system which he believed originated from diseased conditions of the ovaries, and mentioned particularly the case of a lady whom he had seen with Dr. Mundé, in which there was prolapse of the

ovary associated with epilepsy and attacks of vomiting, and where the result was lateral sclerosis of the spinal cord.

Dr. Mundé, although he agreed, in the main, with all that Dr. Skene had said, thought that the agency of the uterus in causing nervous troubles should not be overlooked. He had frequently seen neurotic symptoms in connection with an enlarged and indurated uterus, where no trouble whatever could be detected in the ovaries, and where these symptoms entirely disappeared after the uterus had been restored to its normal condition. In the course of his remarks he related a case which exhibited the influence of the ovaries upon the nervous system in a very striking manner. A lady who had previously been under treatment for some uterine trouble met with a fall, which produced a displacement of one of her ovaries into Douglas's cul-de-sac; and shortly afterwards she began to suffer pain in the head, and became very irritable, morose, and melancholy, — a state of mind utterly foreign to her natural temperament. When the prolapsed organ was restored, the cephalalgia and mental trouble entirely disappeared.

After remarks by several other gentlemen, Dr. Skene spoke briefly on some of the points brought up, and then, on motion of Dr. J. Foster Jenkins, of Yonkers, it was resolved that a further discussion of the paper should be made the special order for some future meeting of the Academy.

Recent Literature.

On the Construction, Organization, and General Arrangements of Hospitals for the Insane, with some Remarks on Insanity and its Treatment. By THOMAS S. KIRKBRIDE, M. D., LL. D. Philadelphia: J. B. Lippincott & Co. 1880.

This handsomely printed volume is one that will be valued by all persons who are interested in insane hospital management. The author, from his forty years' connection with the Pennsylvania Hospital for the Insane, has acquired a world-wide reputation. Though not a reformer, he has not been slow to appreciate and utilize any new ideas that have had a bearing on the care of the insane. His aim has always been for the best, and he has patiently and unceasingly worked to that end. To Dr. Kirkbride we owe a debt of gratitude, for, while theorists and reformers have been splitting hairs, he has constructed and manned a hospital for four hundred persons, where every appliance that can in any way enhance the true comfort of the patient may be found in constant use. His kindly nature and pure character have done much to elevate the tone of asylum management, and his influence will be felt long after he himself has ceased from active labor.

The first edition of this work was published twenty-six years ago, and since that time the author has found that the correctness of the principles then expressed has been confirmed by the light of subsequent experience. It is not expected that this book will possess any particular novelty to those who have been engaged in the care of the insane for any length of time; it will always, however, prove of great value to those physicians who are just entering on the work, and should be of still greater value to boards of commissioners and others who, entirely without knowledge

of hospital architecture or the needs of the insane, are suddenly thrown into a position where the entire erection of an immense institution is practically left in their hands. These persons can avoid the most lamentable errors by a careful perusal of the book before us.

The book is divided into two parts: Part I. treating of the Construction of Insane Hospitals, and Part II. of their Organization and General Arrangements. The whole book is subdivided into one hundred and nine brief chapters, from half a page, upward. Each one of these deals with some point of interest in hospital construction and management. For instance, in Part I., there are chapters on Water Supply, Drainage, Ventilation, Construction of Cellars, Roofs, Doors, etc. It will not be possible, in this review, to enter into these matters of detail, and we must satisfy ourselves with briefly alluding to a few points of more general interest.

In speaking of the curability of insanity, Dr. Kirkbride states that when this disease is properly and promptly treated, and this treatment persevered in, it may be curable in as many as eighty per cent. of cases. We revere the writer for his cheering hopefulness, so characteristic of him, but regret that we cannot imagine any class of cases where so high a percentage can be hoped for. Under the most favorable conditions we should not look for a higher percentage than fifty.

It is important to place insanity in the same category as other diseases, we are told. "It is just as possible for any one to have an attack of insanity, to recover from it, and to have another attack at a subsequent period of life as it is of any other disease, or as any one is liable to have a first attack. It would be quite as reasonable to say that a patient with fever, rheumatism, or dysentery, or any other attack he may have had in the course of a year, had not recovered from either of them, because from some cause (understood or not, as the case might be) he had suffered from another attack of the same disorder in the same year, as to insist that any one who had had an attack of insanity, and had been relieved of every symptom of it, had not been cured because, at some later period of life, from some cause or other, he had another attack of the same disease." At first sight it seems reasonable to view an attack of insanity in the same light as any other disease; but when we more closely examine the question we find the conditions different. In the words of Dr. D. Hack Tuke, "the relapses after pneumonia and fever, when once cured, would be much less frequent than in mental disease, and the patient himself would be generally a sounder man *physically* in the intervals than the recovered lunatic is *mentally*. Besides, from the different functions of the organs attacked, the permanent consolidation of one lung may allow a man to perform efficiently the duties of his station in life; but the remains of an infinitesimal lesion of the brain may virtually incapacitate him from the performance of his duties in the intervals of his attack." If it were possible to send a patient out of an asylum entirely cured of every symptom of insanity, and after prolonged trial there was no relapse, and if it were further possible for the patient to return to business and manage it successfully for a fair space of time, then we could agree with Dr. Kirkbride that a real cure had been effected. The true state of the case is generally quite different. In the first place, the patient leaves the hospital *before* every symptom of insanity has vanished; and, secondly, it is impossi-

ble to follow him in his future history. As he leaves the hospital, *cured* is entered against his name, and this cure figures in the hospital statistics. It is necessary to draw a line somewhere in settling on the value of recoveries; but it will be more in the true interests of science if the tests applied are more severe in the future than in the past, and the histories of patients after discharge are looked into more rigidly before placing them in the category of recoveries.

Dr. Kirkbride does not favor the home treatment of insanity. It is imperatively necessary that persons should be removed at the first possible moment from home surroundings. The dangers incident to insane persons being at large are much greater than is supposed. Only a few years ago the writer of these pages, by a careful comparison of a list of lives lost and of persons injured by this class of irresponsible people being at large, as reported in the newspapers during a twelvemonth, found that these cases actually exceeded in number all the deaths and injuries from railroad accidents occurring in the United States during the same time."

The number of patients in a hospital should not be greater than the superintendent can visit every day, and even in a state hospital, where fully one half the patients will be chronic and require but little medical care, the number should not exceed two hundred and fifty. The greater the number of acute cases the smaller should be the total number.

In Part II., in speaking of the number of assistant physicians, the writer says that where the number of patients reaches two hundred, especially when there is a large proportion of recent cases, two assistants will be required. This number seems to us a small one; it would be better to say that one hundred patients was a sufficiently large number for one assistant, and a larger number should have the services of two assistants. The routine duties are so numerous, and the service requires such close confinement, that more time for relaxation and study than can now be obtained is imperatively demanded.

It is not desirable, in Dr. Kirkbride's opinion, to appoint a board of consulting physicians. "It is not possible for any one who sees insane patients only at long intervals to prescribe properly for their ever-varying condition, or to judge from short interviews of the real character of their cases." If any disease other than insanity afflicts the patient, then the best of outside medical skill should be freely called in.

The plan of treating the sexes in separate buildings is advocated, as at the Pennsylvania Hospital for the Insane, where there are, as one might say, separate institutions for each sex, a half a mile or more apart. For the first twenty years of the hospital's history the sexes were treated together, for the last twenty separately; the latter arrangement has worked the best. While we can see no particular objection to this plan, neither can we see any advantage to be gained. Taking everything into consideration, we should prefer to treat the two sexes together under one roof. By this arrangement, it is possible for one man to superintend both sexes equally efficiently; whereas if placed in separate buildings at some distance (provided the numbers are large), their care must be left greatly to other persons. It is also a little suggestive of the prison to thus entirely prevent intercourse between the two sexes. We should, on the other hand, prefer to bring them together at balls, tea-parties, and other entertainments, in order to encourage self control and keep alive

an interest in general society. Insanity should no further ostracize a man than, under the circumstances of the case, is absolutely necessary.

In the chapter on the Separation of the Chronic from the Acute Insane, the writer's experience is valuable, as well as timely. It is his opinion that, on the whole, it is better to treat both of these classes together in one institution. If patients cannot be cured they should still be considered under treatment as long as life lasts, for if they cannot be restored to health their comfort and happiness should still be promoted in as far as possible. Almost the same class of means is required for the treatment of the curable and the incurable. We think the following sentence so important that we quote it entire: "When the chronic are in the same institution as the recent cases, there is little danger of their being neglected; but when once consigned to receptacles especially provided for them, all experience leads us to believe that but little time will elapse before they will be found gradually sinking mentally and physically, their care intrusted to persons actuated only by selfish motives, — the grand object being to ascertain at how little cost per week soul and body can be kept together, — and, sooner or later, cruelty, neglect, and suffering are pretty sure to be the results of every such experiment." These words, written upwards of twenty-six years ago, would now be almost of necessity modified by the fact that immense numbers of chronic cases have collected on our hands, filling our hospitals to overflowing and crowding out the acute cases. Our modification would be this: that while the chronic still need medical treatment it differs in certain respects so much from that required for the acute cases that they might be equally well cared for in institutions built peculiarly for them, which, however, should not be mere receptacles, but true hospitals under medical supervision. This is as far as we should go in establishing separate institutions for the chronic insane. Once do away with the hospital plan, once abolish medical supervision, and we take the first step downward toward the poorhouse system, which, in the interest of true humanity, it is our duty to condemn.

In speaking of restraint Dr. Kirkbride thinks that it should seldom be resorted to; but for a limited number of cases its use is sometimes more humane than the hands of attendants. He uses strong wrist-bands, soft leather mittens, and the apparatus for confining a patient to a bed. His experience would indicate that, on an average, not more than one or two per cent. of all patients require any mechanical means of restraint, and often a period of several months may pass without its use in any form.

Report of the Commissioner of Education for 1878. Washington. 1880.

A valuable compilation of facts and figures from all the States, Territories, and cities, from schools of all classes, and from all other institutions of an educational character, with deductions drawn therefrom. It is interesting to note from the report how promptly the school-house follows the railroad and the telegraph, throughout the new regions of the West and South, with its humanizing and civilizing influence. To the account of our home schools are added data regarding education in foreign countries, with a full account of the representation of education in the United States at the Paris International Exposition of 1878.

Medical and Surgical Journal.

THURSDAY, JANUARY 6, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Remittances by mail should be sent by money-order, draft, or registered letter to Houghton, Mifflin and Company, Boston, Mass.

INTRODUCTORY TO 1881.

IN so far as a robust survival of the past twelve months on the part of the JOURNAL is an evidence of the fitness of the form into which it evolved itself on the first of January, 1880, those concerned in the change and in its general management have reason to be satisfied, we will not say elated; for it would have been indeed deplorable had any influences, however adverse, produced an absolutely disastrous effect upon a professional publication so mature and firmly established in its surroundings as the Boston Medical and Surgical Journal. There are doubtless still some of its patrons, and among them perhaps some of those most valued, who regret a break in their bound volumes, and lament the want of proportion between the new volumes and their old book shelves. But even they, we believe, would not have us revert to more contracted dimensions; their grievances are expressed from time to time in a kindly way to steady our equilibrium, and we are sure that the double columns are really no more to them than a trifling blemish engraved on solid and useful qualities.

The enlargement of the JOURNAL was fortunately synchronous with a marked revival of activity and interest in society work, and we may be allowed to think that the two changes act and react in a favorable manner upon each other. It is gratifying to the JOURNAL to feel assured of being able to furnish its readers with so many excellent and valuable papers and discussions upon all the important theories and discoveries of the time; and, on the other hand, it is a proper stimulus and encouragement to members of medical societies to feel that their suggestions and conclusions are promptly brought before a larger audience than that of the society itself. We are led to hope that the revival in this sort of work, which, as far as the JOURNAL is affected thereby, has manifested itself mainly in Boston and its vicinity, will cause itself to be heard from in other parts of New England, and beg to call attention to the appointment on the editorial staff of Dr. F. H. Gerrish, of Portland, Maine. Although recognizing the primary duty of the JOURNAL to continue a faithful expositor of medical thought and events in the part of the country in which it is published, we think the past year has tested and proved its capacity for giving its readers matters of value and interest transpiring in other centres, without neglecting its primitive functions.

Every effort will be made to preserve those features which have been good and acceptable in the past,

and to develop or add to them when prudent and possible.

We are not at all sure of the truth of the physiological dictum that change is life, when applied to the editing of a medical journal. But as time inevitably brings changes in that as in other things we are pleased to have the assurance, which the pages of the first part of this first number give, that an energy hitherto largely drawn upon by editorial supervision has merely transferred itself to the department of original communications; it is not lost, but only gone before.

With well-founded hopes that the JOURNAL and its readers may share in the general good fortune of what promises to be an exceptionally prosperous period, we wish them a Happy New Year.

ADULTERATION OF FOOD.

THE National Board of Trade at their recent meeting received the report of the committee of award, which selected the prize essays on the Adulteration of Food and Drink. The committee recommend a state law which shall be supervised in its execution by a State Board of Health, and that considerable discretion should be left to that board in defining in detail what adulterations are; that there should also be a national law to "deal with adulterated articles coming from foreign countries, or passing from one State into another, and also with adulterations in the Territories, the District of Columbia, and in all places under the special jurisdiction of the United States." A very important part of the report is contained in the little paragraph which says, "Under no circumstances should fees or moieties to informers be allowed."

In consequence of this the committee of award submitted draughts for the basis of a state law, which has not yet been put into a form suitable for use, and for a national law. The latter has been prepared for presentation to Congress, and proposes: (1) the penalty of fifty dollars for transporting, or offering for sale or barter, adulterated articles of food or drugs in places under the jurisdiction of the act; with (2) the addition of a clause to govern the manufacturing of the same within such places; not to allow articles to pass the custom-house if, on examination, they be found to be adulterated. It allows the owner or consignee to have a re-examination made at his own expense, and if the report be favorable to the same the articles shall be returned and passed, but if unfavorable they shall remain in charge of the collector, to be disposed of according to law, with the proviso that the owner or consignee, by paying expenses and giving bond, may re-export them within six months. The National Board of Health is to submit names of qualified persons as special inspectors and public analysts for selection and appointment by the secretary of the treasury at the various ports; and this board is furthermore to prepare instructions governing their work. The National Board is to collect specimens of food and drugs from various parts of the country; to ex-

amine the same, and publish the results of its analyses in the weekly bulletin; the secretary to report in full, and at once, any violations of the act to the proper authority. Then follows a general definition of the adulterations of food or drugs, which makes a drug adulterated "if its strength or purity falls below the professed standard under which it is sold," whether such standard be foreign or that of the United States.

In the case of foods, the National Board of Health may from time to time declare certain exempts and publish a list of the same.

The bill is drawn up with care and completeness as to minor details, involving legal phraseology, and has an additional clause with regard to the mode of prosecution, etc. The modifications and details, of course, it is not necessary to give here.

THE PROPOSED ORGANIZATION OF THE MEDICAL SERVICE OF THE COMPANY CHARGED WITH THE CONSTRUCTION OF THE PANAMA CANAL.¹

At the request of M. de Lesseps, Dr. Louis Campanyo, under the form of a letter to his chief, has drawn up a project for the organization of a medical and sanitary service in connection with the company for the construction of the Panama Canal, in the course of which the peculiar influences to be encountered and the requirements necessary to meet these successfully are pretty carefully and minutely discussed. This memoir was presented to the Academy of Sciences of the French Institute, and was favorably reported on by Baron Sharrey, who recommended it as worthy of the approbation of the Academy. The Institute, it may be mentioned, had previously appointed a committee to take into consideration matters of interest pertaining to the proposed Panama Canal.

Dr. Campanyo had charge of the sanitary and medical arrangements in connection with the construction of the Suez Canal, and to the experiences gained in this undertaking he frequently reverts. These experiences naturally fit him, to a certain extent, for the work in which he is about to engage. A very striking feature of his memoir is his unbounded admiration and veneration for his distinguished chief, which is freely expressed with true Gallic effusiveness. Indeed, there is nothing more characteristic of M. de Lesseps than the contagiousness of his own irrepressible enthusiasm, which seems to communicate itself impartially to all his fellow-workers and subordinates. The views which he professes to entertain as to the present comparative innocuousness of the atmosphere of the Isthmus of Panama, and of the probability that the isthmus will be developed into an actual sanitarium by the cutting of the canal, have been everywhere circulated by the newspapers. This part of the subject was discussed in a pamphlet by Dr. Boyland, of Baltimore, which appeared last summer. Although

due allowances are to be made for the exaggerations of an interested enthusiasm, it must be confessed that a very strong antidote was required to counteract the still more exaggerated and now exploded statement that every sleeper of the Panama railway covered the body of an immolated Chinaman.

If the canal is actually made, it is proposed to do much of the work of excavation by powerful dredging machines, and in so far as possible to employ laborers from neighboring countries and negroes; by such means reducing to a minimum any real dangers from soil and atmosphere of the country itself. To prevent the introduction of epidemic diseases from without, a station of observation at each end of the line is suggested, where all arrivals can be inspected and the suspected quarantined. The line of the works is mapped out in the mind of the future head of the medical service into two divisions of inspection, and each of these into three medical districts, and these, as he naïvely says, only await their names. Each inspection division is to be provided with a hospital, and each medical district with an ambulance service, and in addition there are to be stationary and "flying" ambulances, according to the position of the works. A convalescent hospital is recommended upon an elevated point, and another on the island of Toboga, in the Pacific, a short distance from Panama. The arrangements for the pharmaceutical branch of the service are no less accurately designated, as may be seen from the fact that provision is made for the manufacture and distribution of wine of quinine and aerated waters. A very considerable medical and pharmaceutical *personnel* will, of course, be required, and two midwives are to be on hand. In short, the necessities of the whole service, from the hygienic and medical stand-point, are minutely anticipated, whether in health, in disease, or even after death.

Trees — among others the eucalyptus — and vegetable gardens are to be planted, cattle for slaughtering to be raised, tents and houses to be erected on approved plans, and fire extinguishers to be provided. Libraries, laboratories for chemical analysis and the manufacture of ice, reservoirs for pure water, fish ponds, appliances for baths, douches, and general hydrotherapy are not to be overlooked. Dr. Paquelin's thermo-cautery is to be on hand to deal with the bites of serpents. Heifers or mares *ad hoc* are to be procured to furnish animal vaccine matter. The "social evil" is to be wisely regulated and superintended.

Finally, if, notwithstanding all possible precautions for prophylaxis against the introduction or development of diseases, and all available means for the alleviation and treatment of those who get sick, deaths do occur, as, even in the ordinary course of nature, they must, the service will be equal to the occasion, as several furnaces for cremation are proposed, and in connection therewith, at a given point, a "funerarium," where the ashes of the cremated, inclosed in hermetically sealed vases, will be deposited.

It is plain that any avoidable suffering or mortality among the employees of the Panama Canal Company will not be attributable to a want of foresight and humanity on the part of the president or

¹ *Projet d'Organisation du Service de Santé de la Compagnie du Canal Interocéanique de Panama.*

Lettre à M. le Comte Ferdinand de Lesseps, par le Dr. Louis Campanyo.

Memoire présenté à la Commission de l'Institut du Canal et à l'Institut.

chief medical inspector, but more probably to an insullicieney of funds.

From a more serious point of view, however, Dr. Campanyo's minute and painstaking prevision is very admirable, and worthy of consideration by those who are accustomed to enter upon undertakings in a somewhat more reckless fashion.

KOLPOECPETASIS.

THE above term, which, by way of mitigating the nomenclatural woes of a long-suffering profession, it might perhaps be wished were of somewhat less formidable dimensions, is a new one in medical literature. It is employed by Dr. Nathan Bozeman, of New York, in a paper, entitled *Kolpoecpetasis versus Partial Kolpokleisis*, recently published in Volume IV. of the *Gynæcological Transactions*, in which he gives its derivation from *κόλπος*, vagina, and *ἐκπετάσνυμι*, to stretch out. As the method of vaginal dilatation there described, to which Dr. Bozeman has devoted much thought and study, and which he has now practiced for many years with constantly increasing confidence in its value, is as yet but little understood and appreciated by gynæcologists, and perhaps not at all by the mass of the profession, attention is now called to it in the hope that a more extensive trial of it may be made in appropriate cases, in order that it may be thoroughly tested by competent observers, and the claims of its originator on its behalf either established or disproved.

One of the great advantages which the author claims for this method is that it enables the gynæcologist to do away completely with the operation of kolpokleisis, (complete or partial closure of the vagina), a procedure which, he says, is a "direct acknowledgment of the defectiveness of the resources of gynæcological and surgical art, and when successful proves fatal through the development of uncontrollable sequences in from five to fifteen years." Among these sequences are enumerated vaginitis, endometritis, metritis, ovaritis, cellulitis, peritonitis, cystitis, nephritis, calculi, nervous complications of the severest character, and partial or complete destruction of the sexual and procreative functions. The following eight indications for kolpokleisis were laid down by the late Professor Simon: (1) great loss of substance, making it impossible to bring the two sides of the fistule together; (2) inaccessibility of the fistule, from its high position, from the inversion of its edges, etc.; (3) loss of the infra-vaginal cervix and danger to the peritonæum; (4) hæmorrhage into the bladder, where considerable, after operations; (5) confinement by adhesions of the stump of the cervix uteri inside the bladder; (6) atresia vaginæ above the fistule, with immobility of the posterior border of the latter; (7) obliteration of the urethra, with one fistule below and another above; (8) urethro-vaginal and urethro-uterine fistules.

About the year 1868 Dr. Bozeman came to the conclusion that out of these eight indications for the application of kolpokleisis, in only a single instance

was the operation advisable, namely, loss of tissue, and impossibility, from coexisting adhesion, of bringing the two sides of the fistule together; and since then he has held and successfully demonstrated in his own experience that in every one of these cases his method of gradual preparatory dilatation of the vagina can be resorted to, to the exclusion of kolpokleisis. Notwithstanding that so eminent an authority as Simon had designated the latter as the "most important plastic operation which in the last decennium has originated from one single man," Dr. Bozeman became thoroughly convinced, from the instances of it which he had seen, and especially from a remarkable case of spontaneous kolpokleisis, brought about by inflammatory action, which came under his notice in the year 1870, that the expedient was at most only temporary in its beneficial results, and that, from its liability to be followed in a large proportion of cases by sequences dangerous to life, it ought to be condemned. He was the first to protest against the procedure, and it is a source of gratification to him now to be supported in this matter by Emmet in his work on the diseases of women.

Not only in the various forms of vesico-vaginal fistule, however, is kolpoecpetasis believed to be superior to other methods of procedure, but also in the rarer forms of rectal fistule, as well as in the different varieties of vaginal stenosis and atresia.

The interesting case which forms the basis of Dr. Bozeman's paper was one of vaginal stenosis with recto-utero-vaginal fistule. In it the attempt by an eminent surgeon was first made by partial kolpokleisis to convert the cavity of the uterus and upper part of the vagina into diverticula of the rectum, with the anus serving as a common outlet for the faeces and menstrual blood, while the intercommunicating fistule was left untouched and concealed. But this failed completely, and later the attempt by Dr. Bozeman was made, with entire success, by means of kolpoecpetasis, to reach the intercommunicating fistule by overcoming the stenosis of the vagina, close it, and maintain intact the functions of all the organs involved. The procedure adopted by the first surgeon who operated was an endeavor to unite with the interrupted silver suture the anterior lip of the cervix uteri to the margin of a thick column of cicatricial tissue, the seat of stenosis, which stretched across the rectal wall, just below the cervix and the fistulous opening. If the operation had been successful, the vaginal tract would have been in great part preserved, and the sexual fitness of the organ only slightly interfered with; but, on the other hand, there would have been unnatural menstruation through the rectum, loss of the procreative faculty, and, in all probability, the development of a train of sequences disastrous to health and happiness, and, sooner or later, to life.

By the course of treatment adopted by Dr. Bozeman, however, the fistule was completely cured, and the patient, who had been a fearful sufferer for many years, restored to perfect health. The author holds, therefore, that his method of procedure occupies a higher sphere than others, on account of its greater

applicability, and he has found by experience that when others have been tried, and (even under the most advantageous circumstances as regards the skill of the operator, etc.) have failed, his plan can be resorted to just as readily and successfully as though no such attempt had ever been made.

Just what, then, is the method of kolpoeptetasis which the author advocates so strongly? In the case of vaginal stenosis with recto-utero-vaginal fistule above alluded to, Dr. Bozeman thus describes the measures adopted: "Two or three days after my first examination the patient, by the aid of one assistant, was confined in the knee-chest position upon my supporting chair, anesthetized, and operated upon as above indicated. The thick column of cicatricial tissue, projecting forward from the rectal wall, was divided backwards at three points. This being completed, intra-vaginal dilatation with cylinders of compressed sponge in oil-silk bags was commenced and gradually increased, with further incisions, as were from time to time required, until the point of resiliency in the stenosis had been entirely overcome, and the fistule brought fairly within reach of operative procedure. This preparatory step of the treatment, thus commenced and carried out, required about six weeks, when the final step for closure of the fistule was undertaken." The following is a more detailed description of the method, by Dr. Ludwig Bandl, clinical assistant and lecturer on obstetrics and gynecology in the University of Vienna, who for three months had the opportunity of observing Dr. Bozeman's hospital practice in that city:—

"The beginning of the procedure is to pay attention to excoriations and abrasions of the vagina and of the external genital organs. He cuts off the hair found in the posterior vaginal angle, which is usually incrustated with deposits of urinary salts, greatly irritating the excoriated surfaces and causing great distress to the patient. After this is carefully done, a solution of argenti nitratis (one drachm to one ounce of water) is applied to all the abraded points inside and outside the vagina. By these means the woman is freed from pain, and soon her confidence is gained; which is absolutely necessary, especially if the treatment is to be protracted. At the same time, during the first examination, cicatricial bands are divided, and the vagina dilated as far as possible with the fingers. After this, dilators of gradually increased size are kept constantly in the vagina. The latter consist of balls and cylinders of hard rubber (or other unyielding material). Both balls and cylinders are perforated near the surface or end, and a string is passed through and tied in a loop to facilitate removal from the vagina. According to the vaginal dimensions, therefore, a cylinder is inserted and allowed to remain from ten to twelve hours. It is then withdrawn, and the vagina flushed thoroughly with tepid or cold water; or the woman is placed in a hip-bath to recover from this first proceeding. Already after three or four days one is surprised at the effect produced by this treatment; the hard dilator, firmly encircled everywhere by the surrounding walls of the vagina, softens the tissues; cicatricial

bands, heretofore unperceived, are recognized; and last, but not least, the bladder, which had previously projected outside the vulva, in consequence of the great deficiency existing in the posterior vesical wall, is now found to have resumed its proper place when the patient is placed in the knee-elbow position. Superficial incisions are afterwards made whenever any resistance is found in the vagina and is likely to cause obstruction, and a dilator of larger size, either ball or cylinder, is introduced. The woman soon becomes accustomed to this procedure; she now bears it gladly, for she is enabled to remain in bed for hours in a dry condition. While thus treated she can easily attend to her household duties, if she chooses, and also can enjoy comfortable nights. After this course has been persisted in for from three to five days, or even a longer time, the vagina, previously hardened and stiffened by cicatricial tissue, becomes soft and enlarged, while the edges of the fistule are clearly visible."

(To be concluded.)

MEDICAL NOTES.

— General Albert J. Myer — better known as "Old Prob" — was a graduate of the Buffalo Medical College.

— An ovarian tumor weighing 125 pounds was removed lately at the Carney Hospital by Dr. John Homans.

— We take especial pleasure in seeing the pages of the *JOURNAL* copied by other medical periodicals; but the pleasure is somewhat marred when the copying journal fails to acknowledge the source from which it draws. The *Atlanta Medical and Surgical Journal* for December, 1880, fills eight pages at our expense without signifying its indebtedness.

— Dr. Buckminster Brown has felt himself obliged, by failing health, to surrender his active duties at the Good Samaritan; but as consulting surgeon will continue to give his services to the institution with which he has been so long connected.

— Dr. Edward H. Bradford has been appointed surgeon to out-patients at the Boston City Hospital in place of Dr. Thomas Dwight, resigned.

— Dr. C. A. Walker has resigned the superintendency of the South Boston Lunatic Asylum, and Dr. Theodore W. Fisher has been appointed his successor.

— A Holstein peasant, says *Public Opinion*, unimpaired in microscopic research, and not possessing the requisite instruments of precision, has devised for himself a new test for the presence of trichinae in pork. When he killed a pig he was careful to send a portion of it—a ham or a sausage—to his pastor, and then waited the consequences for fourteen days. If his pastor remained healthy, then he felt perfectly easy in his mind, and well assured that his pig fulfilled the requisite conditions of soundness of food, and he proceeded to dispose of it accordingly in his own family. This ingenious method of research has not been considered satisfactory by the district physician.

—We received notice from the *Allgemeine Wiener Medizinische Zeitung* of the celebration last month of its twenty-fifth anniversary. Dr. B. Kraus has been its editor during the whole of this long period, and we take especial pleasure in tendering him our congratulations on the completion of a quarter of a century in the editorial chair, and on the high standing of his periodical.

Miscellany.

FEIGNED EPILEPSY.¹

CASE OF JAMES CLEGG, THE "DUMMY CHUCKER."

AFTER his discharge from this prison Clegg returned to his native city, immediately robbed his aunt, fled to London, thence to Glasgow, where he robbed a house of four hundred pounds, and then sailed for America. Landing in New York he recommenced dummy chucking, which, he says, was something new to the "crooked people" of that city. He joined a gang of pickpockets, and operated in New York, Philadelphia, and Boston. Large retail houses afforded a rich field, lady customers being especially victims during their consternation at sight of a well-dressed young man writhing on the floor. The ferry-boats, when crowded, offered excellent opportunities. On one of these occasions a kind-hearted physician came to his assistance, and *meanwhile was relieved of his watch*. Unaware of this, the doctor, on landing, called a cab and took the scamp to his own office, where, after considerable effort, he succeeded in "restoring" the patient, about the same time discovering the loss of his watch. Clegg expressed great sorrow, and denounced the outrage, but the doctor consoled himself by the reflection that the loss of the watch was of little consequence compared with the life he had been instrumental in saving. Clegg admits that for once his conscience smote him, and avers that he really tried to get the watch for the purpose of restoring it to its owner, but it was "sold" before he got back to the city again. On another occasion he feigned a fit on a Fulton ferry-boat, and was taken in an ambulance to Bellevue Hospital. After pretending to sleep for an hour or two at the hospital he "recovered;" but the authorities were suspicious, and detained him, as the nurse informed him, for the purpose of having him examined by one of the physicians of the Hospital for Epileptics. In due time the physician from the epileptic hospital arrived, and Clegg, who was on the alert, hearing the nurse say, "There comes the doctor," feigned a fit, and was in "convulsions" when the latter reached his bedside. The doctor, after watching him a few moments, depressing his eyelids, trying his pulse, and observing the numerous cicatrices on his face and forehead, expressed the opinion that it was a case of epilepsy, and Clegg was discharged.

Subsequently he was sent to Blackwell's Island Prison for stabbing a man. Here the chief of staff of Charity Hospital pronounced him an epileptic. His next commitment placed Clegg in Sing Sing Prison. Here his "dummy chucking" became the means of his transfer to the Asylum for Insane Criminals at Auburn. At this place Dr. MacDonald, on assuming charge, found Clegg in a strong room and in restraint.

He was said to be "subject to terrible fits." Dr. MacDonald ordered his release from restraint, requesting notification should a fit occur. Shortly after he was called. He found Clegg on the floor, his face distorted and livid, saliva, frothy and bloody, oozing from the mouth; body apparently violently convulsed. Two patients were holding his limbs. He seemed to be having a series of rapidly recurring convulsions, each one commencing with marked muscular rigidity, the head being drawn to one side, the body twisted upon itself. Thoracic muscles rigid, respiratory movement almost completely arrested. This tetanoid condition was quickly followed by one closely resembling clonic convulsions: there were alternate contractions and relaxations of different portions of the body, during which his head was frequently brought into such violent contact with the floor as to abrade the scalp; his tongue was wounded; respiration jerking and noisy, and at each expiration bloody saliva was forcibly ejected from his mouth. Pulse somewhat accelerated; eyes turned upward as far as possible; pupils moderately dilated. (It should be stated that the room was partially darkened by a window screen, kept locked. This would account for the dilatation of the pupils.) "His hands were tightly clenched, but I observed that the thumbs were not closed within the hands," also that *the finger nails were not livid, and when I forced his hands open he immediately closed them again.*² *There were also no visible indications of relaxed sphincters.* The 'clonic convulsions' were followed by a condition of muscular quiet, immobility, and stupor, lasting for a few moments, during which he would occasionally open his eyes and gaze around in a confused and stupid manner,³ when, suddenly, another 'spasm' would supervene. The series of seizures lasted about an hour, followed by a pretended sleep, after which Clegg appeared to be mentally confused for a day or two, and complained of headache and physical weakness."

On this occasion Dr. MacDonald intimated, in Clegg's hearing, that he was an impostor, although he confesses he was not positive at the time, but deemed it safe to assume from his history that the rogue was shamming. Attendants were instructed to impress upon his mind that the doctors regarded him as a fraud. The next time Dr. MacDonald met Clegg he accused him of feigning. The man stoutly denied it, calling attention to the scars on his head and face, asking if the doctor thought he would purposely hurt himself like that, and adding that he had been subject to fits since he was three years old. The doctor's suspicions were again awakened by the next fit, which began *soon after he entered the ward*. He again said the fellow was shamming, and that, while his acting resembled epilepsy, it lacked certain characteristic features, the absence of which stamped it as counter-

¹ "They [epileptics] clasp the thumb upon the palm, and hold it down with giant-like force." (Radcliffe, *Epilepsy and other Convulsive Affections*.)

² *Dictionnaire des Sciences médicales*, vol. xiii, p. 542 (Marc). "Ordinarily the fits (*poignets*) are spasmodically closed in epilepsy, and are opened with much difficulty, but when once opened they remain so to the end of the fit, or they are only reclosed when there follows an exacerbation of the spasm. The fits of a feigning epileptic are not only opened with less effort, but the impostor thinks he is acting well his part in immediately reclosing them."

³ "If an impostor is narrowly watched, he will be found to open his eyes occasionally, for the purpose of observing what effect his acting produces upon the by-standers. This led to the detection of a man who twice simulated a paroxysm so successfully as thereby to evade punishment, and very nearly succeeded a third time." (Marshall, *On the Enlisting of Soldiers*.)

feit. Clegg subsequently told the doctor that this announcement staggered him. "For," said he, "I have studied the subject in books, have seen a great many epileptics in fits, and have practiced it for fifteen years, until I thought I knew every symptom of it." After he had recovered from this "attack" the doctor watched him on occasions when Clegg was unaware of his presence, and was struck with the cheerful and vivacious aspect of the man's countenance, as compared with his facial expression during the ward visits. Clegg could easily assume the peculiar, indescribable look habitual to epileptics. This, together with the cicatrices on head and face, might easily deceive even a skilled observer.

By this time Dr. MacDonald felt justified in insisting upon a confession from Clegg, who still denied feigning, but with less emphasis, until the doctor forcing him still more, he laughingly admitted that the fits were simulated, but mildly urged that he was a victim of *real* epilepsy. This Dr. MacDonald refused to admit, and threatened him with unsparing punishment in the event of another "fit." After brief reflection Clegg said, "Well, I guess it's no use, but you are the first doctor that ever tumbled to me." His countenance then underwent a decided transformation, the epileptic look vanishing at once. He was transferred to Auburn Prison as *not insane*, and was released in December, 1876. He next went to Boston, where he resumed the practice of "dummy chucking" in connection with a gang of pickpockets, and afterwards followed the Marquis of Lorne to Canada, chucking dummies in the crowds that gathered. Returning to New York, he was sent to Sing Sing for burglary, and there played epilepsy, which again sent him to the Auburn Asylum as an "epileptic imbecile." Meeting Dr. MacDonald in the ward, he threw off his epileptic mask, laughing heartily. On this occasion, at the request of the doctor, he feigned a fit, first borrowing a pocket-knife, with which he calmly cut the side of his tongue; then, uttering the "epileptic cry," fell violently upon the floor in a "convulsion." He afterward repeated the fit in the presence of two other physicians.

Dr. MacDonald says authorities are divided as to whether it be easy or difficult to feign epilepsy. Gavin, Van Swieten, and De Haen report cases in which impostors suffered the most flagrant liberties and allowed pins and needles to be thrust into their bodies without betraying consciousness.

Clegg made a practice, while in prison, of complaining of vertigo, tinnitus aurium, etc., between the paroxysms. When asked what remedy he had taken he always replied, "Bromide," knowing that was "the medicine the doctors give for epilepsy." Realizing that if he fell in such a manner as to avoid injury suspicion would be aroused, he never selected a "soft place" on which to fall. Reynolds¹ remarks that "choice of locality (for falling) does not prove that epilepsy is feigned; the absence of choice, on the other hand, is presumptive evidence that it is genuine; and this in proportion to the danger or the privacy of the locality in which the fall occurs."²

"Cicatrices on the skin of the face," says Gavin, "made with the design of presenting incontestable proofs of anterior falls, never exist without tending to deceive the medical man." Clegg sets a high value

upon the scars upon his head and face, acquired through falls. He says they have often served as aids in diagnosis to examiners who have pronounced him "an epileptic."³

"In conclusion," says Dr. MacDonald, "these are the grounds upon which the opinion that Clegg was not an epileptic was based: First, he was a convict, sentenced to hard labor,—this furnished a strong motive for feigning, and suggested suspicion; second, the occurrence of a paroxysm during my visit to the ward; third, the readiness with which he spoke of his complaint, and called attention to the cicatrices on his face and head; fourth, the marked change in his facial expression when he supposed he was unobserved; fifth, during the spasms the thumbs were not closed within the palms, the nails were not livid, muscular rigidity could readily be overcome, and the hands, after being forced open, immediately closed; sixth, the sphincters were not relaxed; and, seventh, there were no ecchymoses, extravasations, or minute petechial spots observable upon forehead, throat, or chest. The presence or absence of pallor was not determined by observation in Clegg's case, nor was any value attached to the condition of the pupils.

"As regards the question of pallor, Dr. MacDonald agrees with those who maintain that it is not a constant symptom attending the onset of epileptic seizures. Reynolds speaks confidently of its absence in some instances. In a total of forty-five observations recorded by him, 'pallor was observed in but little more than one fourth of the cases.' Owing to its exceedingly evanescent character, its presence can be determined only in cases observed from the very commencement of the attack. My experience leads me to conclude that, as a rule, in general practice, persons suffering from epileptic attacks do not come under medical observation until the 'pallid stage' has passed. Of course it cannot be feigned; and while its recognition might warrant the dismissal of suspicion of shamming in a doubtful or suspected case, its absence in a given case would by no means justify a verdict of feigning.

"Respecting the condition of the pupils during an epileptic attack authorities are also divided, some claiming that the iris expands, a few that it contracts, while others declare that it oscillates. *The important point relating to the condition of the pupils in epilepsy, as regards its diagnostic value, is that during a paroxysm they are insusceptible to the influence of light.* This fact would be of great service as a means of diagnosis of feigned epilepsy, but for the difficulty of determining its presence or otherwise in a person violently convulsed."

Dr. Landon Carter Gray, in a communication to the *American Journal of the Medical Sciences* says: "If there be any one phenomenon which is constantly or generally present in true functional epilepsy, and not in that which is due to organic disease, it has seemed to me that such a phenomenon would do considerable service to the clinician. Such a symptom, if my observations be trustworthy, is a dilated and mobile pupil. *By this I mean a pupil which changes from contraction in a bright light to dilation in a shaded light much more quickly than the normal pupil, some-*

¹ *Epilepsy, its Symptoms and Treatment*, page 285.

² Portal, *Sur la Nature et le Traitement de l'Epilepsie*, page 127.

³ Fallois relates a case where "the limbs were covered with the marks of contusions of different dates, as evidenced by the differences of coloration," and where, "the night after admission, the impostor wounded his forehead and nose."

times instantaneously, undergoing the changes from dilatation to contraction with the same facility, and which is, moreover, moderately dilated even in a bright light. The mobility and dilatation were usually in proportion to the inveteracy and violence of the disease, although not always so. The cases of *petit mal* have exhibited this phenomenon in a marked degree."

THE TREATMENT OF DRUNKARDS BY THE STATE.

THE *Northwestern Law Reporter* sketches desired legislation as follows: "Legislature is asked to place dipsomaniacs—persons whom the use of alcohol, or other intoxicants, has rendered mentally incapable of performing the duties required of a member of society, or of providing for a family, or who, from their use, have become a burden or a danger—on the same legal basis status as other lunatics, and to extend the authority to place them under restraint and supervision

for a lengthened period of time, on the ground that they are persons of unsound minds. Such restraints shall be in appropriate buildings, to be called inebriate hospitals,—which shall be branches of the insane hospitals,—where they shall receive such proper medical and special treatment as is required for the restoration of persons of unsound mind to a condition of sanity. This treatment shall be extended over such a period of time as to insure the permanence of the cure, in case such may be found possible. Should the best directed efforts of their medical attendants show the fact that any cases are incurable, such cases shall be transferred for restraint and protection to appropriate buildings, to be called inebriate asylums, which shall be branches of the authorized insane asylums for the incurably insane. That in the asylum they be encouraged and required to contribute from their skilled labor, manual or intellectual, to the payment of the expense of the State for their support, even in cases in which they or their relatives may be able or willing to pay for their maintenance."

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 25, 1880.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	647	262	21.02	21.17	12.21	5.10	.46
Philadelphia.....	846,980	319	84	21.00	6.27	2.86	2.86	11.91
Brooklyn.....	566,689	292	119	25.34	15.41	16.10	4.11	—
Chicago.....	503,298	160	63	36.88	11.87	23.75	1.25	3.75
St. Louis.....	—	107	33	5.61	21.49	1.87	.93	—
Baltimore.....	393,796	149	76	21.48	16.11	8.06	4.03	—
Boston.....	363,938	192	74	24.48	15.10	17.71	—	—
Cincinnati.....	280,000	82	22	18.30	14.63	—	3.66	—
New Orleans.....	210,000	98	33	16.33	8.17	5.10	1.02	—
District of Columbia.....	180,000	69	23	14.50	24.64	11.60	—	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	55	19	38.18	10.91	12.72	21.82	—
Buffalo.....	155,159	64	16	20.31	3.13	12.50	3.13	—
Milwaukee.....	127,000	42	24	28.57	11.90	9.59	14.29	—
Providence.....	104,862	40	9	7.50	10.00	2.50	2.50	—
New Haven.....	63,000	17	1	5.88	—	5.88	—	—
Charleston.....	57,000	27	9	14.81	7.41	3.71	—	—
Nashville.....	43,543	14	5	14.29	7.14	7.14	—	—
Lowell.....	59,340	12	5	16.67	16.67	8.33	8.33	—
Worcester.....	58,040	17	10	41.18	5.89	—	11.77	—
Cambridge.....	52,860	14	6	28.58	35.70	14.29	—	—
Fall River.....	48,626	24	8	8.33	12.50	—	—	—
Lawrence.....	39,068	—	—	—	—	—	—	—
Lynn.....	38,376	13	6	23.08	30.77	15.38	—	—
Springfield.....	33,536	11	2	18.18	27.27	9.09	—	—
Salem.....	27,347	13	1	15.38	7.69	7.69	—	—
New Bedford.....	27,268	11	4	9.09	18.18	9.09	—	—
Somerville.....	24,964	10	4	20.00	10.00	20.00	—	—
Holyoke.....	21,961	7	—	14.29	14.29	14.29	—	—
Chelsea.....	21,780	12	3	25.00	16.67	25.00	—	—
Taunton.....	21,145	12	3	16.67	—	—	8.33	—
Gloucester.....	19,288	6	4	16.67	16.67	16.67	—	—
Haverhill.....	18,478	7	3	14.29	14.29	—	14.29	—
Newton.....	16,994	—	—	—	—	—	—	—
Newburyport.....	13,470	4	2	—	25.00	—	—	—
Fitchburg.....	12,270	7	3	28.57	14.29	28.57	—	—
Twenty-two Massachusetts towns.....	179,846	44	11	20.45	27.27	18.18	—	—

Deaths reported 2598; 947 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 562, lung diseases 395, consumption 393, diphtheria and croup 282, scarlet fever 93, small-pox 47, typhoid fever 36, diarrhoeal diseases 25, malarial fevers 20, cerebro-spinal meningitis 18, whooping-cough 14, erysipelas 14, measles 13. From

typhoid fever, Philadelphia seven, Chicago six, Cincinnati five, Baltimore four, Buffalo three, Boston and Pittsburgh two, New York, Brooklyn, District of Columbia, Nashville, Fall River, Salem, and Taunton one. From diarrhoeal diseases, Cincinnati six, New Orleans five, New York, Brooklyn, and Baltimore three, Chicago, St. Louis, Boston, Charleston, and Brooklyn one. From malarial fevers, Brooklyn seven, New York

five, New Orleans three, Charleston two, Chicago, District of Columbia, and Lynn one. From *cerebro-spinal meningitis*, New York and Worcester four, Chicago three, Philadelphia two, St. Louis, New Orleans, Milwaukee, Fall River, and Springfield one. From *whooping-cough*, Baltimore five, New York three, Philadelphia, Brooklyn, New Orleans, Providence, Worcester, and Cambridge one. From *eczema*, New York and Brooklyn three, Baltimore two, Philadelphia, Chicago, Boston, Cincinnati, Milwaukee, and Cambridge one. From *measles*, Boston nine, New York two, Chicago and St. Louis one.

One hundred cases of diphtheria, 95 of scarlet fever, measles six, typhoid fever three, whooping-cough one, small-pox one, were reported in Brooklyn; diphtheria 46, scarlet fever 10, in Boston; scarlet fever 41, diphtheria 15, in Milwaukee; scarlet fever 12, diphtheria 11, typhoid fever three, measles one, in Providence; diphtheria nine, typhoid fever two, in Somerville; small-pox one, in Holyoke.

In 39 cities and towns of Massachusetts, with a population of 1,042,531 (population of the State 1,783,086), the total death-rate for the week was 20.86, against 21.32 and 20.43 for the previous two weeks.

For the week ending December 4th, in 150 German cities and towns, with an estimated population of 7,713,385, the death-rate was 22.8. Deaths reported 3334; 1537 under five; pulmonary consumption 449, acute diseases of the respiratory organs 287, diphtheria and croup 156, typhoid fever 98, scarlet fever 73, measles and röteln 66, whooping-cough 50, puerperal fever 15, small-pox (Königsberg) three. The death-rates ranged from 8.3 in Carlsruhe to 29.5 in Chemnitz; Königsberg 25.7; Breslau 29.2; Munich 21.6; Dresden 21.3; Berlin 26; Leipzig 22.4; Hamburg 23.5; Hanover 18.1; Bremen 21.5; Cologne 25; Frankfurt 19.6; Strasburg 27.2.

In the 20 chief towns in Switzerland for the weeks ending December 4th and December 11th, population 522,856, there were respectively 32 and 29 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 14 and 17, diphtheria and croup five and 12, small-pox four and six, typhoid fever four and five, whooping-cough two and three, measles one and two, scarlet fever none and one.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1880																			
Dec. 19	29.927	27	36	14	66	53	77	65	W	NW	NW	16	20	19	C	F	C	—	—
" 20	30.098	31	39	22	86	53	69	69	W	W	NE	10	4	4	C	F	O	—	—
" 21	29.869	27	33	27	89	88	88	88	NE	N	N	12	23	18	O	Snow.	O	2.55	.01
" 22	30.065	29	38	23	75	45	64	61	N	N	W	18	15	10	O	C	C	—	—
" 23	30.261	31	43	22	73	31	58	54	W	N	NW	13	8	8	C	C	C	—	—
" 24	30.397	31	35	27	88	70	79	79	N	NE	N	4	10	11	Snow.	O	Snow.	8.20	.02
" 25	30.376	30	33	29	87	79	79	81	N	NE	NE	12	16	16	Snow.	O	O	10.45	.03
Week.	30.142	28	43	14					W	N	NW								.06

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

CORRECTION.

MR. EDITOR, — I have just had sent me the Boston Medical and Surgical Journal for December 16th, in which is a report of my remarks at a meeting of the Association for the Protection of the Insane, held in New York, November 11th.

In one or two matters the report quite misrepresents what I said, but no one will be injured thereby. I spoke of neglect and abuse as the proper term to apply to the manner of treatment of some state insane, not the majority of them. Nor did I refer to "even the best institutions" in the language put in my mouth. And in referring to the Scotch asylums I simply quoted from the lunacy reports relating to the Fife and Kinross asylum, and also from Dr. Luke's report of last summer.

I am sure that many of our public asylums are improving, both in the matter of occupation and restraint, and I may add freedom. Dr. Kirkbride, in his new book on Insane Asylums, almost surrenders on the question of restraint. Yours very truly,

H. B. WILBUR.

SYRACUSE, N. Y., December 20th.

DAVID P. SMITH, M. D.

At a special meeting of the Hampden District Medical Society, held December 28, 1880, the death of Dr. David P. Smith, late Vice-president of the parent society, was announced, and a committee was appointed to draught resolutions commemorative of the sad event.

Whereas, It has pleased our Heavenly Father to remove from us, by death, our esteemed friend, valuable associate, and fellow member, Dr. David P. Smith,

Resolved, That we desire as individuals and as a society to place on record our appreciation of the life and character of our deceased brother; that we call to mind with gratitude his distinguished services to the profession and community, his labors as a member and officer of our association, and our regret at his sudden and untimely death.

Resolved, That our heartfelt sympathy is hereby tendered to the bereaved wife and brother, and that we condole with them in this their sad hour of sorrow and affliction.

Resolved, That we attend the funeral in a body; that these resolutions be spread upon the minutes, and a copy of the same be sent to the wife of our deceased member; and also that they be published in the *Springfield Republican* and Boston Medical and Surgical Journal.

ALFRED LAMBERT, M. D.,
T. L. CHAPMAN, M. D.,
S. F. POMEROY, M. D. } Committee.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 25, 1880, TO DECEMBER 31, 1880.

MEACHAM, F., captain and assistant surgeon. To report in person to the commanding general, Department of the East, for assignment to duty. S. O. 275, A. G. O., December 28, 1880.

DR. GEORGE F. JELLY has been appointed examining physician to the Board of Directors of Public Institutions, vice Dr. Fisher, who has accepted the superintendency of the Boston Lunatic Hospital.

BOOKS AND PAMPHLETS RECEIVED. — How to Use the Forceps, with an Introductory Account of the Female Pelvis and the Mechanism of Delivery. By Henry G. Landis, M. D. New York: E. B. Treat. 1880.

Scarlatina. A Lecture delivered in the Jefferson Medical College. By William B. Atkinson, M. D. (Reprint.)

Beitrag zur practischen Augenheilkunde. Von W. W. Seely, M. D. (Reprint.)

The Surgical Treatment of Intestinal Obstruction. By W. T. Briggs, M. D. (Reprint.)

Original Articles.

THE AVERAGE DAILY AMOUNT OF URINE:
ITS IMPORTANCE IN DIAGNOSIS.¹

BY E. S. WOOD, M. D.

THE importance of the daily measurement of the amount of urine in disease, although referred to in all works upon the examination of the urine, is not so fully appreciated as it should be, and the neglect of this simple aid to diagnosis may in some cases result in serious error. The examination of the urine is, in the vast majority of cases, resorted to for the purpose of ascertaining the presence or absence of the more serious forms of renal disease, and, if one or more of these exist, to determine its nature; and it is in just those cases, in which it is desirable to eliminate the existence of organic renal disease, that the knowledge of the amount of the urine is of the greatest importance.

It is true that in many cases the diagnosis of serious renal disease can be made with certainty by the other characteristics of the urine, but there are some in which very great assistance is obtained by simple measurement. This is naturally of the greatest consequence in those cases in which a quantitative estimation of the solids is also required. It is not possible in many cases to ascertain, even approximately, how much work the kidneys are capable of doing without knowing approximately the average amount of urine which those kidneys are eliminating, and it is self-evident that the kidneys cannot be suffering from very advanced degeneration, and yet be doing a normal amount of work.

It is only in an exceedingly small percentage of the cases in which I examine the urine, that I am able to learn approximately how much the patient is passing. Even in our hospitals with skilled attendants it is only in the ward specially assigned to nervous and renal diseases at the Boston City Hospital that the practice of daily measuring the amount of urine of the patients is habitual. In private practice, measurement of the urine, in cases of known or suspected renal disease or complication is the rare exception. Most frequently the medical attendant relies upon the statement of the patient or nurse that a larger or smaller amount than usual is being passed; yet it is well known that patients are very frequently deceived in this respect, thinking that they are passing more urine than usual on account, perhaps, of frequent micturition, when actual measurement shows a diminished amount.

It is no hardship to require actual measurement of the urine even in the case of patients who are not confined to the house, since they can be provided with a wide-mouthed bottle fitted with a tight stopper, and sufficiently large to contain the amount passed at a single micturition. This bottle can be graduated into twenty-five or fifty cub. cent. spaces, or into fluid ounces, by a file-mark on the glass, or by marks on a strip of paper pasted on the outside. This may, if necessary, be carried in the pocket, and the amounts passed at each micturition be noted.

It is only after knowing the actual amount of urine in the twenty-four hours that we have the starting-point for ascertaining the rapidity of the metamorphosis going on within the body and the amount of work

being done by the kidneys; the estimation of the total solids, which is, to a certain extent, the measure of the metamorphosis, is easily made approximately by multiplying the last two figures of the specific gravity by 2 $\frac{1}{2}$, which gives the number of grams of solid matter in one liter of urine; and from this, knowing the amount of urine, the daily amount of solids eliminated by the kidneys is readily calculated.

Without desiring in the least to undervalue the quantitative estimation of the more important urinary constituents, I wish to lay stress upon the fact that with these two pieces of information, the average amount of urine and the specific gravity, together with the ordinary clinical examination of the urine, we have the data for preventing many errors in diagnosis, and consequent errors in prognosis, which might otherwise be made.

In this paper I shall not consider the amount of urine in general diseases, such as the average diminution in fevers or the great increase in diabetes, but shall limit myself to the consideration of those cases which are liable, on account of temporary albuminuria, or for other reasons, to be confounded with organic disease of the kidney. For the purpose of comparison I will first briefly mention the average amount of urine eliminated in the various forms of Bright's disease, and will illustrate by a few cases, for most of which I am indebted to the records of the Boston City Hospital.

In acute parenchymatous nephritis the amount is at first much diminished, and then gradually increases with the diminution of the inflammation up to the normal amount; with convalescence it exceeds the normal considerably; and finally, in those cases which terminate in recovery, with complete restoration of the kidney to a healthy condition, it falls again to the normal.

Examples: (1.) J. H. entered the hospital after being ill two weeks. The amount of urine was then 473 cub. cent.; during the next ten days, with the diminution of the dropsy, the amount gradually rose to 1626 cub. cent.; with convalescence, it averaged for eighteen days 2410 cub. cent.; and finally fell, with the restoration of health, to the normal. (2.) J. A. passed during twenty-four days before death, on the average, 496.5 cub. cent. The autopsy showed simple acute nephritis. (3.) In another fatal case the average of twenty-nine daily measurements before death was 1234 cub. cent. (4.) In another case, three weeks after the beginning of the illness, the amount was 1300 cub. cent.; it then gradually rose to 4022 cub. cent.; and finally fell to the normal as health became reëstablished.

In chronic parenchymatous nephritis the amount of urine is always below the normal. Possibly for one or two days the amount may exceed the normal by one or two hundred cub. cent., but this increase is very rare and only temporary. With the increase of the disease, accompanied by increasing dropsy, the amount is very small and the urine concentrated, but when the progression is not active, the amount is but little below the normal.

Examples: (1.) In the case of J. G. the average of sixty measurements was 1239.5 cub. cent. There was frequent micturition (three or four times during the night), when only from 500 to 1000 cub. cent. was being passed. (2.) In the case of A. W. the average of 171 daily measurements was 1005 cub. cent. (3.) In the case of J. S. the average of twenty-three meas-

¹ Read before the Boston Society for Medical Improvement, December 27, 1880.

urements before death was 658 cub. cent. (4.) In another case (M. P.) the average of eighty-two measurements, the last one being a few days before death, was 965.5 cub. cent. On only one day did the amount exceed the normal (1774 cub. cent.).

In both interstitial nephritis and amyloid degeneration the amount of urine is largely increased, even to three or four times the normal amount, except during a short time previous to death, when the quantity may be less than normal.

Examples: (1.) In one case the average of twenty-five measurements in May and June was 2288 cub. cent. Death took place in August, and the autopsy showed interstitial nephritis. (2.) In the case of J. C. (interstitial) ninety-five daily measurements gave an average of 2266 cub. cent. (3.) In the case of J. M. (interstitial) the average of forty-one measurements just before death was 1017 cub. cent. (4.) In the case of K. G. (amyloid) fourteen measurements during the month before death gave 921 cub. cent.

In complicated cases, which are far more common than uncomplicated ones, the amount of urine varies according to the nature and extent of the complicating affection. A very frequent combination is that of amyloid degeneration and chronic parenchymatous nephritis, or interstitial and chronic parenchymatous nephritis. Acute parenchymatous nephritis is liable to occur with any of the other renal diseases, as a result of exposure or from other cause. The result of the admixture of chronic or acute parenchymatous nephritis with either the interstitial or amyloid degeneration is to diminish the amount of urine, and the amount of this diminution is, of course, dependent upon the extent of the parenchymatous complication, as the following cases show:

Examples: (1.) G. C. passed, during twenty-eight days, an average of 563 cub. cent. During this time the abdomen was tapped several times. Death occurred about three months after the last measurement, when the kidneys were found about one half of the normal size, and both "fatty and amyloid." (2.) T. D. passed, on the average, during forty-three days before death, 2198.5 cub. cent.; or, omitting the last eight measurements, when the patient was moribund, which were, respectively, 532, 0, 0, 177, 7, 14, 118, and 177 cub. cent. (average = 128 cub. cent.), the average of the previous thirty-five days was 2671.5 cub. cent. After death the kidneys were found to be in a state of amyloid degeneration and chronic parenchymatous nephritis.

If a parenchymatous affection exists as a complication of either an interstitial nephritis or an amyloid degeneration, it is almost sure to be detected by the increased amount of albumen and the character of the sediment; the measurement of the amount of urine is often in these cases of especial importance in making a diagnosis of such complications. If, for example, we have a specimen of urine with hyaline, granular, and fatty casts, and fatty renal epithelium in the sediment, and at the same time the urine contains a considerable amount of albumen, it is impossible for us to say, without knowing the average amount of urine, whether we are dealing with a case of pure chronic parenchymatous nephritis, or one of the other forms of Bright's disease in which the parenchymatous affection is merely a complication; but if, as in the case of T. D., mentioned above, we knew that the daily amount of urine averaged between 2000 and 3000 cub. cent., we might be reasonably sure that the parenchymatous disease

was not the principal one, but only a complication. If the parenchymatous affection is the principal one, the amount of urine will be diminished, in which case it is impossible without the history of the case to determine the existence of any of the other forms of organic renal disease, as in the case of G. C.

It is well known that Bright's disease is diagnosed chiefly by the detection of albumen in the urine and renal casts in the urinary sediment, and I frequently meet with physicians at the present time who pronounce the existence of serious organic renal disease from these characteristics alone, which may occur without any serious disease of the kidneys. Daily measurement of the urine in these cases is of very great assistance. In hyperæmia of the kidneys, for instance, due to disease or abnormal condition of some other organ, we frequently find both albumen and casts, and a knowledge of the amount of urine may prevent an error in diagnosis and prognosis.

In passive hyperæmia of the kidneys, due to cardiac or other disease, we find in the urine, so far as the kidneys are concerned, only hyaline and finely granular casts and a trace of albumen,—conditions which are only found in the interstitial and amyloid forms of Bright's disease; but the average daily amount of urine in passive hyperæmia is diminished, while in the above-mentioned organic diseases it is much increased.

In active hyperæmia of the kidneys, due to the elimination of some virus or drug, the amount of urine is usually diminished, owing to the febrile complication, and in addition to the sediment mentioned above in cases of passive hyperæmia, we find free blood and renal epithelium and usually an occasional blood and epithelial cast; albumen is present only in mere traces. These characteristics of the urine and sediment are the same as those of acute nephritis, but in the proportion in which they occur in the stage of convalescence, when in acute nephritis the amount of urine is increased, and often much increased, while in this condition of hyperæmia it is almost always diminished.

Examples: (1.) In the case of W. K. the average of seventeen measurements during two months was 622 cub. cent. The urine at first contained no albumen, but a few hyaline casts; later a trace of albumen with hyaline and an occasional epithelial cast, with considerable free renal epithelium. The autopsy showed beginning glomerulo-nephritis. Death was due to malignant disease of liver. (2.) The average of nineteen measurements in a case of rheumatism, for which the patient had been taking salicylic acid and salicylates, was 941.5 cub. cent. The urine contained a trace of albumen and hyaline casts, both of which entirely disappeared before the patient left the hospital.

Such cases are the ones in which mistakes in diagnosis are the most frequent. For instance, I have known of a diagnosis of chronic Bright's disease being made in a case of cerebral disease, in which the urine contained a trace of albumen and the sediment hyaline casts, with blood and renal epithelium; yet the amount of urine was about normal, and more than fifty grams of urea were being eliminated,—a condition of things which should lead one to give at least a doubtful diagnosis, so far as the kidneys are concerned, and wait for time to show whether a temporary or permanent affection existed. In this case the casts and albumen have entirely disappeared.

In typhoid, rheumatic, and other fevers we often see

in the urine a few hyaline casts and a trace of albumen, with a diminished amount of urine. In these cases parenchymatous disease of the kidneys can be eliminated by the character of the sediment and the proportion of albumen, but those renal diseases characterized by only a trace of albumen and the same composition of the sediment can only be eliminated with absolute certainty by waiting until the fever has subsided and examining again, although a normal or increased amount of solids, with the diminished amount of urine, points very decidedly to the absence of any serious renal disease.

In many cases of acute rheumatism, especially after the exhibition of salicylic acid and the salicylates (as in Case 2 above mentioned), I have found a trace of albumen in the urine and hyaline and finely granular casts, with blood and renal epithelium in the sediment. I have not yet a sufficient amount of material to be able to form an opinion as to whether the salicylic acid has anything to do with this condition or not. I have seen some of these cases in which the casts and albumen entirely disappeared, but in which the diagnosis of chronic Bright's disease had been made; an error which would not have occurred had due regard been paid to the amount of work which the kidneys were capable of doing, and to the average daily amount of the urine.

EUROPEAN AND AMERICAN ANATOMY ACTS COMPARED.

BY EDWARD MUSSEY HARTWELL, M. A.,
Fellow of the Johns Hopkins University.

THE Greek anatomists at Alexandria, 300 B. C.; Mondino de Luzzi in Italy, 1300 A. D.; Vesalius in France and Spain, in the sixteenth century; the Hunters in England, and Shippen and Warren in the United States, in the latter half of the eighteenth century; Knox in Scotland, and his contemporaries in England and America, in the first third of the present century, have all been obliged to contend against the hostile forces of popular prejudice and legislative indifference. The influences which to-day work to the detriment of anatomical studies in so many of our American States are strangely compounded of pagan superstition, Christian materialism, and a natural repugnance to the untutored mind and manners of the average medical student. European and American anatomy have both developed along the same lines; but the European type is more highly specialized. Nearly all the developmental stages through which European anatomical science has passed are to-day represented in the various States of the American Union.

It is noteworthy that in its earliest stages anatomy depended on the favor of princes. Ptolemy Soter founded the Alexandrian School 300 B. C. "Braving all prejudices, and considering that the interests of science ought always to outweigh those of the individual, Ptolemy authorized the dissection of human dead bodies, and himself set the example by beginning to dissect with the physicians gathered about him."¹ "In the year 1238, Kaiser Frederic II. ordered, at the suggestion of Marcianus, sub-chief physician of Sicily, that every five years a corpse should be publicly dissected [in Sicily], and that physicians and surgeons

should be admitted, according to their rank, to the dissection."² The favor of Ptolemy and Frederic II. has, perhaps, its modern parallel in the judicious blindness of the American chief of police as to what transpires in the potter's field.

It is not usual to find the prototype of our city fathers in the early fathers of the church; but there is certainly a strong generic resemblance between the doctrine of Tertullian that the bones and teeth remain unchanged "in order that they may fructify as seeds in the resurrection of the body," and the reason given recently by a commissioner, in one of our principal cities, for refusing the request of certain anatomists for bodies required to be buried at the public expense, namely, that dissection would prevent their resurrection.

It is customary to state or imply that the church anathematized dissection. There is every reason to believe, however, that the oft-quoted edict of Pope Boniface VIII., issued in 1299, according to Raynaldus, against the boiling, drying, or cutting up of the dead, was not aimed at the anatomists, but was intended to reform certain obnoxious burial customs. In 1482, Pope Sixtus IV. granted the rector, doctors, and students of the University of Tübingen a special dispensation to take the bodies of certain criminals executed under the civil law, in order that they might thereby become expert and learned in the art of medicine, provided they would bury the same dead bodies in the customary manner after they should be dissected and dismembered.³ Hyrtl holds that the edict of Boniface VIII. remained in force as an obstacle to anatomy till 1556, when the divines of Salamanca, in reply to the inquiry of Emperor Charles V., the patron of Vesalius, declared that human bodies might be dissected with "a blameless conscience and without suspicion of criminality."⁴

The following chronological statement may serve to indicate how essentially mediæval is the present attitude of certain American States regarding practical anatomy. For the sake of brevity, the authorities consulted are not cited:—

The Great Council of Venice in 1308 passed a decree ordering the medical college of that city to undertake a dissection once a year. In Prague, as early as the founding of the university, in 1348, the executioners were enjoined to deliver the dead bodies of malefactors to the medical school. In 1376, Duke Louis of Anjou granted the medical faculty of Montpellier, in France, the privilege of taking yearly the body of an executed criminal for dissection. In 1377, Charles the Bad, King of Navarre and Lord of Montpellier, confirmed the grant. In 1404, the first anatomical demonstrations were made before the medical faculty of Vienna. Duke Albert IV., having imported Galeazzo de Santa Sofia, an Italian anatomist, to introduce the art of dissection, July 1, 1505, the town council of Edinburgh granted the Surgeons' Company to "have anis in the year ane condampnit man efter he be deid to mak anatomie of." It was enacted, 32 Henry VIII., chapter 42, 1510, that the Mystery and Commonalty of Barbers and Surgeons of London might "take yearly forever . . . four persons condemned, adjudged and put to Death for Felony . . . to make

² Haesser, *Geschichte der Medicin*, 3d edition, vol. i. p. 733.

³ See the original in the *Magazine vor Aertze*, Leipzig, 1775-78, vol. ii. p. 1068.

⁴ See *Antiquitates Anatomice Rariores*, § 22.

¹ Bouchut, *Histoire de la Médecine*, vol. ii. p. 303.

Incision of the same dead Bodies . . . for their further and better Knowledge, Instructions, Insight, Learning, and Experience in the said Science or Faculty of Surgery." It is possible that Governor John Winthrop, who was read in physic, may have authorized the first anatomy in the colony of Massachusetts Bay, as Mr. Giles Firmin, who made it before 1647, was a connection of Governor Winthrop. Prior to the Revolution the royal governors could order the dissection of a murderer's body. In 1778 the State of Virginia refused to sanction the dissection of executed murderers, and has apparently remained in a state of arrested development ever since, so far as any appreciation of the claims of anatomy are concerned. Massachusetts, in 1784, passed a law allowing the dissection of dead duellists, thereby unwittingly reproducing in spirit, though not in letter, a canon of the mediæval church, which denied Christian burial to men slain in tournaments. New York, in 1789, in order that science might not be injured by its law of that year regarding disinterment, made it lawful for the courts to add dissection to the death penalty in cases of murder, arson, and burglary. The First Congress of the United States, by the act of April 30, 1790, gave federal judges the discretion of adding dissection to the sentence of convicted murderers. A similar act was passed in New Jersey, in 1796. No trace of progress worth mentioning, in this class of legislation, since the enactment of the above-noted laws, is to be found in the most recent revisions of the statutes either of the United States or of New Jersey.

The dissection of executed criminals, as such, is still lawful within the special jurisdiction of the United States government and in the following States: Alabama, Arkansas, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Massachusetts, Missouri, Nebraska, and New Jersey. Nebraska, like the United States and New Jersey, makes no provision other than this for its anatomists. Unlike them, however, it has a penal statute regarding grave robbery. Alabama, Georgia, Missouri, and Tennessee allow the dissection not only of executed criminals, but also of "other persons with the consent of their friends." Maine should not be classed with these States since 1876, when capital punishment was abolished within its borders. Tennessee retains a useless permission to anatomists to dissect "the remains of slaves with the consent of their masters."

Kentucky, Mississippi, Oregon, Rhode Island, Texas, Virginia, and West Virginia are without laws of any kind regarding dissection, though they all forbid violation of sepulture. The most backward of the United States are those which have no statute touching either dissection or grave robbery. In this class we find Delaware, Florida, Louisiana, Maryland, Nevada, North Carolina, and South Carolina. The Territories of Arizona, Idaho, Montana, and New Mexico are similarly indifferent to the science of anatomy and the sanctity of burial-places. Certain of these States, like Maryland and Louisiana, contain medical schools. In order to punish body-snatching Maryland is to-day obliged to fall back on the common law of England, although the common law penalty was superseded nearly fifty years since by the passage of the Warburton anatomy act. All things considered, the attitude of the Italian cities of the fourteenth century and that of the empire of Japan of to-day must be characterized as more liberal and enlightened regarding the alpha-

bet of medicine than that of the United States and of very many of the individual States. France, in 1790, and England, in 1832, recognized the impolicy of employing dissection as a mark of infamy by repealing the laws allowing the dissection of murderers.

In the Privilegia granted by the Landgrave Wilhelm von Hessen to the University of Marburg, in 1653, it is provided that "in the medical faculty at the start there shall be two doctors in pay, who, in addition to the theory, shall conduct the practice of anatomy and of botany with the youth." The statutes of the medical faculty at Marburg for the same year, Title IV., read as follows:—

"(1.) It is clear that anatomy, next after psychology, forms the chief part of universal physiology. Since there is a twofold method of teaching it, one that is ordinarily practiced in anatomical theatres in the presence of many spectators, and the other which is employed by the holders of scholastic chairs, let neither of them be intermitted. Let both of them, as well publicly as privately, be practiced.

"(2.) Let also the art of dissection and of skillfully handling and applying the knife in individual parts be shown, in order that a difference may be noted between physical and medical or practical anatomy. The various skeletons, also, both male and female, of common and exotic animals shall be prepared, in order that not only the structure of the skeleton, but also the whole of osteology, may become known to students of medicine as well as of surgery.

"(3.) Let pregnant women be dissected as well as others. Let midwives as well as others be admitted.

"(4.) Let not those who are condemned to death be opened alive, but let living things of every kind, as insects, serpents, aquatic animals, birds, and quadrupeds, be dissected. Especially let those studying anatomy observe more precisely than butchers would domestic quadrupeds while they are being slaughtered.

"(5.) Moreover, let the bodies of atrocious criminals, whether they have been beheaded or hanged, be designated for dissection. Let them not be kept back by the magistracy when they are sought for this purpose, in order that those who have done as much evil as they could when alive may, after death, on the other hand, be of as much service and use as possible."

France in 1798, Massachusetts in 1831, and England in 1832 gave enlarged expression to the principle enunciated in Section 5 of the Marburg statutes by making it lawful to surrender, for anatomical purposes, the bodies of persons required to be buried at public expense. The following named States have imitated the lead of Massachusetts in legalizing such delivery: Arkansas, California, Connecticut, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, New Hampshire, New York, Ohio, Pennsylvania, and Wisconsin.

Notwithstanding the numerous privileges granted to anatomists by kings and popes and parliaments, recourse to "outside sources" of supply for subjects was often necessary. This is evident from various regulations concerning medical students. For instance, on February 1, 1630, the parliament of Paris passed a decree forbidding medical students from taking by force the bodies of executed criminals, and prohibiting prefects and executioners, also their servants, from delivering such bodies to students without an order signed by the dean of the faculty of medicine. When this decree was under discussion it was said that "for a long time the students of medicine and surgery had

indulged in deeds of violence and had even committed murder in order to get the bodies of criminals, and to that end had stirred up vagabonds, pages, and lackeys to raise an uproar, and favor in that way their removal." In 1632 students were again forbidden to remove by force the bodies of malefactors in a decree which provided as a penalty for such an offense a fine of one thousand livres of Paris. In 1722 the apprentices of the Surgeons' Company of Edinburgh were obliged to subscribe to the following additional obligation in their indentures: that "they would altogether avoid raising the dead." Dr. J. C. Warren and Dr. H. I. Bowditch, in works heretofore cited in these articles, have shown what was expected of medical students in New England seventy-five years ago.

(To be continued.)

DETECTION OF ARSENIC IN WALL PAPERS.

BY WILLIAM B. HILLS, M. D.

IN a recent number of the JOURNAL, the nitrate of silver test is spoken of as the "most simple and reliable test for arsenic in wall papers." This statement has lately been made in several medical journals, and doubtless originated in a paper read last summer before one of the British medical societies. The wide publicity which it has received seems to me a sufficient reason for stating, briefly, why it is one of the *least* reliable tests for the purpose mentioned. The cases in which the nitrate of silver test gives fairly reliable results are comparatively few, and are essentially those in which arsenite of copper (Scheele's green) or aceto-arsenite of copper (Schweinfürdt green) is used as a pigment, unmixed with other substances. These arsenical compounds are, however, seldom used thus, but are commonly employed mixed with other substances, by which means the green color is modified and various tints are obtained, in which, as a rule, the arsenical green cannot be detected by any physical appearance. Under these circumstances the above test will ordinarily fail to indicate the presence of arsenic, and particularly so if the arsenical green is mixed with organic pigments. Many of these latter, when treated with ammonia, furnish colored liquids, the color varying with the nature of the organic pigments. If nitrate of silver is added to such a liquid, any precipitate produced, whatever its true color may be, will ordinarily *appear* of the color of the liquid; for example, yellow arsenite of silver will generally *appear* red in a red liquid. Obviously, no conclusion can be drawn in such cases as to the presence or absence of arsenic. Moreover, various organic solutions give precipitates with ammonio-nitrate of silver, even in the absence of arsenic. If arsenious acid is present at the same time, the light yellow arsenite of silver produced is easily obscured by these organic compounds. On this account the test is often of no value.

Even if we obtain a yellow precipitate, we cannot say positively that it is due to arsenious acid, unless we are dealing with one of the characteristic greens, and at the same time get with ammonia the characteristic blue color due to copper. I have several times obtained from wall paper, by nitrate of silver, a yellow precipitate, when other tests proved the absence of arsenic. This precipitate is probably phosphate of

silver, which cannot be distinguished by physical appearances from arsenite of silver. (It is well to say here that the yellow precipitate due to arsenic is the *arsenite* of silver and not the *arsenate*, as the journals copying this test all have it.)

But arsenic may and in fact usually does occur in paper in other forms than those mentioned. The yellow sulphide of arsenic is sometimes used, and the arsenic in such cases cannot be detected by nitrate of silver.

One of the most common forms in which arsenic occurs in paper is as an impurity in the aniline colors so much used as pigments. Arsenic acid is very extensively employed in the manufacture of aniline colors, which are often sent into the market still retaining a considerable proportion of arsenic. The various shades of red are especially liable to contain arsenic from this cause, though many of the other aniline colors do contain it. With papers printed with these pigments ammonia usually produces the colored liquids above mentioned, which may disguise the true color of any precipitate produced by nitrate of silver. In the aniline colors arsenic is present chiefly as arsenic acid, which with nitrate of silver and ammonia gives a *red* precipitate, arseniate of silver. Here also the test is useless. If the pigment is a red one, soluble in ammonia, we cannot say whether we have obtained a red precipitate, or whether the precipitate *appears* red because it is suspended in a red liquid. Even if red itself, it may be due to organic matter and not to arsenic acid.

The arsenic may not be in the pigment at all, but in the mordant employed to fix the pigment. Arseniate of alumina is thus used. Ammonia will probably not remove this from the paper. Even if it did the test is useless for the reasons stated.

Arsenic occurs in paper in still other forms. Without mentioning these, the facts stated show that a person employing the nitrate-of-silver test alone will necessarily report most arsenical papers as free from arsenic, and will be in danger of reporting, as arsenical, papers entirely free from arsenic.

My method of proceeding is as follows: Take a sample three or four inches square (less will suffice with plain papers), cut into small pieces, moisten with concentrated sulphuric acid and heat carefully till the paper is thoroughly charred. Let the charred mass cool, add to it about one fluid ounce of water, grind the black mass fine that the water may come in contact with all parts of it, filter and wash. The arsenic will be found in the filtrate, which is examined by Marsh's test. All chemicals must be free from arsenic. A paper which, treated carefully in this manner, furnishes no arsenical mirror on porcelain does not contain any appreciable amount of arsenic.

RECENT PROGRESS IN GYNÆCOLOGY.

BY W. H. BAKER, M. D.

SIXTY-SEVEN CASES OF UTERINE DISPLACEMENT.

DR. GRAILY HEWITT reports these cases to the London Obstetrical Society.¹ The treatment which in a large majority of them proved successful consisted of rest in such positions of the body as would relieve the uterus

¹ British Medical Journal, June 26, 1880.

of abdominal pressure; attention to diet with an abundance of food, which oftentimes had to be given in small amounts each hour; the use of the cradle pessary for forward and the Hodge for backward displacements; and, as subsidiary measures, the sponge bath, friction of the skin, and great care to prevent constipation.

The cases offer strong evidence of the connection between the health of the body generally and that of the generative organs, especially the uterus; and they show that if the strength be not adequately sustained during the growing age, the uterus is liable to suffer and to become weak and incapable of resisting the physical strain and tension of an ordinarily active life. Local uterine treatment cannot therefore be expected to be permanently successful unless measures be taken to remedy the extreme general weakness. The physical change most evident in the uterine tissues, in the cases of prolonged insufficiency of food, was softening and loss of tonicity.

Another general conclusion arrived at by the author from his observations was the remarkable frequency with which the patients were afflicted with physical powerlessness, an incapability for locomotion varying in degree. Physical exertion produced a temporary exaggeration of the existing internal malady, caused pain, and was then given up. Hence, in many cases, a helpless invalidism. This physical inability was not imaginary or fanciful, though often erroneously so considered.

Dr. Hewitt urged the removal of pessaries at moderately short intervals, for the sake of observing the position of the uterus, as well as for cleanliness.

PROLAPSE OF THE OVARIES.¹

The subject of this very valuable article is one whose importance has not been generally felt, judging from the extreme brevity with which authors have treated it. The anatomy of the ovaries and their relations to the adjacent viscera are first considered by Dr. Mundé, and from the table introduced from Farre it appears that the average longitudinal diameter of the ovary is 1" 4", the transverse diameter 9", and the perpendicular diameter 4.5". From another table, introduced from Hennig, the fact is shown that the distance of the ovaries from the uterus is nearly twice as great in puerperæ as in married women, and more than twice as great as in virgins. This is important to remember, as bearing upon the establishment of the fact that frequent child-bearing, with its correspondingly frequent stretching of the attachments of the ovaries to the uterus, predisposes to prolapse of these bodies. The ovary is sustained in its movable position, first, by the posterior layer of the broad ligament; second, by the ovarian ligament; third, by the infundibulo-ovarian ligament; and a very slight support may be afforded by the thickening of the upper border of the broad ligament by the Fallopian tube. The projection of the ovary posteriorly, the mobility of the broad ligaments and their inclination downwards and backwards, show the tendency of the ovary to glide into Douglas's pouch, — a tendency materially increased by the lengthening of the ovarian ligament in consequence of repeated pregnancies and the dragging of the enlarged ovaries.

In regard to the palpation of the normal ovaries, the author says that in women with relaxed, compressible abdominal walls and a soft, non-rigid vaginal vault it

is frequently possible to palpate the normal, non-prolapsed ovaries, one finger (preferably the left index for the left, the right for the right ovary) pushing up the corresponding vaginal cul-de-sac, and the other hand pressing down the abdominal wall immediately over it. By then rolling the pelvic organs gently over the internal finger with the external hand, the ovary can frequently (and the tube occasionally) be felt, and its size and shape clearly mapped out. If perfectly healthy, moderate palpation gives but slight pain, and that of a dull character. In sixteen hundred unselected gynecological cases, the author found it possible to examine the ovaries in one hundred and forty-five. From the statistics given, it is shown that the prolapse of the ovaries laterally or backwards constitutes by far the greater majority of all cases of dislocation.

The various conditions given as favoring or producing dislocation of the ovary are: (1.) Enlargement of the ovary. (2.) Displacement of the uterus. (3.) Relaxation of the supports of the uterus and ovaries. (4.) Inflammatory adhesions. (5.) Sudden jarring or concussion of the whole body. (6.) Pressure from above, as by tumors, fecal accumulation, etc.

The symptoms produced by prolapse of one or both ovaries (if any inconvenience be experienced) are: a dragging sensation in each groin and down the thighs, some bearing down and weight in the pelvis, sacralgia, pain in either hip, slight radiating neuralgic pains in the groins and thighs, a numb, sickening pain during coition, and difficult defecation, owing, of course, to direct pressure on the ovary. The general symptoms are an excess of irritability, of "nervousness," similar to that usually occurring during the menstrual period.

The displacement of a congested and enlarged ovary excites symptoms of vastly greater intensity. The patient complains of a burning, throbbing, heavy sensation in the pelvis and sacrum; of a feeling of obstruction, alternating with tenesmus, in the rectum; of frequent darting, shooting pains in one or both groins, generally the left, and through the pelvis and down the thighs; of nausea and irritability of the stomach; of painful coition and defecation, generally in a high degree. Usually, every movement of the cervix uteri by the exploring finger causes great pain through traction or pressure on the ovary. A vaginal examination ordinarily produces an exacerbation of pain for one or more days.

In the treatment of these cases, the indications are obvious, namely, to restore the displaced organs to their normal position. If the ovaries are movable, not bound down by adhesions, this is easily done. The knee-breast position is the best for such replacement. The perineum should then be lifted with Sims's speculum, when the vagina becomes distended to its utmost capacity. If the ovaries still remain within reach, both fingers should be pressed into the posterior cul-de-sac of the vagina, and each ovary gently lifted up and pushed forward with a quick motion, so as to cause it to fall forward and downward into the abdominal cavity. Should the fingers not suffice for this manœuvre, the sponge-holder or vaginal depressor may be used, or similar efforts may be made through the rectum.

The adaptation of means to retain the prolapsed ovaries when replaced is as difficult as their reposition is easy. Having been replaced, they may be retained by the introduction of a pessary so constructed as to fill the retro-cervical pouch and leave no space between the uterus and the sacrum. Such a pessary is that devised

¹ Paul L. Mundé, M. D., Transactions American Gynecological Society, volume iv.

by Thomas, and known as the bulb pessary. When the prolapsed ovaries are enlarged, inflamed, and hyperæsthetic, their reposition may succeed, but the immediate introduction of a pessary is usually impracticable. If they are very much inflamed, the better plan is to confine the patient to her bed for a few days, and by antiphlogistic measures (hot vaginal baths, tincture of iodine to the vaginal vault, glycerine tampons, perhaps leeches to the cervix) endeavor to allay the inflammation before attempting the reduction and application of a permanent support. If the parts should still be too tender, the posterior vaginal cul-de-sac first, and then the whole vagina, should be gently but firmly packed with disks of cotton, sheep's wool, or marine lint, soaked in carbolized glycerine and squeezed dry, and introduced one by one, until the uterus and vaginal roof have been furnished a soft and firm support. This tampon should be renewed each twenty-four or forty-eight hours.

If the prolapsed ovaries, besides being inflamed, are attached to the bottom or sides of Douglas's pouch by fresh or old adhesions, our therapeutical measures are restricted to the removal of the inflammatory signs and the relief of pain by the remedies already indicated, namely, narcotic rectal suppositories, preferably hyoscyamus, cannabis indica, and iodoform, if sufficiently powerful, instead of opium. If these do not avail, and the regularly recurring menstrual oöphoro-neuroses endanger the intellect, the removal of the ovaries may be the only hope of cure; and this may be a scant one, on account of the greatly increased danger to life from the operation under these circumstances.

MEASUREMENTS OF THE UTERINE CAVITY IN CHILD-BED.¹

Dr. A. D. Sinclair contributes a paper with statistical tables based upon one hundred and eight cases, observed either by himself or Dr. W. L. Richardson. The importance of these experiments is readily seen when we consider that we were formerly taught that six or eight weeks were required to accomplish the involution of the uterus; whereas it is here shown that the process, in the large majority of cases, is completed within eighteen days, as measured by the sound passed carefully into the uterine cavity; and this, too, when, in a large proportion of the cases, the patients were suffering from some complication, as fissures of the cervix or perinæum, etc., etc., which are likely to have a deleterious effect upon involution. The author expresses the hope that these experiments may be pursued by others, and that at some future time more extensive results may be obtained.

— In the last session of Congress of the United States at Washington, May 24, 1880, the committee on naval affairs reported a bill in support of a proposed international commission to agree upon standard tests for color-blindness and visual power in navies and merchant marines, and standard requirements of these faculties. Resolves in recommendation of this commission have been passed by the American Ophthalmological Society at their Newport meeting, the ophthalmological section of the British Medical Association at Cambridge, and the International Congress of Ophthalmology at Milan. The next United States Congress will act on this bill to initiate the commission.

¹ Transactions American Gynecological Society, volume iv.

Hospital Practice and Clinical Memoranda.

NOTES OF CHANGES SEEN IN THE EYES OF TEN CASES OF GENERAL PARALYSIS OF THE INSANE.

BY CHARLES H. WILLIAMS, M. D.

THROUGH the kindness of Dr. H. R. Stedman, I lately made an ophthalmoscopic examination of ten cases of general paralysis at the Danvers Hospital, and as the number of recorded cases is not large the following notes are given:—

	Duration of disease.	Size of pupils.	Reaction to light.	Ophthalmoscopic changes in fundus.
No. 1. E. B. H.	Under 1 yr.	Small.	Poor.	No change.
No. 2. C. D.		Small.	Poor.	No change.
No. 3. J. W. D. S.		Left smaller than right.	Poor.	Both eyes, disc reddish gray; arteries slightly contracted; scleral ring well marked, especially in right.
No. 4. W. D.		Small.	Poor.	Both eyes, disc slightly whiter; arteries smaller than normal.
No. 5. G. F. S.	3½ yrs.	Small.	Poor.	Both eyes, disc slightly whiter than normal; blood-vessels unchanged.
No. 6. J. B. S.	4½ yrs.	Small.	Poor.	Both eyes, disc whiter than normal; arteries smaller; the surface of discs has a slightly hollowed, excavated look.
No. 7. M.		Normal.	Good.	Right eye, a slight band of white fibres crosses over the vessels just before they pass out from the disc.
No. 8. B. F. L.	1 yr.	Small.	Sluggish.	Both eyes, slight hyperæmia of disc; veins somewhat enlarged.
No. 9. E. M.	1 yr.	Normal.	Poor.	Both eyes, disc striated and tendoned; on temporal side not to be distinguished from general tint of fundus; veins slightly enlarged. With ophthalmoscope a hypermetropia of 6 dioptres was found in each eye. Lens of right eye had a small opacity in anterior part in head of pupil.
No. 10. D.		Small.	Poor.	Crescentic posterior staphyloma on outer border of disc; myopia; otherwise normal.

Different observers have reported various ophthalmoscopic changes in this disease; John having found about fourteen per cent. of atrophy of the optic nerves, and Albutt speaking of a preliminary stage of congestion which some others have failed to see.

In the above cases it will be noticed that the commonest symptoms were small pupils, with slow and poor reaction to light, when the eye was quickly illuminated by the mirror.

In four cases no change was noticed in the fundus which could be referred to the nervous disease.

In four cases, including Nos. 5 and 6 where the disease was of three and one half and four and one half

years' standing, slight signs of atrophy were found at the disc, which were most marked in the case of long-standing.

In two cases, each of about a year's duration, evident signs of congestion were seen about the disc; in one case a slight hyperæmia, in the other an appearance of slight neuritis; but in this case there was also found an uncorrected hypermetropia of some six dioptries, which may, to a certain extent, account for the greater congestion.

Attempts were made to ascertain the acuteness of vision and other data; but the answers were found, in most cases, to be unreliable.

IN-GROWING EYE-LASHES.

BY DAVID COGGIN, M. D., SALEM.

THERE are few general practitioners who have not had patients, chiefly from the laboring class, suffering from trichiasis, commonly of the upper eyelid, and sometimes in such a degree as to almost incapacitate them from following their usual avocations. Heretofore the many operations that have been performed for its relief have by no means been wholly satisfactory, while the execution of some of them has been the reverse of facile.

In the *Annales d'Oculistique*, tome lxxxi., page 146, Dr. Warlomont, the well-known ophthalmic surgeon of Brussels, speaks highly of an operation, devised by Anagnostakis, and modified by Lebrun, which is thus done: After arresting the circulation in the affected lid, by means of Snellin's or any other suitable clamp forceps, an incision is made through the skin only, along the entire length of the lid, and about two mm. distant from the row of lashes; then the upper flap (embracing the skin alone) is dissected as far as the superior border of the tarsal cartilage.

This done, four or five fine catgut sutures are inserted by means of a hollow needle (but an ordinary one in a good holder answers very well). The needle is thrust through the skin between the lashes and the line of the incision (the dissected flap being held up out of the way by an aid) and is then made to pass under the connective tissue and the orbicularis muscle and along the cartilage till it emerges at, or a little above, its superior border. These sutures, which are perpendicular to the edge of the lid, and equidistant from each other, are tied so as to strangle the tissues included in them. The dissected flap of skin is now drawn down in place, and the sutures are thus concealed. The sutures gradually cut through the parts beneath, with but little suppuration, and become absorbed, leaving cicatricial tissue behind, which helps to maintain the upturned margin of the lid in its new position. The distinguished advocate of this operation claims for it many advantages over the older ones, among which are these:—

It is subcutaneous and leaves no visible scars, which in some cases is obviously very important.

Its effect is to correct the position of the tarsal cartilage, and at the same time to carry the ciliary border away from the globe.

In severe cases it readily allows the removal of a wedge-shaped strip of the cartilage, — Streetfield's operation (my results were the best when I did not thus groove the cartilage).

The fullness and mobility of the skin of the lid are not affected, nor is the integrity of the margin interfered with.

Dr. Green, of St. Louis, the American editor of *Carter on the Eye*, performs an operation similar to the above with the exception that he includes the skin in the sutures, while to facilitate the tilting out of the ciliary margin of the lid he makes "a bold longitudinal incision through the conjunctiva and tarsus, from one end of the tarsus to the other, and parallel to and about a line or a line and a quarter distant from the free border of the lid." The groove made by it is allowed to fill with granulations, which tend to remove still further the misplaced lashes from the eye. This incision apparently proved an important addition in some of the cases in which I tried it, and I opine that its performance is likely to be ordinarily attended with better success when doing the above described operation than when it is omitted.

In the original Anagnostakis operation the needle is carried immediately up beneath the skin, or rather on the surface of the exposed muscle, till it enters the fibrous tissue covering the cartilage, while by the Lebrun method it passes beneath the connective tissue and muscle. It was by following the first procedure that I attained the best results (combined with the conjunctival incision), though as yet I have not operated enough times to allow me to speak *ex cathedra*. It should have been stated earlier that, on drawing down the dissected flap of skin over the seat of the sutures, it is not necessary to unite the cutaneous edges of the wound with sutures, as immediate union occurs and in a short time there is scarcely a trace left of the incision. Only the lightest, if any, dressings are required. Within three days after being operated upon, laboring men have resumed their work without inconvenience.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. KOTCH, M. D., SECRETARY.

DECEMBER 27, 1880. DR. JAMES C. WHITE, permanent chairman, presided.

DR. E. S. WOOD read a paper on *The Average Daily Amount of Urine: Its Importance in Diagnosis*, which may be found on page 25 of this number of the JOURNAL.

DR. T. B. CURTIS thought that Dr. Wood's paper was exceedingly interesting and instructive, as an opportune protest against an error still too prevalent in the profession, which consisted in supposing that the examination of single specimens of urine could suffice to establish or controvert the diagnosis of renal disease. Samples of water were often sent to the urinary analyst with the expectation that a statement of the condition of the kidneys would be returned in exchange. It is now, however, universally recognized by all the authorities that albuminuria may exist as a temporary functional disturbance, in the absence of any organic renal disease, if not, indeed, as lately maintained by Runeberg and others, in full bodily health. Such is also the case as regards the occurrence of certain forms of urinary casts. On the other hand, the most com-

mon and fatal form of chronic Bright's disease, namely, interstitial nephritis or renal cirrhosis, may be unattended by albuminuria, as well as by casts, dropsy, or renal pain, until an advanced or complicated stage of the disease. In certain cases, even, as shown by Bartels, Mahomed, and others, a fatal termination in cerebral uræmia may be reached without albuminuria having ever been detected, in spite of repeated careful examinations of the urine. Therefore "albuminuria" and "Bright's disease" have now ceased to be synonymous and exchangeable terms, though still erroneously so considered by many physicians and surgeons, and so laid down in the last edition (1869) of the nomenclature of diseases of the Royal College of Physicians of London.

The diagnosis of renal disease, in surgical as well as in medical cases, like that of typhoid fever, should be based mainly and primarily upon the rational signs and circumstantial evidence, rather than upon the presence or absence of albuminuria, casts, renal pain, and dropsy, formerly considered pathognomonic symptoms. In one kind of renal disease, namely, chronic parenchymatous nephritis, the urine is, perhaps, sufficiently characteristic, by its specific gravity, sediment, and abundant albumen, to allow of a correct diagnosis based solely upon the results of urinary analysis; but in the other forms of chronic disease of the kidneys, such as primary renal cirrhosis and secondary interstitial nephritis (sometimes called "surgical kidney"), the urine may at any period, or at all periods, be found normal or nearly so. The most valuable signs to be derived from the renal secretion in these forms of disease consist not so much in the qualitative changes, formerly alone considered significant, as in the variations of *quantity*, consisting chiefly of polyuria, upon the importance of which the reader has laid due stress.

In conclusion, Dr. Curtis would urge that we, as physicians, should bear in mind and imitate the wise caution shown by Falstaff's doctor. In the play of Henry IV. (Part II. Act I. Scene 2) the knight enters, followed by his page bearing his sword and buckler. "Sirrah, you giant," says Falstaff, "what says the doctor to my water?" To which the page makes answer, "He said, sir, the water itself was a good healthy water, but, for the party that owed it, he might have more diseases than he knew for."

In answer to a question by Dr. S. Cabot, Dr. Wood said that the daily amount of urine passed in health is about fifty ounces.

Dr. ELLIS called attention to the cases of hysterical anuria, where the secretion may cease for days without the appearance of symptoms so frequently associated with suppression.

Dr. T. B. CURTIS remarked that hysterical anuria or suppression of urine had been most carefully studied by Charcot among his patients at the Salpêtrière Hospital, and was fully described in his clinical lectures on diseases of the nervous system. In Charcot's hysterical patients the disturbance lasted several days, the longest duration recorded by him being ten or eleven days; in some vicarious vomiting existed. These cases remind one of the form of anuria described by Roberts under the name of "obstructive suppression of urine," due to blocking of the ureters by calculi. A "non-obstructive" form of suppression exists which occurs as a result of surgical procedures in the urethra or bladder, and accompanies severe "urethral fever." In these cases, which are apt to be rapidly fatal, recov-

ery is not uncommon after a duration of about twenty-four hours, but Sir Henry Thompson has seen but one recovery after forty-eight hours of such suppression. In the obstructive form, on the other hand, complete anuria may exist for many days, as many as fourteen or even twenty days,¹ with ultimate recovery, on the blocked ureter again becoming pervious to urine. For upwards of a week no urine may be passed, the bladder remaining empty, the patient eating and drinking as usual, and complaining of little or no distress or discomfort, except, perhaps, sleeplessness. Later, ominous symptoms, the first of which consists in muscular twitchings, are apt to supervene. Dr. Curtis had seen two such cases of obstructive suppression, due to blocking of the ureters, each lasting a week, and ending in recovery, with voiding of the calculi.

Dr. WEBBER said that the measurement of the urine is valuable not only for diagnosis, but also is of as much importance to aid in forming a correct prognosis, and to guide in the treatment. This is especially true in parenchymatous nephritis, whether acute or chronic. If the amount passed in the acute disease varies according to the course described by Dr. Wood as favorable, the prognosis is of course favorable; if, however, the amount is persistently small, it is less favorable. In chronic diseases, if the amount passed is continuously much below normal there is more reason for apprehension, or if, having been considerable, the amount diminishes, the prognosis is less favorable than when nearly the normal amount is passed. Also, in treatment, a knowledge of the amount of urine passed daily is a valuable guide, a diminution in the amount indicating that other or more decided measures are called for. While administering digitalis a sudden diminution in amount of urine is of great importance as pointing the probability that that drug is acting unfavorably.

The effect of hot air or hot-water bath upon the secretion of urine in acute or chronic nephritis is of interest. The benefit is most marked in freshly acute cases, or where an acute attack supervenes upon an old chronic disease. The hot-air bath may be used with comparatively vigorous patients at a temperature of 110° F. to 130° F. for fifteen to thirty minutes. The object being to act on the skin in producing perspiration, it is not necessary to increase the heat after the skin acts freely, though the temperature may be but slightly raised. Feeble patients, of course, bear the bath less well than the vigorous, and it should be used in such cases with caution, especially if there is cardiac complaint. Hot-water bath, 100° F. to 105° F., for fifteen to thirty minutes will sometimes act better than the hot-air bath, and has the advantage of its cleansing effect. The day after the urine will frequently show a marked increase in amount, and severe dropsical effusions may speedily disappear under such influence. Unfortunately, some patients who most need this relief cannot be made to sweat by these means.

Dr. ELLIS inquired whether the amount of water taken during and after the hot-air bath had been noted, as he considered this an important factor in explaining the increase of urine.

Dr. WEBBER remarked that a theory may be given for the action of the hot bath: The equilibrium between the tension of the vessels and the secreting power of the kidneys is changed by disease, and thus

¹ See a case reported by James Russell, Medical Times and Gazette, November 27, 1880, page 616.

a variation of tension which would not be noticed in health may cause a diminution of secretion; the action of the skin will then relieve the kidneys in a chronic case, just as the same relief is obtained in acute congestion, and the equilibrium which is most favorable for the action of the diseased kidneys is restored.

DR. J. J. PUTNAM spoke of the cold pack causing greater activity of the circulation and furnishing more water without any increase of the amount taken, thus perhaps answering the question of Dr. Ellis.

DR. ELLIS suggested that the elimination of injurious elements through the skin might relieve the nervous centres, and by this means the action of the heart might be increased, with the usual result of increasing the amount of urine.

DR. T. B. CURTIS was inclined to doubt if any true diuretic agent existed which acted as a direct stimulant of the renal secretion, without being dependent for its diuretic effects upon cardiac stimulation or upon the collateral ingestion of large amounts of water. Saline substances introduced into the blood cause thirst and drinking of water, whereby diuresis is brought about. Here the water is the diuretic. Digitalis is commonly supposed to be a true diuretic; but, according to the elaborate experimental and clinical investigations of Professor Hirtz (of Strasburg), this drug does not act at all as a diuretic when administered to healthy subjects; in heart disease, on the other hand, when cardiac failure supervenes, with lowered arterial tension, venous stagnation, and *dropsy*, then digitalis in suitable doses produces diuresis by enabling the enfeebled heart to pump out the dropsical effusions. The diuretic effect is the measure of the utility of the medication; when the quantity of urine begins to diminish digitalis has ceased to be useful.

DR. T. B. CURTIS inquired of Dr. Webber whether he had had any experience of the use of digitalis as a cardiac stimulant in the late stages of chronic interstitial nephritis, when failure of the heart had set in and uramic symptoms were observed or apprehended.

DR. WEBBER replied that he could not remember such a case with sufficient detail to mention the particulars, but that he was in the habit of using digitalis in nephritis under all conditions where it promised benefit, and that he considered it a very valuable agent.

MYELITIS.

DR. WEBBER reported the following case:—

About a month ago a patient entered the City Hospital whose case is of some interest. He had visited a friend the day previous to his admission, and sat outdoors in the cold for an hour or two; felt chilly. On admission he had not passed water for nearly twenty-four hours; forty-five ounces were drawn. The next day there was numbness, very slight in degree, in both legs, increase of tendon-reflex, and slight motor weakness in the legs. The numbness continued only a few days; he was soon able to pass his urine. The motor symptoms remained nearly stationary. He seemed but slightly ill, and in a fair way to recover, but he subsequently became weaker, motor power being most affected in the right leg. Sensation still remains unaffected. There has been lately retention of urine and cystitis, though he is improving again. The points of interest are the retention of urine occurring so soon after exposure, with so slight symptoms of spinal disturbance. Also the final development of the more serious symptoms after partial recovery from the slightest

is of interest, and the fact that motion is so much more affected than sensation.

BIMECONATE OF MORPHIA.

DR. T. B. CURTIS wished to call the attention of the society to a preparation of morphia, namely, the *bimeconate*, which he believed to possess advantages rendering it superior, for certain exceptional cases, to all other opiates. Morphia, in its natural condition in the poppy, is combined with meconic acid. The bimeconate, Dr. Curtis believed, was first introduced into therapeutics in 1839 by Squire, the author of the *Companion to the British Pharmacopœia*, in the form of a "solution of bimeconate of morphia," said to be of the same strength as laudanum, and to possess in an eminent degree the sedative powers of morphia, but having this superiority, that it disturbed the head, stomach, and bowels less than any other preparation of opium. For hypodermic use this solution, according to Squire, could be evaporated to one twentieth of its bulk, so that three minims were equal in power to a half grain of acetate of morphia. The bimeconate of morphia can now be obtained of druggists in the crystalline form, and can be administered in all the usual ways, like the other salts of morphia. In prescribing this salt, however, it should be borne in mind that it contains only half as much morphia as an equal weight of the sulphate. To obtain similar effects to those of the sulphate, therefore, a double dose must be given.¹

Dr. Curtis had recently met with three patients who were inconvenienced in various ways by opiates to such a degree that, although suffering much pain and distress, they were debarred from using these means of relief. One was an elderly lady who had for some weeks been afflicted with protracted hepatic colic and jaundice, due to gall-stones, and followed by severe hepatic pain and nausea. Opium and morphia caused intolerable nausea and vomiting; but the bimeconate, the use of which had already been suggested by her previous medical attendant (Dr. Daniel Stimson, of New York), was taken in fair doses with little or no inconvenience, and was productive of much relief and benefit. Another case was that of an old gentleman who greatly needed the assistance of anodynes, but preferred to abstain from opiates on account of the intolerable itching, combined with wakefulness, which invariably followed their administration. This patient, however, used the bimeconate in full doses successfully, without the production of pruritus. The wakefulness continued to follow the use of morphia, even in the form of the bimeconate, but a ten-grain dose of chloral added sleep to the relief from pain brought about by the anodyne. The third case was that of an elderly patient, of a neurotic temperament, suffering from a very protracted and severe epididymitis. Past experience had so convinced him of the ill effects produced in him by opiates that, when first seen by Dr. Curtis, the patient, although suffering severely every night, was using suppositories containing only one sixth of a grain of opium. The bimeconate was tried, and was taken nightly for many weeks in doses ranging from a quarter to three quarters of a grain without any ill effects.

Dr. Curtis did not regard his own experience as

¹ Sulphate of morphia, $2(C_7H_7NO_2)SO_4H_2 + 5H_2O$, contains 75.2 per cent. of morphia; the bimeconate, $C_7H_7NO_2 \cdot 2(C_7H_7O_7)$, contains only 41.6 per cent. of the alkaloid, or even a less percentage if combined water is present, as is usually apt to be the case.

sufficiently extensive to demonstrate conclusively the superiority of the bimeconate of morphia for the use of patients who were intolerant of opiates; but he thought that the results which he had obtained were sufficiently striking to warrant him in calling attention to this little-known remedy, in order that its efficacy might be tested and verified by other observers.

DEODORIZED TINCTURE OF OPIUM.

DR. T. B. CURTIS said that errors were frequently committed in the administration of the *tinctura opii deodorata*, a favorite opiate with many practitioners. The dose of this preparation is said to be the same as that of laudanum, of which thirteen minims or twenty-five drops equal one grain of opium. The deodorized tincture, however, is not really a tincture, but a watery solution of the extract of opium, and its drops are equal to minims. Therefore, if it is used in drops, like laudanum, a double dose will unintentionally be given. The dose in drops should not exceed the number of minims considered necessary.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

ANEMIA IN INFANCY AND EARLY CHILDHOOD.

At a stated meeting of the New York County Medical Society Professor A. Jacobi read an elaborate paper on the above subject. He commenced by saying that pathological processes were but the expression of physiological functions performed under abnormal conditions. The latter were anatomical in their nature, and he regretted to say that the anatomical predisposition of the different tissues to definite pathological states was a subject that was greatly neglected by the profession. As a general rule, every treatise on a special disease ought to commence with a statement of the anatomical predispositions of the part or parts affected by it. Thus, in the paper which he had read some time previously before the society, on the subject of infant diarrhoea, he had endeavored to point out that in early life there was a normal tendency to loose passages, partly on account of the anatomical characteristics of the intestinal tract, and partly on account of the nature of the food ingested. On the other hand, there was an obstinate form of constipation occurring in infants and young children, due to certain anatomical characteristics peculiar to that period of life, to which he had called the attention of the profession ten years ago, but which had not seemed to attract the notice which he believed it deserved. It had been found that until the third or fourth month of foetal life there was no colon ascendens whatever, and at birth this portion of the large intestine was still very short. Notwithstanding this, however, the colon descendens, and particularly the sigmoid flexure, was of excessive length in infants, and in the cases of constipation referred to it was the repeated bending of the elongated gut which interfered with the passage of the faeces.

Passing to the subject of rachitis, Dr. Jacobi alluded to the relatively large size of the liver and the arteries, the comparatively small lungs, and other anatomical peculiarities of the affection; and in this connection spoke of the influence of the abnormal abundance of cholesterine, from the increased size and activity of the liver, upon the osteous development. He then spoke of the characteristics of the lymphatic system on which

the development of the affection which we call scrofula depended, and stated that in his recent work on diphtheria he had pointed out that it was on account of the peculiar condition of this system, incident to early life, that the disease was especially dangerous in infancy.

He next considered the peculiarities of the blood at this period. In the newly born it had been found by Dennis in 1830 that the blood in the umbilical artery contained 22.2 per cent. of hæmoglobine, while in the vessels of the mother it contained only ten per cent. The high percentage of hæmoglobine met with at birth, according to Dennis, diminished until the age of six months, when there was a slow increase in its proportion up to the age of thirty years. The blood of the fœtus and of the newly-born child contained but little fibrin; but vigorous respiration soon made great changes in this respect. The infant and the young child had, and required, more blood in proportion to the entire weight than the adult; but the blood contained more salts and more leucocytes, with less fibrin and less albumen. With the increase of the size of the body the peripheral blood-vessels grew. The heart was relatively smallest, in proportion to the great size of the large arteries, during the first year of life, and particularly in its second half. The largeness of the pulmonary vessels made more active work for the lungs; but it also gave rise to a greater tendency to disease in the young.

In children, unlike adults, there was not only reproduction, but a constant growth, and hence all the organs were continually in occupation. There was an incessant busy metamorphosis of matter going on, and all this activity was at the expense of the system; the blood containing less solid constituents than that of the adult. In the healthy child there was the most accurate balance, so to speak, between its physiological capital and labor, and the slightest mishap was sufficient to derange this. The vulnerability thus being very great, cases of anæmia were met with every day in practice, and these were either uncomplicated or complicated, and perhaps incurable. Anæmia might be idiopathic or sympathetic. When the matter was sifted, it was evident that every such condition was in reality secondary, and could not therefore be strictly called idiopathic; but the same objection held good in regard to the use of the term in connection with all other affections. When the local trouble was not complicated with an affection that was recognizable and removable, it was sufficiently correct, therefore, to call it idiopathic.

The large majority of anæmias were of a secondary character, since every disease occurring in infancy was apt to give rise to anæmia, and very few affections could run their course without producing it. It was found also that one attack of disease in an organ usually predisposed the parts to subsequent ones.

Dr. Jacobi then alluded to various forms of hæmorrhages liable to occur in early life; after which he said that, as a rule, acute anæmia was more easily overcome than that of a more chronic character. It had been found that young animals were able to survive starvation for a much shorter period of time than older ones; and in the Prussian army it had been proved that the recruits which had been born in the years of famine were very much less robust than those born in other years. Of like character were premature children, and those born of delicate parents, who were liable to cyanosis, various forms of neoplasms, etc. Amongst the causes of anæmia in young children were acquired endocarditis, protracted diarrhoea or constipation, malaria,

leucoerythæmia, pernicious anæmia (of which only two cases at this period of life had been described), sleepless from any cause, rachitis, syphilis, fatty liver (which was more frequent than commonly supposed), enlarged lymphatic glands, the so-called scrofula, diseases of the lungs, and diseases of the bones, which were apt to finally result in amyloid degeneration of various organs.

In anæmia both the skin and mucous membrane were pale, or yellow, and flabby. The fat and muscular tissue usually failed first, but there were cases in which the fat remained, and was even deposited in increased quantities, on account of the incomplete combustion taking place in the system. This was apt especially to be the case in rachitis, and an illustration of the point was seen in the appearance of accephalic and other monsters, in which there was frequently a large amount of adipose tissue in consequence of the exclusively venous blood with which they were supplied. In anæmic conditions emaciation of the brain did not correspond with that of the rest of the body, — this organ being nourished at the expense of other parts of the system, — and hence any baby with depression of the fontanelles (which indicated emaciation of the brain) was to be considered in danger from inanition.

When murmurs were heard in the heart and large arteries in early life it was usually safer to attribute them to organic disease rather than to merely functional derangement; the trouble in all probability being due to acquired endocarditis.

This affection was much more common than was ordinarily supposed. It was usually the result of rheumatism, which in children was so much less marked than in adults that it sometimes escaped notice altogether, and was frequently mistaken for "growing pains." Yet, slight as the rheumatic trouble, it was much more apt to be complicated with endocarditis and to result in organic disease of the heart than when it occurred in adults.

Sometimes when children were noticed to cry and to sleep badly at night, this was due to simple anæmia, and a good night's rest might be secured by the proper administration of food or stimulus at bedtime. In infants and young children the condition of the pulse was one of the most unreliable of symptoms. During sleep it was better to feel it at the anterior fontanelle than in the radial artery; but if the child were awake it would be found that a little muscular exertion affected it perceptibly. Very few anæmic children had a good appetite, except, perhaps, at the beginning; and, as a rule, both appetite and digestion were markedly impaired in anæmia. Catarrhal trouble in the respiratory organs was also very frequent in this condition. In consequence of the thinness of the blood and the state of the vascular system, serous transudation was also apt to occur. In the same way anæmic women usually suffered from an unusually large menstrual flow. Again, acute diseases in anæmic children were, as a rule, much more serious than the same affections in robust children. As had before been stated, the predisposition to anæmia was very great in the young; and the causes producing it being so numerous great care was necessary to prevent its occurrence. The danger of anæmia was always greatest, as we would naturally expect, at the period of most active growth.

The nursing, therefore, was the most exposed to its risk, and the two great factors in its production at this

age were insufficient and improper food. Crying babies, it should not be forgotten, were often starving babies; and in such children any drain upon the system that occurred was almost sure to terminate life. Many an alleged case of constipation, when fully investigated, was found to be simply one of insufficient food. Improper food, however, was a much more frequent cause of anæmia than too little nourishment. Thus, nursing during pregnancy or menstruation was manifestly productive of the condition, and the same was true of diseased states of the mother from syphilis, anæmia, etc. Dr. Jacobi then gave a sketch of his well-known views on infant feeding when weaning became necessary, and stated that these had been expressed in full in the first volume of *Buck's Hygiene*. He also spoke of the general habits of life required in children in addition to proper feeding, and incidentally remarked that too many books and too few skates were bought for Christmas.

Amongst remedial agents, iron had long been considered as that which held the first place in anæmia and chlorosis. It had been believed to be of service mainly because it was supposed to have the property of increasing the red blood corpuscles; but this was still a doubtful point, and even if it did this to a certain extent it seemed to act beneficially in other ways also. There was plenty of iron in almost every article of food, and cases of chlorosis were continually occurring which could not, therefore, be due to merely a lack of iron. When iron was assimilated it was first dissolved in the form of an albuminoid, and it had been found to cause an increase of temperature and of the vascular tension. Hence its use was contra-indicated in acute inflammatory fevers, but indicated in septic fevers.

As to the form of iron to be used in any given case, that must depend to a great extent on the peculiar conditions existing. The preparations that he preferred were the lactate, the hypophosphate, the subcarbonate, the tincture of the chloride, and the syrup of the iodide. The last-named preparation fulfilled two indications, and was of service particularly in diseases of the glands and of the lungs. One advantage that it possessed was that it was easily decomposed, and the result was the setting free of the iodine, which acted as an admirable corrective of fermentation. The lactate was useful especially on account of its not interfering with digestion, and the subcarbonate was also a valuable preparation. Larger doses of this preparation could be given than of any of the others, and to a child of two years of age should be given from four to eight grains a day. Combined with three times this quantity of bismuth and a much larger amount of bicarbonate of soda, it was very serviceable in anæmia accompanied by gastric irritation. The tincture of the chloride was the one among the ferruginous preparations which was regarded as a vascular irritant, and it was the one mainly indicated, therefore, in conditions of low vascular tension. When there was catarrh of the stomach the pyrophosphate was perhaps the best preparation. Chronic anæmia was far more common than acute, and in this the various preparations in turn could usually be employed with advantage. After speaking of transfusions of blood in general, he alluded to the simple method which had recently been resorted to with apparent success, namely, the withdrawal of blood from the veins of a healthy individual and the direct injection of it into the veins of the anæmic sub-

ject by means of the ordinary hypodermic syringe. As regards the ease with which it could be performed, it had manifest advantages over the more complicated procedures usually adopted, but more experience with it was required to establish it on a firm basis.

Other medicinal agents besides iron were frequently of service, especially in chronic anemia, and one of the best of these was arsenic. To a small child one drop of Fowler's solution might be given three times a day after eating. It was of special service in cases in which there was a peculiar torpid condition of the stomach, due to deficiency both of the gastric juice and of nerve power.

Strychnia was also a useful adjuvant to other measures, and might be given to the amount of one fortieth of a grain to a child two years of age. Phosphorus could be given in about the same doses, and was particularly indicated in all cases where there was any disease of the bones. For several years he had been in the habit of prescribing phosphorus in caries and other bone affections, and he had found that it was of decided benefit. Thus, cases such as formerly took years in which to run their course now did so in as many months, if systematically treated with phosphorus. From one one hundred and fiftieth to one one hundredth of a grain might be given three times a day.

In a large number of cases cod-liver oil was of the greatest service, but there were some contra-indications against its use which were apt to be overlooked. Thus, most children did not bear it well in summer time, as at this season it was apt to occasion gastric irritation and diarrhoea. Some children, indeed, did not bear it well at any time, and in such instances other agents had to be substituted for it. In a great many cases, however, some preliminary treatment had to be gone through with before the little patient was in a condition to take either cod-liver oil or iron with advantage.

QUARTERLY MEETING OF THE RHODE ISLAND MEDICAL SOCIETY.

THE regular quarterly meeting of the Rhode Island Medical Society was held in Providence, December 15th, eighty-five Fellows attending.

Herbert Terry, M. D. Harv., of Providence, was elected a Fellow.

Delegates to state medical societies were appointed as follows: Maine, G. W. Jenckes, of Woonsocket, G. H. Stanley, of Pawtucket; New Hampshire, C. W. Fabyan, of Providence, J. O. Whitney, of Pawtucket; Vermont, Ariel Ballou, of Woonsocket, R. H. Carver, of Providence; Massachusetts, E. T. Caswell and W. R. White, of Providence; Connecticut, T. W. Perry, and A. G. Browning, of Providence; New York, S. W. Butler, of Newport, G. D. Hersey, of Providence; New Jersey, W. H. Palmer, of Providence, W. J. Burge, of Pawtucket.

Dr. C. H. Fisher exhibited a series of ingeniously carved splints, devised by Dr. J. W. Smith, of North Scituate, for treating a severe gun-shot wound of the arm, with compound fracture of the humerus extending into the elbow-joint. The case seemed at first to demand amputation, but conservative surgery triumphed, and now, one year after the accident, the patient has a useful arm.

Dr. T. W. Perry reported several cases of syphilis coming under his observation during thirty-five years of practice:—

CASE I. In 1816 a gentleman contracted syphilis and had the usual secondary symptoms. After two years' treatment, he married, and neither his wife nor either of her five children have showed any syphilitic symptoms. In 1863 the patient's hair commenced falling off in spots, leaving the scalp shiny. The alopecia continued, until, in six months, not a hair was left on his body. Otherwise he remains in good health.

CASE II. A young man of twenty years had syphilis of a mild type, of which he was supposed to be cured. He afterwards married, and became the father of eleven children, all but the youngest dying in youth. At the age of forty-seven epilepsy appeared, and at fifty he died from falling on a stone pavement during a convulsion. A post-mortem examination revealed a node growing from the inner table of the calvarium and projecting three fourths of an inch into the cranial cavity.

CASE III. A student acquired syphilis at nineteen. Married at twenty-two, thinking himself to be thoroughly cured. Eight children issued. The father developed brain symptoms, and committed suicide at forty-five. The wife had only mild symptoms of contamination, such as losing a fine head of hair. The first child died in a few days, covered with a syphilitic eruption. The second child lived, but was of too feeble mind to be educated. The six other children were sons: one committed suicide at twenty-two; the next is insane; the third died of some brain trouble at twenty-four; the fourth committed suicide at about the same age; the fifth occupies a felon's cell; the youngest is the only one having a tolerably well-balanced mind. In the history of this unfortunate family there was no hereditary vice other than syphilis.

In the discussion following Dr. Perry's paper reference was made to the possibility of communicating syphilis by vaccination. Admitting that there is a risk of syphilis when humanized virus is used, the following points were insisted on:—

- (1.) Pure vaccine lymph produces only vaccinia, and cannot transmit any other disease.
- (2.) The use of genuine bovine virus is safest and always preferable.
- (3.) If humanized virus is to be employed, take the pure lymph on the eighth day, free from contamination with pus, blood, or cutaneous secretions, but never from suspected children.
- (4.) The practice of vaccinating heifers with humanized virus, and selling the lymph thus secured for genuine bovine virus, if perpetrated, is an imposition on physicians and endangers public health.

Dr. L. F. C. Garvin defended the use of the metric system in writing prescriptions, and with a blackboard illustrated the translation of the familiar apothecary weights into metric equivalents.

Dr. George Capron read an essay on the use of obstetric forceps, particularly in lingering labor; advocating the use of the long forceps in preference either to turning or craniotomy.

Dr. E. B. Eddy presented a paper on Disease of the Prostate.

Dr. Ely believed rectal examination to be superfluous in diagnosing this affection. Residual urine, detected by passing a catheter immediately after micturition, is sufficient evidence.

Dr. Caswell deprecated the use of force in passing catheters. These cases must be approached with great gentleness, and different cases require different methods

of procedure. Lately, Dr. Caswell saw a case which defied all attempts at catheterization until he tried a soft metallic catheter bent nearly into a circle. In most cases three times a day is too often to introduce a catheter. Better pass the instrument once daily and wash out the bladder, using hydrostatic pressure in preference to the syringe.

Dr. W. O. Brown recommended the use, in these cases, of a flexible woven catheter bent in a large curve, as described by Dr. Squire in *American Journal of Medical Sciences*, July, 1876.

Dr. Greely had uniformly succeeded in surmounting prostatic enlargement by using Mercier's elbowed catheter.

Recent Literature.

Photographic Illustrations of Cutaneous Syphilis. By GEORGE HENRY FOX, A. M., M. D., etc. New York: E. B. Treat, No. 757 Broadway. Price of each number [four plates] \$2.00.

This valuable atlas of plates representing the various syphilodermata is to consist of forty-eight specimens photographed from life and colored by hand. The first three numbers have just been received and are therefore noticed together. The atlases of Devergie (1826), of Ricord (undated, in hope of immortality), and of Cullerier, reproduced 1868, in this country, by the late Dr. Bumstead, hardly meet the requirements of to-day in this important branch of medicine, and we welcome this new-comer both for its own merits, and as a representative of the enterprise of American physicians, who, in the field of dermatology, are pressing hard after their German forerunners, and developing its practical, as those its scientific relations.

The narrow-minded and short-sighted policy of excluding syphilitic patients from our hospitals, and leaving them to spread disease through the community, prevents both students and physicians from becoming acquainted with the objective aspect of the syphilodermata, and good illustrations as well as descriptions are consequently imperatively demanded. Photographs colored by hand, however, require the greatest care in their treatment if they are expected to equal some of the superb chromo-lithographic representations of diseases of the skin hitherto furnished, and we notice that the same plates in different fasciculi possess varying degrees of merit, though all are quite good. The first fasciculus contains four quarto plates prepared by the artotype process, representing erythematous syphilis with the pigmentation and leucoderma which may follow the disappearance of a syphiloderm. These are excellent, the delicate tinting reproducing admirably the non-pronounced character of the lesion as to color.

The second fasciculus is composed of four plates portraying, respectively, lenticular, miliary, squamous, and papular syphiloderms. These also are highly creditable to the artist. The first and second, of necessity, have a slight tendency to pictorial development; the third attempts, with commendable but not perfect success, as difficult a task as there is, perhaps, namely, the accurate imitation of scales in relief; the fourth is typical and admirable.

The four illustrations in the third number are different from those given in the provisional list of what might be expected. They consist of I., syphilodermata

papulosum circinatum, which is very good; II., S. papulo-squamosum, open to the criticism already made above; III. and IV., S. papulo-pustulosum, the former more papular, the latter more pustular, and both well executed, but needing no special encomium or disparagement.

In the text accompanying these illustrations "the aim has been to present a practical exposition of the subject with special reference to points of diagnosis and treatment," and the writer has hit the mark.

E. W.

A Manual of Medical Jurisprudence. By ALFRED SWAIN TAYLOR, M. D., F. R. S. Eighth American edition from the tenth London edition; edited by JOHN J. REESE, M. D. Henry C. Lea's Son & Co. 1880. Pp. 933.

A special interest attaches itself to this book in the reflection that it is in a literal sense the last edition of its distinguished author's work; he had hardly completed the revision, whose fruit we possess in this new volume, when his death occurred, occasioning a loss to forensic medicine which may rightly be described as irreparable. It is said that Professor Taylor's lecture room was not an attractive one to medical students, but, fortunately for forensic medicine everywhere, his teaching has not been limited to the few who have attended the exercises within the gray walls of Guy's, and the numerous host of lawyers and physicians, who, since 1844, have confidently appealed to this manual to aid them in the resolution of difficult questions in all departments of medical jurisprudence will regret that the master's ripe and comprehensive experience is withdrawn, and that his work must henceforth be revised by other hands. It is surely unnecessary to present any minute analysis of the merits of a book so well and so favorably known as Taylor's Manual, or to indulge in any critical comments upon its characteristics; a review of Webster's Dictionary would be hardly more impertinent. It will suffice to remark that this new edition shows the signs of judicious revision. A great number of illustrative medico-legal cases which have occurred since the last edition was published are cited in their proper connection, and add much to the interest and value of the work; they comprise the bulk of the additions to the text. As an indication of the freshness of the work, we notice numerous references to medico-legal experience that has transpired during the year just ended; among these is a comment by the American editor upon that midsummer madness, the Tanner fasting exploit of last August. In these features and in others there is ample evidence that this admirable book will maintain its high place as a standard authority concerning the matters of which it treats.

On Slight Ailments: Their Nature and Treatment. By LIONEL S. BEALL, M. B., F. R. S. Philadelphia: Presley Blakiston. 1880. Pp. 353.

The name sufficiently indicates the purpose of the book. The author believes that most students of the present day graduate with too little knowledge of the minor ills, and wishes to show the importance of listening to patients' complaints and relieving their pains,

even when the pathological lesion is of little importance. The book embodies the substance of a series of lectures, and preserves something of the original style, though not the original form. The main portion of the book treats of the derangements of the stomach and bowels, though, as every one familiar with Dr. Beale's books on the microscope can imagine, a great deal of somewhat irrelevant but very interesting matter is incidentally introduced. The doctor has a firm belief in the efficacy of mercurials, and has a good deal to say about "biliousness," though he confesses himself unable to give a satisfactory definition of the term.

In speaking of constipation the author places his erities in an unpleasant position. "Many a severe article would never have seen the light if the critic's large bowel had been in good order at the time. Any of you who desire to excel in this department of literature cannot do better than cultivate indigestion and other derangements of the bowels." The directions for the medication of dyspeptics leave much to be desired. Though several courses of treatment are given, they are left for hap-hazard application.

The remaining subjects treated are Neuralgia and Rheumatism, the Feverish and Inflammatory State, Actual Changes in Fever and Inflammation, and Common Forms of Slight Inflammation.

It is hardly possible for any one to read the book without finding something with which he will fail to agree. Few, however, can fail to find something to profit by, and the book must lead every one to look more carefully after his minor cases, and to trace their connection with the severer forms of disease.

Ophthalmic and Otic Memoranda. By D. B. ST. JOHN ROOSA, M. D., etc., and EDWARD T. ELY, M. D., etc. Revised edition. New York: William Wood & Co. 1880.

Many parts of the book have been rewritten and some thirty pages of new matter selected. The authors repeat in their preface "that the work is rather a dictionary of Ophthalmic and Otic Science than a text-book; that it gives only a bare outline of the subject of which it treats, and that it is never to be recommended as a substitute for the larger works." If these warnings are heeded the little book may be of value. The danger is that it may be employed in a manner opposed to the advice given. For a work of its sort it is exceptionally accurate.

Atlas of Skin Diseases. By LOUIS A. DUNNING, M. D., etc. Part VIII. Philadelphia: J. B. Lippincott & Co. 1880.

Of the twelve numbers which are to compose the admirable atlas of Dr. Dunning eight parts have now appeared. The eighth fasciculus maintains the high standard of the previous ones. It comprises plates of erythema multiforme (papulosum); psoriasis; syphiloderma (tuberculosum); and tinea trichophytina (circinata et tonsurans). All are excellent. The second gives a delicate type of the disease, such as may appear upon anemic people, and one not furnished by most atlases. In the third plate the appearance of a few of the lesions, to be perhaps hypercritical, is somewhat too superficial, erythematous and, as it were, superimposed upon the skin, to represent the usual

normal syphilitic tubercle. Others are, however, capitally represented. As a whole these plates portray with great exactness the diseases as seen in practice. The text is clear and concise, and what we should expect from our leading writer upon dermatology. The press work is unimpeachable. The work as a whole will be priceless and should be possessed by every physician.

Treatise on Therapeutics. Volume III. By A. TROUSSEAU and H. PIDOUX. Ninth edition. Revised by C. PAUL, and translated into English by D. F. LINCOLN, M. D. New York: Wm. Wood & Co.

This volume completes the treatise. We have little to add to the criticisms on this translation which were referred to in the JOURNAL of a few months ago. The revisers of Trousseau's work have given us only trivial information in reference to the new drugs recently introduced to the medical profession, as illustrative of which criticism we refer our readers to the articles concerning jaborandi; and no mention has been made of salicylic acid and other familiar modern medicines. In view of these and other similar omissions it is rather a matter of regret that any pretended revision has been attempted, and that Trousseau's original text was not strictly adhered to. A partial revision has not materially improved this work when it is compared with the more modern treatises on therapeutics.

Yellow Fever: Its Ship Origin and Prevention. By ROBERT B. S. HARGIS, M. D. D. G. Brinton, M. D. Philadelphia.

This thin volume consists of three papers, reprinted from medical journals, on The Ship Origin of Yellow Fever, Practical Hints relating to Yellow Fever, and The Most Recent Utterances on Acclimatization and Endemicity. To these articles are appended two letters from Professor John Gamgee, — a short one addressed to the author, and a longer one to Rear-Admiral Ammen on the Inter-Oceanic Ship Canal and the Yellow Fever Law. Dr. Hargis thinks that no opinion could be sustained with more irrefragable evidence than that yellow fever originated in foul ships. He thinks, moreover, that under an adequate central administration by a medical board this disease "can be stayed, and extinguished for all future time from the bloody annals of controllable epidemics." In the course of his remarks the author pays his compliments to "obnoxious quarantines" and to Dr. Chaillé, of the Havana Yellow Fever Commission.

Clinical Lectures, and Cases with Commentaries. By HENRY THOMPSON, M. D., etc. Consulting Physician to the Middlesex Hospital. London: J. & A. Churchill. 1880.

Most of the papers composing this octavo volume of 200 pages appeared originally in the London journals, or in the Transactions of the Clinical Society of London. In general they are reproduced with few variations from the original form, and the author offers them as a legacy — *in memoriam* — to the Middlesex Hospital rather than to the public. Sixteen clinical lectures and twelve cases with commentaries make up the table of contents.

Medical and Surgical Journal.

THURSDAY, JANUARY 13, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Remittances by mail should be sent by money-order, draft, or registered letter to HOUGHTON, MIFFLIN AND COMPANY, Boston, Mass.

THE ACTION OF ANESTHETICS.

At its meeting in 1877 the British Medical Association appointed three gentlemen of Glasgow a committee to investigate the action of anesthetics. They have already published three preliminary reports, and now print a detailed account of their work from the date of their appointment to the present time, giving tables, diagrams, pulse and respiration tracings, and figures of instruments used.

The particular objects of study which the committee proposed to themselves were to discover wherein the special dangers of chloroform consist, and to seek for some anæsthetic agent which would avoid these dangers; though the physiological action of anesthetics in general and the collection of clinical evidence in regard to their value and their dangers have also been kept in view.

In seeking for a new anæsthetic various substances which, from their composition, it appeared possible might prove efficient were experimented with. Of these *ethidene dichloride* was selected as the most promising. It had already been occasionally used, and was the subject of one of the preliminary reports above mentioned; since then it has been tried somewhat extensively in England, and Mr. Clover has reported a series of nearly nineteen hundred cases. After the selection of ethidene, the work of the committee has been in great measure the comparison of the action of chloroform and ethidene, with occasional references to ether. The clinical investigations were very carefully made in the wards of the Glasgow Western Infirmary, and two tables are printed, each of fifty cases, of chloroform and ethidene narcosis, showing time, relations, etc. The result showed that anæsthesia was more rapid with the new anæsthetic. The average time necessary to produce insensibility with chloroform was 5.4 minutes, with ethidene 1.3 minutes. No similar table of ether narcosis is given, which we greatly regret, as we feel sure that it would have somewhat modified the opinion of the committee; for there runs through the report the scarcely expressed idea that ether is altogether too slow for practical use. After spending twenty minutes in producing insensibility in a rabbit, "the tardiness of its action" seemed fully established.

The susceptibility of patients to ether varies very greatly, much more, apparently, than to chloroform; some yield to its influence very readily, while others resist to a remarkable degree. Practice and tact are great assistants to its rapid administration, and a previous training with chloroform does not seem to be

the best preliminary to its use. A sentence from an article in the Royal Medico-Chirurgical Transactions for 1872 seems worthy of quotation here, as showing that one gentleman at least has been able to overcome the difficulties: "The chief objection that has been made to ether is the greater quantity and therefore longer time required to render a person insensible. This does not appear to me a very powerful objection, and, moreover, by attention to a few simple matters insensibility can be produced almost as rapidly as by chloroform." Certainly since the utilization of the "primary narcosis" in minor operations, the objection to ether on the score of time is greatly diminished.

The faithfulness with which the committee have stuck to their appointed line of work, and how little they have allowed outside events to distract their minds is shown in the schedule of Future Studies; they "hope to get specific information from America, as they have found it impossible to get cases of ether administration in this country sufficiently numerous for the purposes of comparison," to which is appended the note, "They were not aware at the time of writing this report that the use of ether is rapidly making way in this country, and that it is now solely used in several large provincial hospitals."

The exceedingly interesting details of the long series of scientific experiments we are obliged to pass over, and must content ourselves with a consideration of the committee's conclusions, some of which we shall quote in full, as putting upon a scientific basis the views advocated by the JOURNAL for a long series of years. It would be interesting but hardly necessary to quote them all *in extenso*.

The case against chloroform, as summed up by the committee, is even stronger than its severest critics have ever claimed; not only is its depressing action on the heart established, but it is shown occasionally to act primarily upon the respiration, and furthermore, in two cases in animals, its sudden and unlooked-for effects on the heart's action occurred more than a minute after the cessation of its administration. (In Taylor's Medical Jurisprudence a case is given in which the heart suddenly ceased to beat four minutes after the vapor had been withdrawn). On the other hand careful experiment showed that ether has no primarily depressing effect upon the heart at all.

From the practical conclusions we quote the following:—

(1.) It is not only necessary to watch the effect of the anæsthetic upon the pulse, but it is also requisite to have regard to the respiration. We must not only take into account the danger of sudden stoppage of the respiration, but must also remember that, in the event of abnormal increase of respiratory movements, it may become essential, for the safety of the patient, to temporarily discontinue the administration.

(2.) Owing to the tendency of chloroform and ethidene—particularly chloroform—to reduce the blood-pressure suddenly, not only during the administration of these agents, but also after they have been stopped for some little time (a source of serious danger), it is necessary for the person who has charge of the administration of the drug to be on the lookout for symptoms of this occurrence, both during the time the agent is being given, and for some time after the patient has recovered from its more evident effects.

(3.) As regards comparative danger, the three anæsthetics may be arranged in the following order: chloroform, ethidene,

ether; and the ease with which the vital functions can be restored may be conversely stated, thus: the circulation is more easily reëstablished when its cessation is due to ether than to ethidene; and when the result of ethidene, than when chloroform has been used. The advantages which chloroform possesses over ether—in being more agreeable to the patient, and more rapid in its action, in the complete insensibility produced by it, and the absence of excitement or movement during the operation—are more than counterbalanced by its additional dangers.

(5.) The chief dangers are: (a) sudden stoppage of the heart; (b) reduction of the blood-pressure; (c) alteration of the pulse-respiration ratio; and (d) sudden cessation of the respiration. The danger with ether approaches from the pulmonary rather than from the cardiac side—so that, by establishing artificial respiration, we have a means of warding off death. Its disadvantages are, to a great extent, obviated by the use of ethidene; whilst the dangers of chloroform are also reduced to a minimum.

We wish to draw attention to the fact that ethidene is shown to possess the same inherent tendency to depress the heart as chloroform, though in a less degree. It certainly is not sufficiently free from danger to allow it to supplant ether in its claim to be the safest of known anæsthetics, and we beg to quote and emphasize the warning of Mr. Clover, whose experience in the practical use of the drug is probably greater than any other man's. "It must never be forgotten that it (ethidene) cannot be used with the same freedom as ether may be."

The committee have evidently failed in their first object, the discovery of an anæsthetic "as potent as chloroform which should affect heart and respiration as little as ether," but it has done most valuable work and produced perhaps the most valuable contribution to the voluminous literature of the subject. Nothing that has been said should be construed as detracting in any way from the value of their services. We sincerely hope the Scientific Grants Committee will authorize the continuation of their investigations.

The same number of the *British Medical Journal* which contains the report gives also the promised lists of deaths during anæsthesia in England for the past eleven years. The chloroform list contains one hundred and twenty, the ether eleven cases. Both lists, as the *Journal* shows, contain cases which cannot fairly be counted against either drug.

The chloroform list contains four cases of self-administration. In at least three others death was due to suffocation from foreign bodies in the trachea.

Of the ether cases one was anæsthetized with Robins' "anæsthetic ether," a compound of ether and hydrate of amyl. Three were cases of advanced intestinal obstruction. One was suffocated by blood in the trachea, and one died apparently of fright within two minutes of the commencement of the administration. What facts a careful examination of the original accounts of the other cases would develop we do not know.

The *Journal* seems to imply a censure for the imperfect manner in which cases of death during operations are reported in England, and even that certain cases are not reported at all. Conversely its words ought to imply the highest praise for the few men who have courted publicity in similar cases.

Additional lists of methylene, and "mixed vapors" deaths are given.

PROLONGED LATENCY OF HYDROPHOBIA.

At the séance of the Académie de Médecine, November 2d last, Prof. Léon Colin, of the Val-de-Grâce hospital, brought to the attention of his colleagues a case which he felt compelled, though reluctantly, from the evidence to regard as one of hydrophobia, in which the disease had an incubation of four years and ten months. The unfortunate victim was bitten in Algeria, November 2, 1874, whilst succoring a companion from an attack of a mad dog; the companion died in forty-eight days. The subject of Professor Colin's report, a non-commissioned officer in the French army, was decorated for his act of devotion, and survived the incident in good health until the 9th of August, 1879, when he began to exhibit the usually accepted symptoms of hydrophobia, and died two days later. The autopsy failed to reveal any lesion which could account for death.

Professor Colin's statement of the case leaves scarcely any doubt in the mind that the disease was hydrophobia. A careful investigation could not discover any other source of infection than that in Algeria five years previous to death.

The other soldier concerned in the Algerian incident was not cauterized until the day following the receipt of the bite, and died, as we have said, in forty-eight days; Lechenet, Professor Colin's patient, was cauterized thoroughly within half an hour. In both cases the hot iron was used.

The event made a marked impression upon Lechenet's mind, and during his final sickness he frequently referred to it as the cause. He was a steady man, of good habits, and the investigation into his past history was facilitated by his continued service in the army.

Professor Colin's report was discussed at the next meeting of the Academy, November 9th.

M. Bouley, whose name is widely known in connection with government reports on rabies and hydrophobia, objected that the case might, perhaps, have been one of *hydrophobie nerveuse*, that the diagnosis had not been assured either by the search for and discovery of leucocytes in the perivascular spaces of the medulla, or by the inoculation of rabbits with the virus, these animals, as shown by M. Galtier, of Lyons, being extraordinarily susceptible to the poison, and the incubation of the disease in them only requiring fifteen days. He objected, moreover, that though the disease were hydrophobia it might easily have had some other origin than the bite received in Algeria. M. Maurice Raynaud, on the other hand, stated, as is the general opinion, that the presence of white blood corpuscles in the perivascular spaces of the neighborhood of the fourth ventricle is by no means pathognomonic of hydrophobia. M. Bouillaud supported Professor Colin's view of his case.

The case is evidently not susceptible of absolute proof, but it is certainly not philosophical to reject evidence which would otherwise be accepted, simply because it leads to astonishing conclusions. As we remarked three years ago, when discussing this same subject, volume xcvi., page 182, there is no more

difficulty in accepting an incubation of years than of months. It is true that out of three hundred and thirty cases of hydrophobia, selected from the French returns, as carefully reported, there is not one in which the incubation was prolonged beyond twelve months; out of two hundred and twenty-four carefully recorded cases, between 1850 and 1862, of these French government reports, there were only eleven with an incubation of over six months; and out of one hundred and six carefully noted cases, between the years 1863 and 1868 inclusive, the period covered by the report of M. Bouley, there was only one case in which the time of incubation covered eight months; in all the rest it was less than six months.

Professor Colin cites, on the contrary, two cases, we know not how authentic, the one preceded by a period of "latency," as he prefers to term it, of two years and five months, and the other of two years and a half.

We share the opinion of Professor Colin that it is proper and for the public advantage that such cases should be reported, but only after due delay and thorough study of the facts.

A REAL KNOWLEDGE OF INSANITY AND ITS TREATMENT.

IN an editorial article published in the *JOURNAL* May 20th last, volume cii. page 497, expression was given to a feeling of dissatisfaction with the composition of the then existing lunacy department of the Massachusetts Board of Health, Lunacy, and Charity, on the ground that, whatever their other qualifications might be, no one of that department possessed a real knowledge of insanity and its treatment.

This criticism passed unchallenged for more than six months, when exception was suddenly taken to it. We therefore feel it proper, though at this late day, to define somewhat precisely our idea of the requisite training for the obtaining of a real knowledge of insanity and its treatment, as this will, perhaps, best define in what that knowledge consists.

A thorough general medical education is an indispensable preliminary to such training; these studies should be followed by some years of experience in general private or hospital practice, and the final pursuit of the special branch of insanity must be founded upon and accompanied by personal observation and treatment of the disease as a medical officer in the wards of an asylum.

Doubtless it is possible for a stupid or a lazy person to have had access to all these desiderata and yet escape the possession of a real knowledge of insanity and its treatment, but without this training we hold that such knowledge is not to be found. A person may know something about insanity and the insane, have a great and in some ways valuable acquaintance with the statistics of the disease and the sociology of the afflicted, and yet not possess a real knowledge of insanity and its treatment. We hold it to be of the first importance that such a real knowledge should be

not only represented, but strongly represented in any department of lunacy, or on any lunacy commission, as is the case in the Scotch and English commissions. There would still be plenty of room left for executive or administrative capacities. Just as we are opposed to the superintendent of an asylum being made a mere administrative factotum, so we are opposed to a department in lunacy being made a mere machine.

KOLPOECPETASIS. II.

IN his early experience Dr. Bozeman employed almost exclusively bags of oiled silk filled with compressed sponge, but of late years, owing to the trouble of having to renew these bags every two or three days while the treatment was in progress, he has employed instead hard rubber made into the required shapes and sizes, which of course is unaffected by the urine. For ready use, however, he still believes that cylinders of compressed sponge, made in the way indicated, are equal, if not superior, to any other known form of vaginal dilators, for the reasons that they are soft, elastic, uniform in pressure, and, when properly attended to, unirritating to the healthy and diseased tissues with which they come in contact.

The great advantage claimed for this intra-vaginal dilatation is that it can be increased by degrees to a point far beyond the limits of vulvo-vaginal dilatation, at which the power of the patient's endurance ceases; it being possible thus to carry it from one to two centimeters further than by the most extensive dilatation of the latter character. Intra-vaginal dilatation can be continued until resilience is completely overcome, as in the male urethra; but if this is attempted by means of the vulvo-vaginal dilatation, the patient is often unable to stand the very severe pressure thus brought to bear upon the perineum and the pelvic arch, while there is besides great danger of the urethra's sloughing.

But, in order that complete success may be achieved in any instance, the author lays stress upon the importance of carrying out his other methods in addition to kolpoecpetasis. Thus, the patient should be placed in the knee-chest position,¹ because this is believed to be the one above all others from which the greatest number of advantages can be derived, as regards relaxation of the abdominal muscles, gravitation forwards of the abdominal and pelvic viscera, natural relationship of the affected parts, direct rays of light, and adaptability for the use of instruments, while fixation and anaesthesia of the patient upon a suitably constructed support or chair are essential to the full realization of the advantages named.

Again, he holds that long, narrow, dilating lateral

¹ More than a quarter of a century ago Dr. Bozeman began to advocate this position (not the exaggerated knee-elbow position, to which the designation has so often been applied), as the one in which the greatest success in any operation for vesico-vaginal fistula was to be secured, and, as may be seen from his numerous publications since upon this subject, he has not abated in the slightest his opinion of its value, only as he has modified and improved it as shown by his operating or supporting chair, adapted expressly to the "right-angle position upon the knees and chest." (See *New York Medical Journal*, February, 1869.)

blades and a short, movable perineal elevator are the means from which the greatest limit of transverse vulvo-vaginal dilatation and the greatest amount of light are to be secured, with the least obstruction in the field of operation, and that a speculum combining these elements, and having a self-sustaining action by virtue of the flaring expansion of the lateral blades, with a system of leverage which gives increased power with increased resistance (as claimed for the Bozeman speculum), is far preferable to any system of separate or detached blades held by assistants, since the surgeon, with this instrument, can easily develop or put upon the stretch any resisting cicatricial tissue, wherever and whenever found in the vaginal tract, by simply turning the thumb-screw.

Finally, it is claimed that in operating upon a fistule the borders, when refreshed and drawn together with the proper number of silver wires, require to be held in the same stretched and even relationship as at the instant when the dilatation is discontinued and the operation commenced, and that to accomplish this and guard against subsequent recontraction of the vaginal tract at the seat of the old stenosis (the great obstacle to primary and permanent union between the edges of the fistule), it is necessary to supplement the sutures with a vaginal splint of sheet lead, secured over the coaptated edges of the fistule by means of compressed perforated shot upon the doubled sutures. The indications fulfilled by it are claimed to be as follows: (1) permanent maintenance of the borders of the fistule in a stretched and smooth relationship during the healing process; (2) fixation by the sutures of the borders of the fistule to the under surface of the button or splint in short and regular divisions; (3) uniform support of both borders of the fistule in each division of the splint, by which is preserved free circulation of the blood and nutrition in the parts otherwise liable to be cut off or impaired by the intensity of the retractive forces; (4) diminution of direct traction upon each suture to the extent of at least twenty-five per cent.; (5) control of all motions in the included borders of the fistule, on the principle of well-adjusted splints and bandages to a fractured bone after the limb is reduced to its proper length; (6) exclusion from the entire line of the coaptated edges of the fistule of all extraneous influences, atmospheric as well as those of vaginal and uterine secretions. When this method is used, it is said that with one half the number of sutures one third greater resisting power can be obtained than with the Sims suture. When the latter is employed there is often great danger of sloughing on account of the low vitality of the kind of tissue met with in these operations; but this is avoided with Bozeman's, because the sutures being much less numerous, the circulation is not interfered with. The worst that can happen is that the sutures may possibly tear out. When the supradilatation of the vagina recommended by Dr. Bozeman is practiced, it is very difficult to get the Sims' suture to hold, on account of the extreme thinness of the edges, but with this button suture it makes no difference whether the edges are thin or not.

Enough has now, perhaps, been said to give some idea of the methods which Dr. Bozeman has devised, and which he is constantly employing in his public and private practice. If it is true, as he contends, that so much needless suffering can be prevented, and even lives saved, by resorting to them, it is certainly desirable that they should be more generally adopted, and the object of this article will have been attained if any of those who are interested in such subjects should thereby be induced to make trial of them, so that the matter can be thoroughly tested, and the claims now set forth either substantiated or disproved.

MEDICAL NOTES.

— We hope that those of our readers who have not subscribed for the *Index Medicus* for the coming year, and feel able to, will do so. Though true that one copy in a library is sufficient for the purposes of reference, this way of viewing the matter will not support the undertaking.

— There is, and has been for some time, a great deal of small-pox in Philadelphia, and the deaths from it are steadily and alarmingly increasing, as may be judged by the following statement: Deaths for the week ending November 6, 1880, 22; November 13, 18; November 20, 20; November 27, 25; December 4, 32; December 11, 26; December 18, 40; December 25, 38; January 1, 1881, 53. Such a state of things offers a constant menace to the whole country.

— On the 28th of December the thirty-fourth case of cremation occurred at Gotha.

— The *Louisville Medical News* will hereafter be under the editorial care of Dr. R. O. Cowling, Dr. L. P. Yandell having retired from his position as associate editor. Dr. H. A. Cattell assumes the position of managing editor. It is a bright, original, and independent publication, and we doubt not will continue to be what it has been.

NEW YORK.

— The new building of St. Mary's Free Hospital for Children is just completed. It has a frontage of fifty feet on Thirty-Fourth Street, and is sixty-five feet deep, with an addition extending back from the main structure thirty feet long by nineteen wide. It is constructed in a substantial manner, finished mainly in ash, with hard pine floors, and it is thoroughly heated by steam, with direct and indirect radiation. In the basement are the reception ward, dispensary, drug and store room, kitchen, and laundry departments. The first floor is occupied by a ward, reception room for visitors, office, and dining-room; the second floor is devoted to hospital purposes; on the third floor are the Sisters' sleeping-rooms, linen room, etc.; while the fourth floor contains the operating room, children's play-room, and servants' sleeping-rooms. The isolation ward is on this floor, in the extension, and is completely cut off from the rest of the house. Each ward has connected with it a

dining-room. All the plumbing is done in a substantial manner, and is in the extreme end of the extension, while the pipes are all left exposed, both for cleanliness and easy access. The hospital can accommodate about seventy patients.

— The contributions on Hospital Saturday and Sunday (Christmas and the day following) are said to have been very much larger than last year, the methods and design of the collection being more fully understood and appreciated by the public than when the experiment was first tried. Boxes for contributions were placed in all the ferry-houses, railway depots, hotels, club-houses, restaurants, armories, and drug stores, and collections were taken up in all the synagogues and churches on Saturday and Sunday; while most of the street cars and omnibuses had the yellow hospital flag flying to remind the general public of the occasion. In addition, many of the business exchanges and trade organizations appointed special committees for securing subscriptions among their members, and all of these committees report amounts largely in excess of those obtained last year. Thus, the Cotton Exchange contributes \$1200 as against \$185 last year, and the Produce Exchange \$1300 as against \$700 last year. The Rev. George S. Baker, of St. Luke's Hospital, who is secretary of the general committee having the matter in charge, states that the amount collected will probably reach \$50,000, or nearly double the sum raised last year, which was about \$26,000.

The fund will be divided on the plan adopted last year by the Hospital Saturday and Sunday Association, according to the charity work and the needs of each, among the various hospitals uniting in the movement, which are as follows: St. Luke's Hospital, St. Mary's Free Hospital for Children, Roosevelt Hospital, Mt. Sinai Hospital, Presbyterian Hospital, New York Infirmary for Women and Children, the Orthopaedic Hospital, New York Eye and Ear Infirmary, the German Hospital, Manhattan Eye and Ear Infirmary, New York Hospital, New York Ophthalmic Hospital, Institution for Relief of Ruptured and Crippled, House of Rest for Consumptives, the Woman's Hospital, the Home for Incurables, the Nursery and Child's Hospital, and the Hahnemann Hospital.

Mr. Lester Wallack will give the gross proceeds of a benefit at his theatre some afternoon in January to the fund, and several other theatrical managers have signified their intention of giving benefits for the same purpose.

— The plan of conducting a seaside house in the warm weather in connection with St. Mary's Hospital, which had been begun the previous year, was continued during the past summer, a house at Far Rockaway being hired for the purpose. In this the Sisters were able to accommodate about thirty children at a time, and from the first of May until the middle of September the building was kept filled with little ones gathered from the tenement population. In this way one hundred and twenty children were given at least two weeks at the seaside, while others, who were more feeble, were kept longer. The expense of maintain-

ing this department was defrayed out of the "Fresh Air Fund."

— Dr. J. Marion Sims, who has been very seriously ill with pneumonia, is reported as now improving.

— In the legislative inquiry into insane-asylum management in New York, which commenced on the 1st of December, and which was recently alluded to in the JOURNAL, the following was some of the testimony elicited:—

Dr. Edward C. Spitzka said that he agreed with those who believed that the fault in asylum management, as at present conducted, lay in the system. The boards of trustees, being of local character, were not responsible to any central authority for the performance of their duties, and, as they were generally laymen, it was not to be expected that they would properly judge of the qualifications of those appointed to medical and other positions in the asylums. It was true that there was a commissioner of lunacy, and on the face of the law it would seem that he had the general control of the management of the asylums of the State; but even if he were willing to do his duty, he would be hampered by the contradictory clauses of the law regarding him. The result of the law had been that the commissioner of lunacy was neglectful of his duties; for even if he could not have corrected abuses, he might at least have called attention to such abuses as, in the capacity of an expert, he should have discovered. The present commissioner's standing as a scientist, however, had been repeatedly questioned on the other side of the water, and he had been severely criticised by Foville, one of the most eminent authorities. Dr. Spitzka then gave a number of instances of abuses in asylums which had come to his notice.

Dr. William A. Hammond was the next witness. After commenting upon the manner in which medical appointments were made in the asylums, the generally insufficient qualifications of the applicants, the forcible feeding of lunatics, the disposition of letters written by patients, he stated that the whole system of the management of the insane was wrong. The office of superintendent should be abolished. There should be lay superintendents to do their duty, namely, to lobby in the legislature, raise turnips, receive visitors, and entertain the state commissioner in lunacy when he made his rounds. The superintendent should be merely a steward, and there should be medical officers, just as in other hospitals. The law should be changed in regard to allowing the commitment of a person to an insane asylum on the affidavit of two physicians whether or not it was dangerous for him to go at large. The old law provided that a statement should be made in the affidavit that the lunatic could not be permitted to go at large, but the new one did not. Consequently, the asylums were filled with people who had no business there, and who would be better cared for at home. There should be some system for the employment of lunatics in the asylums, as was the case in Europe. At present there was almost none in this State, except in the Willard Asylum and, to some extent, in that at Poughkeepsie.

Dr. E. C. Seguin testified that he had learned from good sources that the asylums on Blackwell's and Randall's Islands were overcrowded, and that the number of assistant physicians in the institutions was entirely too small. Curable and incurable cases were aggregated instead of being separated. The acute insane should have as many attendants, in most cases, as individuals suffering from ordinary diseases, and he thought it would be a great benefit to the community at large if there were a small hospital for acute cases of insanity within the limits of the city, which could be officered in much the same way as the Bellevue and New York hospitals, for instance. Under this system medical students and young graduates in medicine might acquire a knowledge of insanity. It was sometimes necessary for the medical attendant to restrain a patient; but he considered the necessity exceedingly rare. Straps, the "muff," and camisole were used at Poughkeepsie as a means of restraint, and these things tended to increase the excitement of the patients and the laziness of the nurses. For so large a State as New York there might be three commissioners in lunacy, with a fixed salary; and he was strongly in favor of work for insane patients as a means of treatment.

Dr. L. C. Gray, of Brooklyn, said that under the supervision of the present superintendent of the Flatbush Asylum considerable effort had been made to remedy abuses; but his power was limited. There was an outrageous overcrowding in the asylum, and the proportion of physicians was altogether inadequate, — five to eight hundred patients. The inmates were locked up in wards, and as the institution had insufficient grounds, from the beginning of winter until warm weather set in, the majority went down-stairs very little, or not at all. In ordinary life a physician was not allowed to treat even skin diseases without proper education; but a man might be in charge of hundreds of patients afflicted with diseases that were least understood, when he had had no training whatever for the position. A system of competitive examinations would remedy that abuse.

Mrs. Josephine Shaw Lowell, of the State Board of Charities, after detailing some of the disadvantages under which the city asylums labored, presented the following remedies, which, she thought, would place the New York asylums on a fair footing with others in the State:—

First, let the salaries of superintendents and staffs be paid by the State at the same rate as those paid at the Willard Asylum.

Second, establish training-schools for attendants.

Third, provide for a portion of the patients elsewhere.

Fourth, state commissioners in lunacy to be appointed who should have power to remove superintendents for cause, while the appointing power was retained by the city.

Fifth, as to new asylums, no hospital for the insane should have less than fifty acres of land around it, nor less than one hundred acres for each two hundred patients, and the largest number of patients to be

treated in one building not to exceed two hundred and fifty.

Dr. W. J. Morton stated that at the National Asylum at Washington workshops were established two years ago, and work was given the patients as a reward for good behavior. The good effect upon all the patients had been very marked, and large additional shops were to be established. He considered it infamous that patients alleged to be insane should have to wait from three to ten days before their cases were taken up and decided, or any treatment given them. There should be a city hospital for acute cases and country colonies for chronic cases. In the London Hospital for acute cases fifty per cent. of them were cured, chiefly because the hospital afforded opportunity for immediate treatment.

Dr. T. A. McBride thought the root of existing abuses was in the want of knowledge of insanity on the part of a majority of physicians, and unless the State aided the profession in getting this knowledge by the establishment in cities of hospitals for the acutely insane, under a corps of alienists who should give lectures and clinical demonstrations, he had little hope of much improvement. Asylums for the chronic insane alone should be in the country. Now the two classes were mixed, and many patients were kept insane by association with the insane.

Dr. A. E. Macdonald, superintendent of the Ward's Island Asylum, replied to criticisms which had been made upon that institution by the gentlemen previously examined, and gave a number of details in regard to its management. The assistant physicians, he said, usually remained about a year, and they were mostly young men who went to the asylum for the training which they could get there. They left the institution from time to time to take better positions, and four had gone away during the past year. When he first went to the asylum, six years ago, about forty patients were employed; while at present 373 were engaged in various occupations. About 200 worked on the farm, and, out of 1173 inmates, 1137 had been out-doors the day previously, which was the usual average for a fine day. For each additional attendant allowed him he said he could put fifteen more patients at work. It was not true that restraint and forcible feeding of patients were imposed in the asylum by attendants, without the authority of a physician's order. He believed that restraint should be used as a medicine, and a record was kept of the restraint that was employed. The use of the "crib" had been abandoned, mainly on account of popular clamor, in order that the friends of patients in the asylum might not be unnecessarily alarmed.

Dr. T. M. Franklin, superintendent of the Blackwell's Island Asylum, said that that institution was far from faultless, but that a large part of the defects were those of construction of the building. Restraint was imposed mostly by means of the camisole and, to a small extent, by wristlets. There were also "muffs," and "that much-abused instrument, the crib." There were four cribs in the institution, and he wished there were more. Violent patients were not generally put

in the crib, as their struggles in it would soon exhaust their strength. The absolute abandonment of restraint would not redound to the welfare of such an institution; but there was less restraint now employed in the Blackwell's Island Asylum than had been the case five years ago. About one third of the 1295 patients were employed.

Dr. Allan McLane Hamilton expressed the opinion that the qualifications of the superintendents and assistants in the asylums had been grossly misrepresented, and that in institutions where the system of non-restraint prevailed all sorts of abuses crept in. As to European asylums, he said, a padded room in a model institution at Berlin was found covered with vermin and fetid matter, and the colony system at Ghel had resulted, among other things, in the birth of idiot children.

The Rev. W. G. French, a clergyman in the service of the Protestant Episcopal City Mission Society, testified that the female asylum on Blackwell's Island was so constructed that nurse and attendants were nine tenths of the time out of the supervision of their superiors, and he thought that no deed of cruelty, or wrong, or immorality in these closed halls was beyond belief. If patients complained, the nurses or attendants could give such explanations as they chose, so that the patients would not be believed, and he had seen many such cases in which he knew, or learned afterwards, that the charges made by inmates were entirely true. It was only two years since table cloths, china, and knives and forks had been substituted, through Mrs. Lowell's influence, for the finger-eating barbarism, with tin paws, tin plates, and bare boards, that had been in use before that time.

After some further testimony by Drs. Beard, Goldsmith, and others and a visit to the city asylums, the committee concluded their labors in New York for the present. Their report to the legislature will probably not be made before February.

Miscellany.

SLIPPERY-ELM-ROOT DILATORS.

MR. EDITOR,—I noticed in your issue of October 28th a note in regard to slippery-elm-root dilators for rapid dilatation of the cervix uteri and of the urethra, etc. As I called Dr. Skene's attention to their use, and as your note fails to convey any definite idea as to how they are made, I thought a fuller description would not come amiss to such of your subscribers as may wish to try them.

The fresh root is cut into lengths, and can be bent at any desired curve, and thus dried. When thoroughly dry, the rough exterior is scraped off. The end is dipped about two inches into water, and heated over a lamp. A series of parallel longitudinal cuts is then made, nearly perpendicular to the bark, and through it to the wood beneath. The cuts are from one eighth to one twelfth of an inch apart and reach from the end of the stick about one inch to an inch and a half back. The end, so far as the cuts run back, is again dipped into water and heated. The strips of bark made by the cuts are lifted from the wood, care being taken not to

break them from their attachment at their base. They are again dipped and heated, when they can be bent back at right angles, to allow the end of the wood to be cut off nearly as far back as the bark is slit up. The end of the wood is trimmed to a conical shape. It is again dipped and heated, and with a strong twine the bark, now a hollow cylinder, is wound down firmly to the conical end of the wood, and beyond it into a solid cylindrical tip. When thoroughly dry, the tip is rounded and the whole surface of the root finished with sandpaper.

It is ready for use by soaking about five minutes in carbolized water.

If it be desirable to use the same dilator again, it is to be wiped immediately after using, and when dry finished again with sandpaper. This can be repeated so long as the tip remains. The smaller sizes can be bent when seasoned, by wetting and heating, but not so readily as when green. The roots are almost perfectly cylindrical, and are found of any size from two inches in diameter down. Dr. Skene has sufficiently attested their value as dilators. I find them very good as applicators of iodized phenol to the mucous membrane of the cervix and fundus uteri. When soaked for use, they are simply dipped in the medicament, and enough adheres to the mucilaginous surface. Such a sized bougie should be used as will thoroughly distend the cervical canal, thus applying the medicament to every part of the surface, while at the same time it is so smooth that it will produce the minimum of mechanical injury. For this latter reason I also use them instead of a metallic sound, for restoring a misplaced uterus to its normal position. Very truly yours,

L. B. TUCKERMAN.

AUSTINBURG, ASHTABULA COUNTY, OHIO. }
December 28, 1880.

CORRECTION.

MR. EDITOR,—I have just perused the editorial remarks in your journal of the 2d inst. on the death under ether at Cincinnati. I there find the extraordinary statement that in the debate on the subject "Dr. Reeve said, 'I never draw the patient's tongue out at all'" (as a means of resuscitation). No such words of mine can be found in the report of that debate. On the contrary, in detailing in that debate a case of chloroform accident seen and treated by me, it is distinctly stated that the tongue was pulled out simultaneously with lowering the patient's head. See *Cincinnati Lancet and Clinic*, October 30th, page 389.

This may appear a very small matter to trouble you about, but it certainly is not pleasant to be represented to the readers of a widely circulated journal as occupying upon a scientific subject a position directly opposite to the one held. There is the strongest evidence in favor of pulling out the tongue as a means of resuscitating patients under anæsthetics, and I have always appreciated it and always been prepared to put the measure in force. Very respectfully yours,

J. C. REEVE.

DAYTON, OHIO, December 24, 1880.

The remark as to drawing out the tongue should have been attributed to Dr. Young, whose remarks in the debate followed those of Dr. Reeve. The other remarks attributed to Dr. Reeve are, we believe, correctly quoted. — Ed.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 1, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	673	271	24.81	20.65	11.00	5.79	.89
Philadelphia.....	846,980	392	111	24.75	—	4.59	3.57	13.52
Brooklyn.....	566,689	262	113	27.10	15.65	20.99	3.82	—
Chicago.....	503,298	—	—	—	—	—	—	—
St. Louis.....	—	—	—	—	—	—	—	—
Baltimore.....	393,796	174	75	27.60	14.37	13.22	6.90	—
Boston.....	363,938	167	61	19.16	17.96	15.57	1.20	—
Cincinnati.....	280,000	119	48	15.13	16.81	4.20	2.52	—
New Orleans.....	210,000	109	30	16.51	8.26	5.51	1.83	—
District of Columbia.....	180,000	84	30	13.10	16.67	9.36	2.75	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	66	23	25.76	15.15	4.55	13.64	—
Buffalo.....	155,159	32	10	12.50	15.62	6.25	3.13	—
Milwaukee.....	127,000	48	26	20.83	10.42	2.08	14.60	—
Providence.....	104,862	32	8	21.90	6.25	6.25	9.38	—
New Haven.....	63,000	25	8	36.00	4.00	8.00	—	—
Charleston.....	57,000	33	8	3.03	18.18	—	—	—
Nashville.....	43,543	18	8	—	5.56	—	—	—
Lowell.....	59,340	28	12	10.71	25.00	7.14	—	—
Worcester.....	58,040	23	8	20.43	17.40	—	17.40	—
Cambridge.....	52,860	29	15	13.80	24.14	10.34	—	—
Fall River.....	48,626	15	6	—	26.67	—	—	—
Lawrence.....	39,068	13	3	—	7.70	—	—	—
Lynn.....	38,376	16	5	18.75	18.75	12.50	—	—
Springfield.....	33,536	7	2	14.29	42.86	14.29	—	—
Salem.....	27,347	7	1	14.29	28.57	14.29	—	—
New Bedford.....	27,268	11	3	9.09	18.18	—	—	—
Somerville.....	24,964	10	1	10.00	30.00	—	—	—
Holyoke.....	21,961	8	3	25.00	25.00	—	—	—
Chelsea.....	21,780	7	3	28.57	—	28.57	—	—
Taunton.....	21,145	11	2	18.18	18.18	—	—	—
Gloucester.....	19,288	8	4	37.50	—	12.50	—	—
Haverhill.....	18,478	4	2	—	25.00	—	—	—
Newton.....	16,994	—	—	—	—	—	—	—
Newburyport.....	13,470	9	1	—	11.11	—	—	—
Fitchburg.....	12,270	6	3	50.00	—	50.00	—	—
Nineteen Massachusetts towns.....	150,881	48	11	14.60	10.42	10.42	—	—

Deaths reported 2494; 915 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping cough, erysipelas, and fevers) 550, consumption 573, lung diseases 355, diphtheria and croup 242, scarlet fever 108, small-pox 59, diarrhoeal diseases 35, typhoid fever 33, erysipelas 22, whooping-cough 17, malarial fevers 16, cerebro-spinal meningitis 10, measles eight. From *diarrhoeal diseases*, New York 17, Baltimore, New Orleans, and New Haven three, Brooklyn and Boston two, Cincinnati, District of Columbia, Pittsburgh, Lowell, and Worcester one. From *typhoid fever*, Cincinnati and Pittsburgh four, New York, Philadelphia, and Baltimore three, Boston, New Haven, Holyoke, and Taunton two, New Orleans, District of Columbia, Buffalo, Providence, Charleston, Worcester, Somerville, and Brockton one. From *erysipelas*, New York six, Philadelphia four, Cincinnati three, Brooklyn two, Baltimore, New Orleans, District of Columbia, New Haven, Worcester, Gloucester, and Brookline one. From *whooping-cough*, New York five, Philadelphia four, Baltimore three, Cincinnati two, Brooklyn, Providence, and Cambridge one. From *malarial fevers*, New York nine, Baltimore and New Orleans two, Brooklyn, District of Columbia and New Haven one. From *cerebro-spinal meningitis*, New York and New Orleans two, Philadelphia, Baltimore, Cincinnati, Milwaukee, Lynn, and New Bedford one. From *measles*, New York six, Milwaukee and Gloucester one.

One hundred and ten cases of diphtheria, 103 of scarlet fever, three of measles, and three of typhoid fever were reported in Brooklyn; small-pox one in Boston; scarlet fever 37, diphtheria 16, in Milwaukee; diphtheria five, in Somerville.

In 37 cities and towns of Massachusetts, with a population of

1,052,636 (population of the State 1,783,086), the total death-rate for the week was 21.21, against 20.86 and 21.32 for the previous two weeks.

For the week ending December 11th, in — German cities and towns, with an estimated population of 7,713,386, the death-rate was 22.9. Deaths reported 3410; 1558 under five; pulmonary consumption 462, acute diseases of the respiratory organs 285, diphtheria and croup 180, scarlet fever 106, whooping-cough 61, typhoid fever 57, measles and *rötheln* 56, puerperal fever 16, small-pox (Königs-berg) two, typhus fever (Po-en) one. The death-rates ranged from 10.1 in Potsdam to 31.9 in Cologne; Königsberg 28.1; Breslau 28.1; Munich 25.1; Dresden 21.2; Berlin 23.8; Leipzig 19; Hamburg 24.7; Hanover 21.4; Bremen 22.4; Cologne 31.9; Frankfurt 19.6; Strasburg 23.6.

For the week ending December 18th, in the 20 English cities, with an estimated population of 7,499,468, the death-rate was 19.4. Deaths reported 2793; acute diseases of the respiratory organs 307, scarlet fever 129, whooping-cough 74, measles 63, small-pox (London 33) 34, fever 32, diarrhoea 24, diphtheria 19. The death-rates ranged from 13 in Wolverhampton to 26 in Nottingham; Sheffield 17, Leeds 18; London, Bristol and Birmingham 20; Manchester and Liverpool 21. In Edinburgh 21; Glasgow 19; Dublin 26.

In the 20 chief towns in Switzerland for the week ending December 18th, population 522,856, there were 21 deaths from acute diseases of the respiratory organs, diarrhoeal diseases eight, typhoid fever six, diphtheria and croup four, small-pox three, scarlet fever two, whooping-cough one.

The meteorological record for the week in Boston was as follows: —

Date.	Barom- eter.	Thermom- eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1880.																			
Dec. 26	29.991	35	37	22	80	79	61	73	E	NE	NE	28	40	32	T	T	Snow.	2.35	.04
" 27	29.657	31	34	27	100	89	79	89	N	NW	W	24	21	8	Snow.	O	O	8.30	.91
" 28	29.857	19	32	13	66	41	64	57	W	W	W	19	20	9	O	F	C	—	—
" 29	29.713	13	22	11	80	82	80	81	W	W	NW	4	5	12	Snow.	Snow.	Snow.	6.40	.50
" 30	29.946	1	11	-2	70	28	68	55	W	W	W	19	20	22	C	C	C	—	—
" 31	30.252	10	19	-4	71	37	58	55	SW	W	W	14	11	8	C	C	C	—	—
Jan. 1 1881.	30.313	8	17	-2	70	48	78	65	W	W	W	12	13	9	C	C	C	—	—
Week.	29.961	17	37	-4	77	58	70											17.05	1.45

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 1, 1881, TO JANUARY 7, 1881.

BAILY, E. I., lieutenant-colonel and surgeon. Granted leave of absence for two months. S. O. 277, A. G. O., December 30, 1880.

WHITE, C. B., major and surgeon. Relieved from the duty assigned him in S. O. 229, October 25, 1880, from A. G. O., and to report to the surgeon-general. S. O. 276, A. G. O., December 29, 1880.

WILLIAMS, J. W., major and surgeon. To report to the commanding officer, Department of Arkansas, for assignment to duty, temporarily, as medical director of that department. S. O. 2, A. G. O., January 5, 1881.

BROWN, J. M., captain and assistant surgeon. The leave of absence granted him in S. O. 264, December 2, 1880, Department of the Missouri, is extended three months. S. O. 2, C. S., A. G. O.

CARTER, W. F., first lieutenant and assistant surgeon. Granted leave of absence for one month, with permission to leave the department. S. O. 265, Department of Texas, December 28, 1880.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, OCTOBER 1, 1880, TO DECEMBER 31, 1880.

BAILHACHE, P. H., surgeon. Detailed as chairman board of examiners of candidates for promotion. October 6, 1880. To proceed to Norfolk, Va., as inspector. November 1, 1880. Detailed as president board of inquiry to meet in St. Louis, Mo., November 17, 1880. November 9, 1880. Upon conclusion of duties under orders of November 9th, to proceed to Dubuque, Iowa, La Crosse and Milwaukee, Wis., Chicago, Ill., Detroit, Mich., and Buffalo, N. Y., as inspector. November 10, 1880.

MILLER, T. W., surgeon. Detailed as member board of inquiry to meet in St. Louis, Mo., November 17, 1880. November 9, 1880.

PERVIANICE, GEORGE, surgeon. Detailed as recorder board of inquiry to meet in St. Louis, Mo., November 17, 1880. November 9, 1880. Upon conclusion of duties under orders of November 9th, to proceed to Louisville, Ky., as inspector. November 19, 1880.

DOERING, E. J., surgeon. Granted leave of absence for thirteen days from January 3, 1881. December 29, 1880.

SMITH, HENRY, passed assistant surgeon. To proceed to Key West, Fla., and assume temporary charge of the service at that port. December 13, 1880.

FISHER, J. C., passed assistant surgeon. Detailed as recorder board of examiners of candidates for promotion. October 6, 1880.

KEYES, H. M., assistant surgeon. To report to president board of inquiry, November 17, 1880. November 10, 1880.

COOKE, H. P., assistant surgeon. To proceed to Galveston, Texas, and assume charge of the service at that port, relieving Assistant Surgeon Guiteras. December 14, 1880.

HEATH, W. H., assistant surgeon. Granted leave of absence for twenty days from October 21, 1880. October 20, 1880. To

proceed to Buffalo, N. Y., and assume temporary charge of the service at that port, relieving Assistant Surgeon Cooke. November 18, 1880. To assume charge of the service at Buffalo. December 14, 1880.

GUITERAS, JOHN, assistant surgeon. To proceed to Galveston, Texas, and assume temporary charge of the service at that port, relieving Passed Assistant Surgeon Smith. December 13, 1880. When relieved by Assistant Surgeon Cooke to rejoin his station. December 15, 1880.

WHEELER, W. A., assistant surgeon. To proceed to Pittsburgh, Pa., and report for temporary duty to Surgeon Purviance. November 10, 1880. Relieved from further duty at Pittsburgh, and ordered to report to Surgeon Fessenden at New York. November 27, 1880.

BENSON, J. A., assistant surgeon. To proceed to Boston, Mass., and report for temporary duty to Surgeon Vansant. October 15, 1880.

BANKS, C. E., assistant surgeon. To act as inspector of unserviceable hospital property at San Francisco, Cal. November 2, 1880.

RESIGNATION. BROWN, F. H., passed assistant surgeon. Resignation accepted by the secretary of the treasury, to take effect November 5, 1880. October 7, 1880.

PROMOTION. GOLDSBOROUGH, C. B., passed assistant surgeon. Promoted to be passed assistant surgeon from October 14, 1880. October 14, 1880.

DEATH. GLAZIER, W. C. W., assistant surgeon. Died at Key West, Fla., of yellow fever, December 12, 1880.

DISMISSED. KEYES, H. M., assistant surgeon. Dismissed the service, to take effect December 31, 1880. December 24, 1880.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting will be held on Monday January 17, at eight o'clock, in the hall, 19 Boylston Place. Reader, Dr. Norton Folsom. Dr. Cushing will report a Case of Oily Urine, with Autopsy. A. T. CAROT, Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Drainage for Health, or Easy Lessons in Sanitary Science. By Joseph Wilson, M. D., Medical Director United States Navy. Philadelphia: Presley Blunkiston. 1881.

Differential Diagnosis; A Manual of the Comparative Semiology of the more Important Diseases. By T. de Havilland Hall, M. D. Second American Edition. Edited by Frank Woodbury, M. D. Philadelphia: D. G. Brinton. 1881.

Dr. Paul Börner's Reichs-Medicinal-Kalender für Deutschland auf das Jahr 1880. I. und II. Theil. Dr. Paul Börner's Reichs-Medicinal-Kalender für Deutschland auf das Jahr 1881. I. und II. Theil. Cassel: Verlag von Theodor Fischer. 1881.

Dr. Med. A. Steinbach's Leitfaden für die Geschäfts- und Buchführung des praktischen Arztes (Separatdruck). Cassel: Theodor Fischer. 1880.

Amblyopia from the Use of Tobacco and Alcohol. By David Webster, M. D. (Reprint.)

Twenty-Fifth Annual Report of the Trustees of the State Lunatic Hospital at Northampton for the Year ending September 30, 1880.

Third Annual Report of the Trustees of the State Lunatic Hospital at Danvers for the Year ending September 30, 1880.

Lectures.

A CASE OF TRAUMATIC EPILEPSY.

PENNSYLVANIA HOSPITAL. SERVICE OF DR. R. J. LEVIST.

GENTLEMEN,—The study of that curious diseased condition known as epilepsy naturally divides itself into two grand divisions, namely, traumatic and idiopathic epilepsy; of course the phenomena presented in both conditions are nearly allied, still there are some points of difference. Before proceeding to consider the case of J. G., aged thirty-five, it may be well to tell you what is meant by the terms traumatic and idiopathic epilepsy. Traumatic epilepsy is a diseased condition of the nervous system due to violence to the cerebral structures, or to pressure exerted upon the cerebral hemispheres by reason of depressed portions of bone, the results of fractures of the skull, resting upon those structures. Idiopathic epilepsy, on the other hand, finds its origin in some diseased condition of the cerebral mass not dependent on extraneous causes, but on a degenerated condition of the cerebral matter itself; or, again, it may be due to syphilitic or other deposits. This variety of the disease, however, concerns the physician more than the surgeon, and so I leave it to my *confères* of the medical staff to discuss more exhaustively with you. As to the time, frequency, and method of seizure in cases of traumatic epilepsy I have a few words to say. As a rule, traumatic epilepsy does not make its appearance until some time after the receipt of an injury; thus, for instance, in the case of J. G., now before you, three years elapsed from the time of the receipt of his injury till epileptic symptoms first manifested themselves. In the mean time he had gone about his business, and had experienced no unpleasant symptoms and no inconvenience of any kind; true, in this case a rather long period elapsed between the injury and its deplorable consequences, but it only serves to prove the truth of what I have just told you. Now, as a differential point, I may say that if this was a case of idiopathic epilepsy the symptoms would have probably made themselves manifest early in life without a history of any exciting cause, as we have seen in this case. Further, in idiopathic epilepsy the attacks may happen at night after the patient has retired, whereas in traumatic epilepsy the seizure is liable to come at any period of the day, and to be precipitated by any excitement which tends to engorge the cerebral circulation and thereby increase the pressure of the cerebral mass against the impinging fragment of bone. An idiopathic epilepsy may also happen during the day, and under exciting circumstances, but I now merely lay down a general rule, from which of course there may be many departures. As to the frequency of the attacks, in idiopathic epilepsy the frequency of the attacks increases in a direct ratio with the time of the duration of the disease; in other words, the longer the time that the patient has been a victim to the disease the more often do the attacks occur. While this proposition is true of idiopathic epilepsy, it may also to some extent be said to apply to the traumatic variety of the disease. In the latter case, however, it seems that for long periods at a time the brain appears to accommodate itself to, or to tolerate the presence of, the foreign body (which the bony projection practically is) pressing upon or into its substance. Now, for instance, in the case before you, the patient, who has now

almost become an imbecile, tells us that the attacks of epilepsy when they first made their appearance followed each other at long intervals, but that gradually they increased in frequency, until now he presents every two hours a peculiar cataleptic condition, these attacks coming on suddenly, and differing from an ordinary epileptic condition in that during their continuance he may maintain the upright attitude, the countenance and body becoming fixed and rigid, the eyes set and staring, whilst the other senses are in abeyance. On recovering from one of these spells, which, however, during the last two days have been somewhat ameliorated by large doses of bromide of potassium, he is unaware of what has taken place around him. These cases of traumatic epilepsy differ also somewhat from the idiopathic variety in the method of attack. In an idiopathic epilepsy the patient is sometimes made acquainted with the approach of a convulsion by means of certain peculiar phenomena, which have received the name of the "aura epileptica." A peculiar numbness and tingling in the ends of the fingers and toes, which, rapidly proceeding up the limbs, seems, as it were, to explode in a convulsion, has been repeatedly spoken of by various observers. In the same way a feeling as though a ball were being pushed up from the abdomen into the throat has also been commented upon. In cases of traumatic epilepsy these symptoms are not so often noticed, and, in fact, are frequently wanting. At times, instead of the disease being due to the pressure of depressed portions of bone, it seems to take origin from the pressure of the thickened membranes that remain when the operation of trephining has been performed; or again a hard cicatrix pressing down on a thin plate of bone which borders the space left vacant by the removal of a disc of bone may be at the root of the trouble. The history of the man before you is that thirteen years ago he was struck on the head over the upper and posterior portion of the parietal bone with a brick. A compound comminuted fracture was the result, for the relief of which the trephine was employed by a gentleman of Williamsport, in this State. For three years afterwards he got along very comfortably, at the end of which time, however, he grew somewhat intemperate, and then first appeared the epileptic seizures; his condition progressively became worse, until now, as I have already told you, he has a cataleptic seizure every two hours, which may terminate in an epileptic convulsion, or which convulsion may only make its appearance every two, three, or four days. From being an intelligent man he has become almost idiotic; this being the history of nearly all epileptics. On examining this man's skull I find over the parietal bone decided evidence of depression in the integuments over the spot from which the comminuted fragments were originally removed. Running backwards and upwards there is a hard, cicatricial ridge or elevation marking one of the lines of the depression. It is my impression that this is the point at which an injurious compression of the brain substance is being exerted, and not at the point where the section of bone was removed in the trephining operation. Acting on this supposition, I propose, this morning, to apply the trephine in the line of this cicatrix, hoping thus, and by elevating any other depressed portion of bone that can be found, to afford the man some relief, and to thus enable him to continue his business, which he is now unable to pursue. In the performance of the operation I shall use

a trephine whose cylinder is straight; in the hands of a novice or an awkward operator the conical trephine is better, there being less risk of perforating too deeply in its employment, owing to its somewhat tapering end. Upon making a trap-door incision through the scalp, — although many operators prefer a crucial incision in performing this operation, — I find a rather prominent, rounded edge of bone bounding the original opening. Having scraped off the pericranium, and being careful not to injure the dense membrane, which at this point protects the brain, I proceed to employ my trephine to remove this prominent edge. The instrument, being held in place by a movable pin till a groove has been cut into the bone, is given what might be styled a fore and back circular or rotary movement, the pin of the instrument being pushed up into its sheath after the trephine has made for itself a resting groove. A tooth-pick or ordinary quill is employed to determine the depth to which the instrument has penetrated, and the portion of the bone can readily be lifted out of its bed by means of an elevator, this latter instrument having been passed beneath the edges of the opening in order to discover if any depressed portion of bone remains. The operation may now be said to be terminated, and the scalp wound is brought together and a carbolyzed dressing employed.

Original Articles.

A YEAR'S WORK IN OVARIOTOMY.¹

BEING TWENTY-FIVE SUCCESSIVE CASES OPERATED UPON BETWEEN NOVEMBER 26, 1879, AND NOVEMBER 28, 1880.

BY JOHN HOMANS, M.D.

I PROPOSE to describe very briefly these cases, and make a few comments upon any points of clinical interest that I have observed.

DOUBLE OVARIOTOMY; DERMOID CYST OF RIGHT OVARY AND COMMENCING CYSTIC DEGENERATION OF LEFT OVARY; RECOVERY.

CASE XIX.² Anne S., aged twenty-four, was admitted to Carney Hospital November 19, 1879. The tumor had been discovered three months before, and had grown rapidly. The girth at the umbilical level was thirty-two inches. Her general health was good.

Antiseptic ovariectomy was performed on November 26th. The pedicle of the right ovary was tied in halves with carbolyzed silk after compression by Dawson's clamp, and that of the left was tied in the same manner without the use of the clamp. In the wall of the cyst were found pieces of skin with hair growing on them, a plate of bone about two inches square, and a sebaceous cyst. Microscopical examination by Dr. A. T. Cabot showed that the flat piece of bone was true bone. Recovery was rapid. Miss S. writes me on July 25, 1880: "I have been unwell five times in eight months; three times within the last three months just as regular as I ever was. At those times I suffer more pain than I ever did before I was operated on." This fact has an important bearing on the usefulness of "Battey's operation." Both ovaries were, I think, thoroughly removed.

¹ Read before the Boston Society for Medical Improvement.

² The numbers refer to the author's whole series.

MULTILOCULAR CYST OF LEFT OVARY; RECOVERY.

CASE XX. Anna H., aged thirty-three, was operated upon December 21, 1879. Her general health had already begun to fail. The tumor had been discovered eight months before. Adhesions, broad and vascular, to the omentum and intestine were tied with silk or catgut, and then divided with Paquelin's thermocautery.

MULTILOCULAR CYST OF RIGHT OVARY; RECOVERY.

CASE XXI. Anne M. P., aged thirty-nine, was operated upon in her home in Boston on February 8, 1880. Her health was failing; she was confined to her bed, and had considerable oedema of her lower extremities. The tumor had been discovered five months before. There were no adhesions. Recovery was rapid.

CYST OF THE LEFT BROAD LIGAMENT; RECOVERY.

CASE XXII. The cyst was removed at the Carney Hospital on March 7, 1880. The umbilical girth was forty-three inches. The tumor had been known to exist for at least four years. Both ovaries were healthy. The fluid removed weighed twenty-six pounds and the cyst eleven ounces. Dr. A. T. Cabot reported that the fluid was slightly alkaline, sp. gr. 1.005, and that it contained a small quantity of albumen and no mucin. She recovered quickly.

MULTILOCULAR CYST OF THE LEFT OVARY; RECOVERY.

CASE XXIII. Laura A. M., aged fifty-seven, was operated upon in her home at Taunton, Mass., on March 23, 1880. The tumor was discovered about six months before. The cyst was much degenerated, more or less rotten, and friable. The pedicle was secured as usual. Recovery was rapid.

CASE XXIV. Anne L. S., aged eighteen, was operated upon at Carney Hospital April 1, 1880. The tumor weighed forty-five pounds. The adhesions were universal and intimate to the anterior parietes, and were burnt off with Paquelin's cautery. The pedicle was secured first by Dawson's clamp, then it was perforated by a double ligature of carbolyzed silk, and tied in halves, and finally was divided by Paquelin's cautery; Dawson's clamp was then removed, and the stump allowed to fall back into the pelvis. This method of treating the pedicle I have followed ever since. Recovery was rapid; but the patient was somewhat annoyed by an abscess in the wound discharging through the tracts of the sutures. Possibly this suppuration was caused by the cautery, which was used freely near the wound.

UNILOCULAR CYST OF LEFT OVARY; RECOVERY.

CASE XXV. Mrs. C., aged forty-eight, was operated upon at her home in Fall River, Mass., April 17, 1880. There were no adhesions. The pedicle was secured as in the last case. Recovery was very rapid.

CASE XXVI. Hannah T., aged fifty-eight, was operated upon at Carney Hospital on April 29, 1880. There were no adhesions; the pedicle was secured as usual. Recovery was almost immediate, the temperature never rising above 99° F. nor the pulse above 97 beats per minute.

MULTILOCULAR CYST OF LEFT OVARY; RECOVERY.

CASE XXVII. Fannie O. D., aged thirty-eight, was operated upon in her home at Mt. Holly, Vt., on May 18, 1880. There were no adhesions. The pedicle was secured as usual. Recovery was rapid.

UNILOCULAR CYST OF LEFT OVARY; RECOVERY.

CASE XXVIII. T. W. N., aged fifty-seven, was operated upon in her home in Boston on July 10, 1880. The tumor weighed forty-eight pounds. There were no adhesions. Recovery was very rapid. The temperature never rose above 99.5° F., nor the pulse above 85 beats per minute.

CYST OF THE LEFT BROAD LIGAMENT; RECOVERY.

CASE XXIX. S. F. E., aged forty-seven, was operated upon at the Carney Hospital on July 15, 1880. There were no adhesions. The fluid, which was limpid and clear, weighed eighteen pounds, and the delicate unilocular cyst a few ounces. Recovery was rapid.

MULTILOCULAR CYST OF RIGHT OVARY; RECOVERY.

CASE XXX. Abbe B., aged forty-seven, was seen in her home July 26, 1880. She was unable to leave her bed, and was evidently suffering from peritonitis and a low form of inflammation within the peritoneal cavity. Her case was not a promising one, as she was a stout, flabby woman, who had worked hard until she had to give up. She was removed to the Carney Hospital, and ovariectomy was performed on July 31st. The adhesions were recent and intimate between every portion of the cyst and the omentum and intestines. The omentum was half an inch thick, of a purple color, and showed itself when the peritoneum was opened. On separating the omentum from the cyst, and turning the former upwards upon the exterior of the abdomen, the cyst was seen. It was of a darkish-brown color, and beginning to be gangrenous, degenerating and inflamed inside and out. The cystic fluid was brown and commencing to decompose. More or less reddish ascitic fluid ran out. Some of the adhesions were separated with the fingers and some with Paquelin's cautery. The pedicle, which was very short, was compressed, tied, and burnt off at about the distance of a line from the intestine with which it was intimately incorporated. The temperature was 100.9° F. on the morning of the operation, and on the third day—that is, at the end of forty-eight hours—it had sunk to the normal level 98.5° F., and the pulse had fallen from 115 to 100. Recovery was rapid, and she went home at the end of two weeks. It may be asked, Why did this woman recover? Because her system was relieved of an exceedingly large mass undergoing decomposition and beginning to poison her blood, and the whole peritoneal cavity was washed clean. I should have said that the intestinal walls were velvety-looking and stiff like the right ventricle of the heart. The omentum was turned up and laid on a carbolized towel, and the intestines turned downwards on the pubes during the removal of the cyst. The cyst weighed two pounds, and the fluid eight and a half. The abdominal enlargement dated back about two years.

MULTILOCULAR CYST OF THE LEFT OVARY; RECOVERY.

CASE XXXI. Emma H., aged thirty, was operated on at the Carney Hospital on August 1, 1880.

There were no adhesions. The tumor weighed twenty-five pounds. Recovery was rapid.

CASE XXXII. Sarah J. S., aged twenty-nine, was operated on at the Carney Hospital on August 21, 1880. The adhesions were recent and easily broken down. The walls of the cyst were made up of a sarcomatous-looking material, in many places half an inch thick. Dr. A. T. Cabot reported that the sarcomatous-looking appearances were villous growths, the tops of the villi growing together and inclosing little cavities, from the walls of which new villi grew. The tumor belongs to the class called villous or papillomatous. The tumor weighed twenty-three pounds. Of these papillomatous tumors and their subsequent history I have spoken at a former meeting of the society.¹

MULTILOCULAR CYST OF LEFT OVARY; ASPIRATION OF CHEST; RECOVERY.

CASE XXXIII. Kate L., aged twenty-nine, was operated upon August 22, 1880, at the Carney Hospital. The tumor had been discovered about three months before. She had been tapped in May, and about three quarts of fluid drawn off. Her pulse was 104; her breathing was rather labored, and her left lower extremity was edematous. Her umbilical girth was forty-three inches. The cyst and its contents weighed fifty pounds; inasmuch as the material was semi-solid, and would not flow through a trocar, the cyst was necessarily removed piecemeal. At the conclusion of the operation the patient was very feeble, and her recovery seemed quite doubtful. The pulse ranged from 130 to 140, and the temperature stood at 100° F., and gradually rose to 101° F. on the third day. On the morning of the fourth day a severe and distressing attack of dyspnoea came on, lasting several hours. On examination the whole of the left thoracic cavity was found to be perfectly flat, and filled with fluid. By the advice and with the assistance of Dr. D. H. Hayden forty ounces of serum were drawn out by aspiration. The patient became somewhat livid, and coughed considerably, but this gradually passed off, and improvement and absorption went on rapidly, until, on the seventh day, the temperature had fallen to the normal standard and the pulse to 110. After this convalescence was rapid, and she went home on the twenty-eighth day after ovariectomy. I have never known of a case of aspiration of the chest after ovariectomy. Had I known of the presence of this fluid in the thorax before the operation I am sure that I cannot tell what plans I should have made. I attributed the rapid respiration to the pressure of the tumor against the diaphragm and the probably edematous condition of the lungs. The case was a very doubtful one, and one that I hesitated about and operated upon somewhat reluctantly, but the issue was successful, and perhaps aspiration after the operation was better surgery than aspiration before.

MULTILOCULAR CYST OF THE RIGHT OVARY; DEATH.

CASE XXXIV. Caroline F., aged forty-six, was operated upon at her home in Woburn, September 1, 1880. The patient's abdomen, buttocks, thighs, and legs were greatly swollen, her abdominal parietes were several inches thick from edematous swelling, and from the skin of the abdomen and the legs exuded serum, which ran from the bursting and eczematous cuticle. The patient was informed that I could give

¹ Vide Boston Medical and Surgical Journal, January 22, 1880

her no encouragement that the tumor could be removed, but as its contents would not flow through a trocar, and as her death was certain within a few weeks, an exploratory incision seemed a sensible thing to do. She decided to have this done. On opening the abdomen the tumor was found to be practically solid. An opening was made in the tumor with the cautery, and its size reduced as rapidly as possible; the adhesions were broken down, and the tumor removed. The relief to the patient was immense, and for forty-eight hours it seemed as if she would certainly recover; but the weather became excessively hot and sultry, and death took place from exhaustion on the fifth day. The tumor weighed thirty-nine pounds.

MULTILOCULAR CYST OF THE LEFT OVARY; RECOVERY.

CASE XXXV. Margaret K., aged forty-seven, was operated upon at Auburndale on September 2, 1880. The tumor weighed forty pounds. There were no adhesions. The wall of the cyst was as delicate as the membrane of the chorion, and when the peritoneum was divided a semi-solid material resembling calf's-foot jelly or vaseline burst through and flowed out. This was scooped out and squeezed out, and more or less was entangled in sponges and brought out. The pedicle, which was very delicate and friable, was secured in the usual manner. Recovery was interrupted, and was due to the antiseptic precautions and to prolonged and patient sponging and wiping of the peritoneal cavity.

MULTILOCULAR CYST OF THE LEFT OVARY; DEATH.

CASE XXXVI. Lucy A., aged twenty-seven, was operated upon at the Carney Hospital on September 7, 1880. The diagnosis was a cyst of the left ovary, with more or less pelvic adhesions. The tumor was found to be intimately adherent to the intestines, uterus, and pelvic organs; its nourishment was mainly derived from the mesentery. It was almost impossible to tell where the outline of the bowel ended and that of the cyst began, and after patient efforts and considerable hemorrhage all attempts to separate the outer covering of the cyst were abandoned, and it was enucleated, leaving its outer envelope attached to the intestine and uterus. The patient never rallied from the shock of the operation, and died in about fourteen hours. In structure the tumor was papillomatous.

MULTILOCULAR CYST OF LEFT OVARY; RECOVERY.

CASE XXXVII. Louisa F., aged thirty-three, was first seen at the Carney Hospital on September 9, 1880. On August 31st she had been tapped at her home in West Scituate by Dr. French, and thirty-five pounds of fluid had been removed. On September 9th I tapped and removed thirty pounds of fluid, partly ovarian and partly ascitic. On the 23d all oedema of the legs and abdomen had subsided, and the cyst was removed. The adhesions were recent and slight. The tumor and its contents weighed sixteen pounds. Recovery was rapid.

CASE XXXVIII. Sarah S., aged forty-eight, was operated upon October 2, 1880. Her case showed the advantages of preliminary tapping in certain cases, of which the previous one and this one are good instances. Ten days before the operation her lower extremities and abdominal parietes were excessively oedematous, and she was tapped, so that by the time of

the operation the oedema had greatly subsided and her condition was very good. The adhesions were new and old, and almost universal to the parietes. The tumor was largely solid. Recovery was uninterrupted.

MULTILOCULAR CYST OF THE RIGHT OVARY; RECOVERY.

CASE XXXIX. Rosa Z., aged thirty-eight, was first seen on June 15, 1880. As she was a Cuban, and could neither speak nor understand English, I was unable to convince her that removal of the cyst would be better than tapping, and as she had been told that the cyst might not fill up after tapping I consented to tap her, and removed thirty-seven pounds of chocolate-colored ovarian fluid. On October 6th ovariectomy was done at the Carney Hospital. The operation, I thought, would be a simple one, but solid and old adhesions united the cyst to the omentum and to the uterus and pelvis. The uterus was almost as much a part of the tumor as the interior cysts, and projected into the cyst wall so that its outline could be felt from the interior of the cyst. The outer membrane of the cyst was left upon the uterus and pelvis, and the cyst more or less enucleated. The pedicle was secured in several parts wherever there seemed to be a likelihood of hemorrhage. Recovery was very rapid.

UNILOCULAR CYST OF THE LEFT OVARY; RECOVERY.

CASE XL. Sarah M., aged forty-five, was operated upon at the Carney Hospital on October 24, 1880. The tumor had been discovered six months before, and had apparently been burst in April by the patient's lying on her stomach. About three weeks after the discovery of the tumor Mrs. M., feeling uncomfortable, tried the experiment of turning over and lying on her stomach. Immediately she felt something give way, and could no longer find the tumor. Vomiting came on, and she had great pain for twenty-four hours. No adhesions were set up, however. Recovery was sufficiently rapid, and she left the hospital on the twenty-first day.

In this case and in the one which followed there occurred a slight attack of phlegmasia dolens. On the twelfth day after ovariectomy the patient was feeling so well that she begged to sit up for a few minutes. She was allowed to do so, and walked a few steps to a sofa. On the next day she complained of pain in her hip and leg, and in a day or two the right leg measured about an inch more in circumference than the left. The temperature rose to 101.6° F., and did not sink to the normal height for a week. Now, January 5, 1881, although the patient has gained flesh and is feeling well, the right leg is somewhat larger than the left. The ovary that was removed was on the left side. There is still some swelling of the leg at the close of the day.

MULTILOCULAR DERMOID CYST OF THE LEFT OVARY; RECOVERY.

CASE XLI. Mrs. S., aged thirty-one, was operated upon at the Carney Hospital on November 6, 1880. The presence of the tumor had been known for at least four years. The tumor weighed twenty-two pounds, and contained in one spot a mass of hair, epithelium, and bone or cartilage. Recovery was rapid, but was attended with the same swelling of the lower extremity as in Case XL. There has also been a slight feeling

of soreness on deep pressure in the left iliac region. Mrs. S. was very anxious to leave the hospital, and seeming perfectly well she was allowed to ride home in a comfortable carriage on the nineteenth day after ovariectomy. Her ride tired her very much, and caused severe pain throughout the abdomen for about two hours after reaching home. Soon the same sort of indolent swelling as in the last case took place, and now, January 1, 1881, still exists slightly; but the tenderness in the groin has entirely subsided, and the patient is gaining flesh, and looks and feels perfectly well.

MULTILOCULAR CYST OF THE RIGHT OVARY; RECOVERY.

CASE XLII. C. W., aged thirty-one, was operated upon at the Carney Hospital on November 18, 1880. I had seen her at my office some weeks previously, and had thought her tumor probably uterine, with more or less ascites. She was much distressed in her mind and was quite worn and feeble. Her appetite was poor, she did not sleep well, her breathing was short, and she had coughed much for three weeks. Her pulse was rapid and feeble. My diagnosis was ascites, with a tumor more or less cystic and either uterine or ovarian; more probably the former, because the uterus and tumor were so intimately connected that the least motion communicated to the latter was transmitted at once to the former. On lifting the tumor the uterus was pulled upwards, on moving the tumor to one side the uterus was moved also, as if it were a part of the tumor. Finally, I said, "Whenever you feel that your life is a burden to you on account of this tumor, let me know, and I will try to remove it and cure you." It was not many weeks before she came and asked to have the operation attempted. The result showed that my diagnosis was wrong and that the tumor was ovarian. At the operation a portion of the cyst was found to be intimately adherent to the small intestine; this portion, about an inch and a half long and half an inch wide, was cut out and left on the intestine. In the pelvis there were practically two pedicles: one, the ordinary pedicle, comprised of the broad ligament and Fallopian tube, belonging to the right ovary, was secured as usual; the other consisted of a series of bands, in appearance resembling the cicatrized contracted bands of burns, such as one sees between the chin and sternum, for instance. These bands, altogether about two inches broad, connected the uterus and the ovarian cyst intimately, and this connection it was which had conveyed the impression that the tumor was a growth from the uterus. I secured these adhesions in an *écraseur*, and divided them with Paquelin's cautery. The patient went on very well until the twelfth day, when she had nose-bleed, and on the next day a hæmorrhage that seemed to me to come from the lungs. She went home perfectly well on the twenty-seventh day after ovariectomy.

CASE XLIII. C. A., aged fifty-two, was operated upon at the Carney Hospital on November 28, 1880. A fortnight before she had entered the hospital, but in such a state of alcoholism that the operation was deferred until her condition became more natural. The pedicle was extremely thick and several inches broad, so much so that it was difficult to include it in a Dawson's clamp, and when burned off and tied presented a stump as thick as my wrist. The only adhesion was a broad and intimate one to the uterus. The tumor weighed twenty-nine pounds. Her recovery was very satisfactory; her temperature never being above 99°

F., except on the evenings of the second and third days, when it stood at 100.8 F. and 100 F. respectively.

These cases, so far as they go, are a proof of the great value of the antiseptic method, or Listerism. I like this latter name because it is concise and identifies Lister's name with the magnificent principle which he has discovered and the method which he has introduced. The number of cases is small, but I am very sure that the percentage of recoveries is much higher than it would have been without Listerism, and the ratio is about what may be expected in cases done antiseptically by an experienced operator. So much has been written and said about the diagnosis of ovarian tumors and the method of performing ovariectomy that any remarks on these subjects would be out of place and superfluous. Any one wishing to know what can be accomplished by experienced operators, practicing perfect attention to all the details of cleanliness, without the spray, is referred to the writings of Mr. Wells and Dr. Keith.¹

A MORAL DUTY OF THE OVIOTOMIST.

I think there is a moral duty involved in undertaking to practice ovariectomy, namely, that a surgeon is bound at times to operate in cases where he can give but little hope for a favorable result. This becomes more and more a duty as time goes on and the operation becomes more and more firmly established. In the earlier efforts to make the operation one to be advised and urged, it would have been wise to select for operation only those cases almost certain to recover, in order that ovariectomy might not fall into disrepute, but now I think an ovariectomist ought to be willing to operate in a case like Number XXXIV., for instance, where the contents of the tumor were so thick that they could only be removed through an incision which would admit the hand. Here there was a possibility of recovery and a certainty of a speedy and distressing death. Much precious time had been lost in this case on account of the supposed existence of pregnancy, but after a lapse of a year without parturition it was found that the tumor was ovarian. In this case, if the fluid had been limpid, the patient ought to have been tapped, and probably when her *œdema* and general dropsy had subsided ovariectomy would have been successful.

THE PERSISTENCE OF MENSTRUATION AFTER DOUBLE OVIOTOMY.

This is illustrated in Case XIX. Miss S. states in a letter lately received: "To-day [November 26th] is the anniversary of my operation. I have gained seventeen pounds in the year, and have been unwell *regularly* for the last eight months. I suffer very much pain at those periods." In a previous letter she writes that her menstrual periods have been very painful since the removal of the ovaries. — much more so than before. Now it is possible that there may be a third ovary, or that some of the ovarian substance containing ova may have been left; but neither of these conditions is probable, and a ligatured stump of an ovary is not at all likely to be able to discharge ova through its tied and cicatrized surface. So far as this case goes it would not encourage one to perform Battley's operation in order to bring about the menopause.

¹ Dr. Keith's article on Ovariectomy before and since the Introduction of Anti-septics, in the British Medical Journal for October 19, 1878, will well repay perusal.

PAIN AFTER OVARIOTOMY.

In regard to pain after ovariectomy patients vary very much: some have very severe pain at a single point in the small of the back, and some complain only of a slight feeling of soreness. Almost every patient requires an opiate, at least once. Some are much distended with wind and suffer in consequence, while in others the intestines remain collapsed, and we find the same deep hole, filled with wrinkled and superfluous skin, when we remove the stitches a week after the operation, that was left when the wound was sewed up; so remarkable is this sometimes that the integument has to be unrolled and unfolded to find the line of incision. This presence or absence of pain, or distention or flatness, seems to have no relation to the amount of handling the peritonæum has undergone.

FLOWING AFTER OVARIOTOMY.

A moderate amount of hæmorrhage from the uterus is not very unfrequent after ovariectomy, and is, as far as I know, of no especial importance.

TEMPERATURE AFTER OVARIOTOMY.

The bodily temperature after this operation and during convalescence is generally low. I mean lower than one would naturally expect; it often does not rise to 100° F., and seldom reaches 101° F.¹

PRELIMINARY TAPPING.

Tapping before ovariectomy, except for purposes of diagnosis or to remove œdema, is an evil, because it sometimes gives rise to adhesions, or causes more or less suffering and pain.

The lady whose case is described in No. XXVII. writes to me: "Advise your patients never to be tapped. I suffered more after tapping than I did after the operation." Mr. Wells has shown, however, that ovariectomy in a large number of cases is as successful in those who have been tapped as in those who have not. The emptying of a cyst by the slow process of aspiration is a most pernicious practice and quite harmful, while simple tapping with a good-sized trocar is almost in comparison innocuous. The attempt to completely empty a cyst in this way seems (at least in my experience) to be followed by a complete degeneration and softening of the contents of the sac and a deposit of a layer of friable lymph on its inner wall. This condition of things can generally be inferred from the pain and constitutional irritation that the patient suffers. Tapping before ovariectomy is always necessary in such cases as XXXVII. and XXXVIII., where there is great œdema of the abdominal walls and lower extremities. If, after the tapping, the patient's general condition markedly improves and the œdema subsides, you may hope for the best results from ovariectomy.

ASPIRATION OF THE CHEST FOR PLEURITIC EFFUSION AFTER OVARIOTOMY.

Case XXXIII. is unique, so far as I know, in regard to the tapping of the chest for pleuritic effusion on the fourth day after ovariectomy. I cannot say whether there was fluid in the chest before the operation, but had I known that there was I should have inferred that it was a part of the general dropsy, and that it would be absorbed rapidly after the removal of the tumor,

just as œdema of the legs generally disappears entirely within four days after ovariectomy.

PHLEGMASIA DOLENS AFTER OVARIOTOMY.

Cases XI. and XII. illustrate the rare occurrence of a mild form of phlegmasia dolens after ovariectomy. When this occurs the extremity on the opposite side to that from which the ovary was removed seems more likely to be affected than the one on which the pedicle has been tied; or, to speak more carefully, it has been found in four cases in which this complication has occurred that three were on the opposite side to the pedicle and one on the same side. In the *American Journal of the Medical Sciences* for July, 1880, Dr. Walter F. Atlee, of Philadelphia, relates a case of ovariectomy in which phlegmasia dolens followed the operation. Dr. Atlee remarks, "This complication of the operation for the removal of an ovarian cyst I had never before seen or heard of." He quotes a like case reported by Dr. Galabin, of Guy's Hospital, in the *British Medical Journal* of March 13th. Both of my cases were very mild, though tedious. The cause of this inflammation of the vein is not at all apparent. Dr. Galabin has no theory to offer, and Dr. Atlee is inclined to think that the cause was septic. In my cases walking about seems to have lighted up the trouble, but exactly why it should in these cases and not in others I am unable to explain.

HEMOPTYSIS AFTER OVARIOTOMY.

I do not remember to have read any account of the occurrence of hæmorrhage from the nose and lungs after ovariectomy, such as occurred in Case XLII. Whether this hæmorrhage was salutary and was similar to the hæmorrhages from the uterus, which I have mentioned above, or whether it was accidental and entirely unconnected with the operation and the precursor of phthisis, I cannot decide, but the future career of the patient will be interesting to follow.

TIME OF LEAVING HOSPITAL AFTER OPERATION.

Patients generally are ready to leave the hospital at the end of the third week after the operation; some leave sooner and some remain later. I think that most of the favorable cases are able to go home at the end of three weeks.

There are certain details of the operation and general rules that may be worth mentioning. Always clean up as thoroughly as you can a dirty, inflamed peritoneal cavity. I always do this, and have several times wiped masses of lymph off from the intestines and peritonæum; perhaps this latter action is unnecessary, but the patients have recovered, and I have not regretted doing it. I generally cut out and leave behind any portion of the cyst intimately adherent to a coil of intestine; it is better to do this than to run the risk of rupturing the bowel or causing hæmorrhage from its surface, which it is not easy to control. I have always followed Mr. Spencer Wells's advice not to yield to the temptation to remove a fibroid from the uterus during an ovariectomy; the desire to do so is very strong, but I think the safer way is to leave them alone, and, although I have one or twice seen them well pediculated, I have not meddled with them. I always compress the pedicle with Dawson's clamp (a very simple and powerful instrument which has done me good service), then burn off the pedicle with Paquin's cautery, tie with a double ligature (*in the sul-*

¹ In the *British Medical Journal* for December 18, 1880, will be found an interesting discussion on hyperpyrexia after Listerian ovariectomy at the Royal Medical and Chirurgical Society.

cus made by the clamp), remove the clamp, and drop the stump. I do this because two of the most successful operators, Drs. Keith and Bradford, use one the cautery and the other the ligature, and so I use both. I dare say that either would be sufficient, but I see no objection to my method, and am satisfied with it. I never use catgut for tying the pedicle, but always carbolized silk. I lost a case from hemorrhage after tying with catgut, and have never used it since. So far as my experience has gone, abdominal hernia rarely occurs after ovariectomy unless the patient is very careless. Mr. Wells advises that the abdomen be supported by adhesive plaster for six weeks after the operation,

and that a proper abdominal belt be worn for at least a year. In the only cases I have known the patients were ignorant and careless, and took off all support, and worked hard within a few weeks after recovery.¹ I continue to find my operating table, which I have shown at one of the society's meetings, very convenient. I can turn a patient nearly over without having the least anxiety as to her slipping off the table, while the board is securely held at any angle by the ratchet or pull in the cogwheel. I have declined to operate but in a single case during the last year, — a case of malignant disease with marked cachexia. This case was operated upon by another physician, but the result was fatal.

CASES OF OVIARTOTOMY FROM NOVEMBER 26, 1879, TO NOVEMBER 23, 1880.

No.	Date.	Place of Operation.	Condition.	Age.	Length of Incision.	Adhesions.	Treatment of Pedicle.	Weight of Tumor.	Result.	Remarks.
1	Nov. 26, 1879.	Carney Hospital.	S.	24	6 in.	Slight.	Tied with carbolized silk and dropped back.	12 lbs.	Recovery.	Both ovaries removed. Menstruation regular, but more painful than before ovariectomy. One cyst dermoid.
2	Dec. 21, 1878.	Do.	S.	33	4 in.	Omental and intestinal.	Do.	25 lbs.	Recovery.	
3	Feb. 8, 1880.	Boston.	M.	39	4 in.	None.	Do.	25 lbs.	Recovery.	
4	March 7, 1880.	Carney Hospital.	M.	28	3 in.	None.	Do.	27 lbs.	Recovery.	Cyst of the left broad ligament.
5	March 23, 1880.	Taunton.	M.	37	3½ in.	Slight.	Do.	20 lbs.	Recovery.	
6	April 1, 1880.	Carney Hospital.	S.	18	5 in.	Universal and intimate to anterior parietes, and slight to omentum.	Tied as above, and burnt off with Paquelin's cautery.	45 lbs.	Recovery.	Adhesions burnt off with Paquelin's cautery.
7	April 17, 1880.	Fall River.	M.	48	3 in.	None.	Do.	83 lbs.	Recovery.	
8	April 29, 1880.	Carney Hospital.	S.	58	2½ in.	None.	Do.	14 lbs.	Recovery.	
9	May 18, 1880.	Mt. Holly, Vt.	M.	38	3½ in.	None.	Do.	50 lbs.	Recovery.	
10	July 10, 1880.	Boston.	M.	57	4 in.	None.	Do.	48 lbs.	Recovery.	
11	July 15, 1880.	Carney Hospital.	S.	47	4 in.	None.	Do.	18 lbs.	Recovery.	Cyst of left broad ligament.
12	July 31, 1880.	Do.	M.	47	6 in.	Intimate, and recent to omentum and intestines.	Do.	11 lbs.	Recovery.	The omentum was turned up and laid on a carbolized towel, and the intestines turned downwards towards the pubes during the removal of the cyst.
13	Aug. 1, 1880.	Do.	M.	30	3½ in.	None.	Do.	25 lbs.	Recovery.	Dermoid cyst.
14	Aug. 21, 1880.	Do.	M.	29	6 in.	Almost universal and recent to parietal peritoneum.	Do.	23 lbs.	Recovery.	Papilloma.
15	Aug. 22, 1880.	Do.	M.	20	6 in.	Slight.	Do.	51 lbs.	Recovery.	Forty ounces of serum removed by aspiration from the left thoracic cavity on the fourth day after ovariectomy.
16	Sept. 1, 1880.	Woburn, Mass.	M.	46	8 in.	To peritoneum, small intestine, and diaphragm; firm and old.	Do.	39 lbs.	Death.	Exhaustion on fifth day. Very hot weather.
17	Sept. 2, 1880.	Auburndale.	M.	47	7 in.	None.	Do.	40 lbs.	Recovery.	Fluid gelatinous.
18	Sept. 7, 1880.	Carney Hospital.	M.	27	6 in.	Intimate and old, or congenital, to small intestine, mesentery, and uterus; in fact, incorporated with them.	Do.	20 lbs.	Death.	Shock. Papilloma.
19	Sept. 23, 1880.	Do.	M.	33	4 in.	Recent to anterior peritoneum.	Do.	16 lbs.	Recovery.	Sixty-five pounds of ascitic and ovarian fluid removed by tapping within the last three weeks preceding the operation.
20	Oct. 2, 1880.	Do.	S.	48	5 in.	Universal, old and new, to peritoneum.	Do.	38 lbs.		
21	Oct. 6, 1880.	Do.	W.	38	3½ in.	Solid, old, to uterus, oment., and pelv.	Do.	15½ lbs.	Recovery.	Cyst more or less calcified.
22	Oct. 23, 1880.	Do.	M.	45	2½ in.	None.	Do.	10½ lbs.	Recovery.	
23	Nov. 6, 1880.	Do.	W.	31	2½ in.	None.	Do.	21½ lbs.	Recovery.	
24	Nov. 15, 1880.	Do.	S.	31	6 in.	To intestine and uterus.	Do.	18 lbs.	Recovery.	The portion of the cyst adherent to the bowel was cut out and left behind.
25	Nov. 28, 1880.	Do.	W.	52	3 in.	Do.	Do.	30 lbs.	Recovery.	

— A London chemist was suspected of selling drugs for the purpose of procuring abortions, and a policeman undertook to procure evidence against him. For this purpose he called, in citizen's dress, upon the chemist, and represented that a friend of his was in difficulty, and he wanted something to aid her. The druggist wanted to see the woman, and accordingly a

female attaché of the force accompanied the policeman, and the desired material was procured. The grand jury found a true bill against the chemist, and also a bill against the police for conspiracy. The result is not yet determined.

¹ Boston Medical and Surgical Journal, March 6, 1880.

EUROPEAN AND AMERICAN ANATOMY ACTS
COMPARED.¹

BY EDWARD MUSSEY HARTWELL, M. A.,
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THE guild spirit which led to the incorporation of the Edinburgh surgeons as a "company," in 1505, and the incorporation of the "Mystery and Commonalty of Barbers and Surgeons of London," in 1510, may be said to characterize the majority of our American medical colleges which are, as has been well said by President Eliot, managed as commercial ventures. This trading, monopolizing spirit is more marked in British than in Continental schools of medicine. The radical difference between European and American medical education results from the woful lack on this side of the Atlantic of the well-considered, consistent, and responsible state supervision exercised over the teachers, students, and practitioners of medicine in most European countries. In no department of medical education is this difference more strongly emphasized than in that of anatomy. It is equally clear whether we consider the training and attainments of the teachers, the amount of practical knowledge required of the students, or the laws regulating the supply of material in this department.

Such apathy regarding anatomical studies as characterized the legislators of Indiana and Ohio prior to the desecration of the Harrison tomb, in 1878, must not be considered distinctively American. The English anatomists were denied adequate protection until the discovery, in 1828, that some fifteen murders had been committed by Burke and Hare, in Edinburgh, for the single purpose of selling the bodies of their victims. This discovery aroused Parliament to pass the Warburton Anatomy Bill, which became a law August 1, 1832. The preamble of this act sets forth the indispensable nature of anatomical examinations; the insufficiency of the legal supply of human bodies for such purposes; the fact that to meet the demand for subjects "divers great and grievous crimes have been committed, and lately murder;" and the expediency of giving "protection, under certain regulations, to the study and practice of anatomy." By the terms of this act, which is known as 2 and 3 Will. IV. chap. 75, the secretary of state for the home department in the United Kingdom and the chief secretary for Ireland are empowered to issue licenses for the practice of anatomy to certain legally-qualified persons, to appoint inspectors of anatomical schools, and to direct what district each inspector shall superintend. The inspectors are required to render quarterly returns "of every deceased person's body that, during the preceding quarter, has been removed for anatomical examination to every separate place in his district where anatomy is carried on, distinguishing the sex, and, so far as it is known at the time, the name and age of each person whose body was so removed. The practice of anatomy is allowed only to certain specified persons after due notice to the proper authorities of their intention, and on the condition that their rooms shall always be open to the inspector of the district. That portion of 9 Geo. IV. chap. 31 which directs that the bodies of murderers may be dissected is repealed, and it is provided that such bodies shall be hanged in chains or buried within the prison precincts, according to the direction of the court.

The specifications as to what bodies may be legally delivered for dissection are found in Sections VII. and VIII., as follows:—

"VII. *And be it enacted* that it shall be lawful for any executor or other party having lawful possession of the body of any deceased person, and not being an undertaker or other party intrusted with the body for the purpose only of interment, to permit the body of such deceased person to undergo anatomical examination, unless, to the knowledge of such executor or other party, such person shall have expressed his desire, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, that his body after death might not undergo such examination, or unless the surviving husband or wife or any known relative of the deceased person shall require the body to be interred without such examination.

"VIII. *And be it enacted* that if any person, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, shall direct that his body after death be examined anatomically, or shall nominate any party by this act authorized to examine bodies anatomically, to make such examination; and if, before the burial of the body of such person, such direction or nomination shall be made known to the party having lawful possession of the dead body, then such party shall direct such examination to be made, and, in case of any such nomination as aforesaid, shall request and permit any party so authorized and nominated as aforesaid to make such examination, unless the deceased person's surviving husband or wife, or nearest known relative, or any one or more of such person's nearest known relatives, being of kin in the same degree, shall require the body to be interred without such examination."

In subsequent sections it is provided that no body shall be removed from the place of death to a dissecting-room until after forty-eight hours from the time of death of the deceased person, nor until twenty-four hours' notice, to be reckoned from the time of such decease, shall have been given of the intended removal to the inspector of the district, nor unless, previous to the removal of the body, a certificate stating the manner or cause of death, signed by the physician, surgeon, or apothecary in attendance upon the deceased in his last illness, shall be delivered with the body to the party receiving it for anatomical examination; that persons receiving a body, as above stated, must within twenty-four hours of its receipt transmit the certificate received with it to the inspector of the district, together with a return stating at what day and hour and from whom the body was received, the date and place of death, the sex, and (as far as is known at the time) the Christian name and surname, age, and last place of abode of such person; that every such body shall, before removal, be placed in a decent coffin or shell, and be removed therein, and after undergoing dissection such body shall be decently interred in consecrated ground or in some public burial-ground; that a certificate of the interment of such body shall be transmitted to the inspector of the district within six weeks after the body was received. Offenders against the provisions of this act are to be deemed guilty of a misdemeanor, and are liable to punishment by imprisonment for not more than three months, or by a fine not exceeding £50, at the discretion of

¹ Concluded from page 29.

the court. Actions or suits under this act must be brought within six months after the cause of action accrued.

The act of 1832 is the one still in force. It has served to suppress "resurrecting," and under it the English anatomists seem to have been fairly well supplied with subjects. The following-named amendatory acts have been passed: 4 and 5 Will. IV. c. 26; 21 and 25 Viet. c. 95; and 34 and 35 Viet. c. 16. The most noteworthy amendment is that of 24 and 25 Viet. c. 95, 1861, repealing the provision which allowed the hanging in chains of a murderer's body.

It is no less certain that the German and French schools of anatomy outrank the British than that the latter outrank the American. While it would be of interest to consider fully the subject of German laws relating to anatomy, we are obliged to give what might seem an undue prominence to the French laws, owing to the fact that it is well-nigh impossible to find in this country any but the most meagre sources of information regarding the statutes and police regulations of Germany. If it were necessary, one might, from sources to be found in the libraries of Washington, Boston, and Baltimore, trace the entire development of the French laws concerning the cadaver; but we shall content ourselves with the consideration of some of the more important modern French acts. The universities, the faculties of medicine, and all other learned bodies in France were suppressed by the revolutionary decree of August 18, 1792. Medical science fell into anarchy, and the degree of M. D. became as worthless as it is in many parts of America to-day, although in 1794 *écoles de santé*, as they were called, were established at Paris, Montpellier, and Strasbourg, which had been the head-quarters respectively of the three Facultés de Médecine. The organization of the instruction and police of these écoles was effected under a decree of July 2, 1796, when regular examinations were established. By the terms of this decree pupils during the winter semester were required to receive practical instruction in anatomy and surgical operations from seven till ten A. M. and from five till nine P. M. In 1803 a law to reform and to regulate medical education and practice was passed. The dissecting-rooms had already been put under state supervision. A decree of the executive directory, given September 25, 1798, forbade the opening of any dissecting-room, either public or private, or of any anatomical laboratory, without the consent of the central bureau of the commune in addition to that of the municipal authorities; and made it obligatory on every one having the right to practice dissection to register his name with the commissary of police of his district, to observe all formalities prescribed by the police in procuring subjects, and to designate the place where he proposed to dispose of the *débris* of *cadavera dissecta*. In 1799 the prefect of police in Paris was particularly charged to inspect the dissecting-rooms of the city. The ordinance of the Prefect Dubois, issued October 17, 1803, is said to have been the first of the sort. This ordinance provided that there should be daily fumigation of all the rooms constituting an anatomical theatre; that dissections should begin on the 25th of October and end the 25th of April; that bodies of persons dying of a contagious disease should not be dissected; and that subjects should be carried to the amphitheatres in covered vehicles, and with all due decency. In 1813 the private dissecting-rooms in Paris had increased

in number to forty. The ordinance of the prefect of police, issued October 15, 1813, suppressed all private anatomical laboratories, forbade all dissections or operations upon the cadaver in hospitals, almshouses, private hospitals, infirmaries, houses of detention, etc., and provided that dissections should only be allowed in the pavilions of the Faculté de Médecine and in the amphitheatre of the Hôpital de la Pitié. Under this ordinance the bodies of all persons dying in hospitals, almshouses, etc., including those which had been opened in the course of post-mortem examinations, were deliverable for dissection. The only bodies of the class alluded to which might not be given up for dissection were those of persons dying in the clinics of the faculty and those which should be claimed by friends willing to pay for their burial. The cemetery of the Clamart was designated as the burial-place of all the *débris* resulting from dissection; and every one engaged in the delivery or transportation of subjects, either to the amphitheatres or to the cemetery, was enjoined to observe a becoming decorum. From nine to ten o'clock at night was the hour set for carrying subjects, in covered vehicles, to the amphitheatres. Article I. of the decree of the Conseil général des Hospices, April 28, 1819, declares that "the hospitals shall furnish four hundred subjects to the École de Médecine for the teaching of anatomy and dissections, to wit, for the course of anatomy given by the professors thirty, for dissections from October 1st till April 1st three hundred, and for the course of operations and the examinations during the scholastic year seventy; to the Collège de France, for the chair of anatomy, thirty subjects, and to the Jardin du Roi thirty subjects." The ordinance of 1813 has since been amended and amplified, notably in 1815, 1825, 1832, and 1834, but so far as we can learn has not undergone radical change.

Since November 1, 1879, aspirants to the degree of M. D., in France, have been subject to the decree of the Council of State, passed June 20, 1878. The general features of this law were considered in the Educational Number of the JOURNAL, pages 384-85; but such as have reference to anatomy may be specially noted here. Practical exercises in the laboratories, dissection, and residence near a hospital for a prescribed period are made obligatory. The charge of one hundred and sixty francs for the material used in practical studies is distributed as follows: sixty francs the first year; forty francs the second year; forty francs the third year; twenty francs the fourth year. This tariff superseded that established by the ministerial decrees of August 4, 1869, and April 21, 1869. Under the abrogated tariff students inscribed with the faculty paid twenty francs for each year's dissections, while foreigners paid sixty francs; and the annual charge for practicing surgical operations on the cadaver was a fee of ten francs for enrolled students, fifteen francs for native students not enrolled, and thirty francs for foreigners not enrolled. From the statistical reports of 1876, the latest that are accessible to the writer, it appears that 4852 students were enrolled in 1876 in the Faculties of Medicine of Paris, Montpellier, and Nancy, besides 772 students of medicine in eighteen preparatory schools of medicine and pharmacy. Three thousand four hundred and sixty-three subjects were delivered according to law at the anatomical theatres of the above-mentioned faculties and schools, which had in all 5624 students. The proportion of subjects to students varied considerably.

The Faculty of Paris, for instance, with 4295 students, had 1998 subjects at its disposal; while the École préparatoire de Médecine et de Pharmacie of Lyons, with 175 medical students, received 220 subjects, that of Amiens, with five medical students, had 20 subjects, and that of Toulouse had 80 subjects for 62 students. The following detailed statement is found concerning the distribution of the subjects delivered to the Faculty of Paris. There were delivered for the first and second examinations for the doctorate 532; for dissections, 138 from January 1st till March 31st; and 145 from October 20th till December 31st; for operative surgery, 78; *concours de l'adjurat et du prosectorat*, 47; to the professors, 56; to the prosectors, 80; to the aids of anatomy, 154; 62 were beyond use; 106 were delivered in August and September; and children and embryos to the number of 600 were not used. Total, 1598. Dissections begin, in Paris, from the 15th to the 20th of October, and close March 15th; during which period they occupy from twelve M. to four P. M., six days in the week. The course in operative surgery extends from May 1st till the 8th or 15th of June; from one to three P. M. being devoted to it three days in the week. The number of students engaged in dissection in Paris in 1876 was 761, and in surgical operations on the cadaver 195.

Since the cession of Alsace to the Germans, the Faculty of Medicine of Strasbourg has been replaced by that of Nancy, which in 1876 had 144 students. It had a professor of general anatomy, one of pathological anatomy and physiology, and one of histology. There were connected with its École pratique, a *chef des travaux anatomiques*, a prosector, an assistant in anatomy, an assistant in pathological anatomy, two servants of anatomy, a servant of anatomy and histology, and a laboratory man. One hundred and thirty-two students were enrolled in anatomy, 52 in operative surgery, and 52 in pathological anatomy. The hours for dissection were from eight to eleven A. M., and from one to five P. M., six days in the week, during the winter semester; those for operative surgery were from four to five P. M., twice weekly, during the summer semester; while the hours from two to four P. M., six times weekly, throughout the winter semester were given to practical exercises in pathological anatomy. Seventy-eight students dissected 76 subjects, and 45 bodies were utilized in the practical course in operative surgery.

By a law passed December 11, 1875, the erection of a new École pratique for the Faculty of Paris was authorized at an estimated cost of 4,740,000 francs; the expense to be shared by the city of Paris and the state. Six amphitheatres in the new school take the place of one in the old, and the number of 80 dissecting-tables in the old has been increased to 180 in the new school.

It is impossible, on the basis of such documents as the writer has been able to find, to give any detailed statement concerning the laws which regulate the organization and maintenance of the German institutes of anatomy. The Germans may be more stringent in their demands for evidences of anatomical knowledge on the part of students and more generous in supplying facilities for its acquirement than are their rivals the French; but it must be said that they furnish very little documentary proof to substantiate their claims. We must content ourselves with a brief notice of two German laws. In accordance with a "Students-Hof-

commissions Decret vom January 19, 1810," candidates for the degree of doctor of surgery in Austria, seventeen years ago, were required to make two surgical operations on the cadaver as a part of their examination. The operations were made in the anatomical lecture-room, in the presence of the dean of the faculty, the professors of anatomy, surgery, and ophthalmology, the students in medicine and surgery, and of such experts as might choose to attend. Two tickets having been drawn from an urn containing the names of all the principal surgical operations, including those on the eye, the director read aloud the names of the operations to be performed by the candidate. The candidate had then to explain the nature of the operation, choose from the methods then or formerly in vogue the one he would employ, and defend his choice. In making the operation he was required to use every precaution and appliance which would be employed in an operation on the living body.

In the *Medicinisches Correspondenz-Blatt des württembergischen ärztlichen Vereins*, Bd. xxxiv., No. 1, January 9, 1864, there is given the text of a ministerial decree concerning the delivery of dead bodies to the anatomical institutes of the kingdom. Precise provision is made for dividing the kingdom into districts, and the dead of certain districts are allotted respectively to the universities of Tübingen, Stuttgart, Ludwigsburg, and Ulm. Certain formalities are prescribed as necessary in the transportation and delivery of subjects for anatomical purposes. The bodies which may be dissected are those of executed criminals, of suicides, except in the case of insane suicides, and of all unclaimed dead, without respect to age, whether paupers or convicts, whose burial charges would fall upon the public. The writer would gratefully receive any information of authentic sources of German laws on anatomy.

The most recent statement noticed regarding the facilities for anatomical studies in Germany is contained in a French report, published in 1879, on the University of Bonn and Higher Education in Germany. M. Edmond Dreyfus-Brissac declares that the new anatomical institute at Bonn, which was recently built at a cost of 329,200 marks, is a veritable palace. Its annual budget is 18,204 marks, of which sum 7155 marks are expended in salaries, and 11,049 marks for material; 3000 marks were paid, in 1878, for subjects, and 2000 marks for instruments, in which year sixty-four bodies were at the disposal of sixty students.

Beyond the statistics given in the first article of this series we have no authentic data on which to base an accurate comparison of the amount of dissecting required in American and European schools, and the expense entailed thereby. It is safe to say that no medical school in the United States combines the rigid requirements of Vienna and Prague of seventy years ago with anything like the wealth of opportunity offered at Paris and Bonn to-day. One who should desire to become a thoroughly expert anatomist through dissection of the dead rather than by mangling the living would be justified in going from America to Germany or France simply on grounds of economy. The depopulation of American medical colleges, owing to such a cause, need, however, not be feared so long as the present public and professional indifference to ignorance of the fundamental facts of medical science obtains.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF CHILDREN

BY D. H. HAYDEN, M. D.

ON CATARRH OF THE STOMACH IN CHILDREN.¹

GASTRO-INTESTINAL disorders in babies and young children are perhaps the most common derangement set up by changes of temperature, and in older children a gastric or intestinal catarrh or a combination of both is a sufficiently familiar consequence of exposure to cold. In the child we meet with every variety of gastric catarrh, from the severe acute attack with high fever, which is comparatively rare, to the more common subacute non-febrile gastric trouble, which is milder in character and quickly subsides. Even in children it is exceptional for acute gastric catarrh to be accompanied by pyrexia; therefore, in cases where fever is a prominent feature in the derangement the diagnosis is sometimes difficult.

As illustrative of this last variety of gastric catarrh the author reports a case in a young girl aged six years. It was seen first by him on the seventh or eighth day of the illness, when the ordinary eruptive fevers could be excluded. The diagnosis lay between acute tuberculosis, typhoid fever, and acute gastric catarrh. The occurrence of fever, with a history of previous delicacy of health, was quite in keeping with the ordinary course of tuberculosis. There was, however, no family history of any such complaint, and this important fact, together with the complete absence of distress or anxiety in the expression of the child, and the absence, also, of any œdema of the lower extremities, was held to be sufficient evidence to exclude the presence of this formidable disease.

Between typhoid fever and acute gastric catarrh the distinction was more difficult. The temperature had not followed the typical course of enteric fever, but in children this latter disease is often mild, and its temperature curve frequently deviates from the ordinary type. It was too early to lay any stress on the absence of rose spots, and these are sometimes absent altogether in undoubted cases of typhoid. The state of the spleen was doubtful. In favor of acute gastric catarrh was the slight snuffling, the mild sore throat, the complete absence of delirium or of apparent discomfort, and the irregularity of the fever. It was impossible, however, to exclude typhoid fever, but on the following day (the eighth or ninth) the temperature fell, and decided the question in favor of acute gastric catarrh. Cases of recurring gastric catarrh are far from uncommon, and their diagnosis is more easy. These attacks, where the intervals between them are short, may exercise a very deleterious influence on the health and development of the patient. Such cases are often supposed to be cases of consumption.

The report of a case of the recurrent form of acute febrile gastric catarrh in a young girl seven years old is then given. In this case jaundice, which, in children, in the large majority of cases, is catarrhal, occurred with the last two attacks of fever, and helped greatly to explain the nature of the attacks. In her most recent illness, too, a new feature had been noticed in the diarrhœa which had followed upon the jaundice, and had still further delayed convalescence. In this diarrhœa the characters of the stools, which contained mucus and blood, and were passed with straining and

pain, pointed to a catarrh of the lower bowel. Explaining then the earlier attacks in the light afforded by the later, the conclusions arrived at by the author were that the child's sensitiveness to changes of temperature showed itself in the form of repeated attacks of acute gastric catarrh, accompanied by fever. Catarrh of the stomach unaccompanied by fever, "perhaps the commonest derangement to which children are exposed," is then described, and the treatment of both the febrile and non-febrile forms given, being the same in both cases. We must first do our best to remove all sources of irritation. The acrid mucus, a free secretion of which is one of the ordinary phenomena of the catarrhal state, quickly induces an acid change in the more fermentable articles of food. Therefore, if the stomach is oppressed by sour matters, as shown by uneasiness at the epigastrium, or sour smell from the breath, and a feeling of nausea, immediate benefit will be derived from an emetic dose of ipecacuanha wine. Afterwards a draught composed of tincture of nux vomica with bicarbonate of soda in water, sweetened with spirits of chloroform, taken two or three times a day, will soon restore the gastric mucous membrane to a healthy condition. Strong purgatives must be avoided, but an occasional mild aperient will be required, such as the compound licorice powder or castor oil. If there be fever which does not subside after the action of the emetic, the child may be allowed to take fluids from time to time in moderate quantities. The best are unsweetened barley water flavored, if desired, with orange flower, toast water, or fresh whey. During the treatment, as long as any signs of acidity of stomach persist, great care must be taken to exclude from the diet all matters capable of favoring the tendency to fermentation of food, and even for some time afterwards starches and sweets must be taken sparingly.

The above measures will effect a considerable improvement, but at this point the treatment may be said only to have begun. The patient is in a weakly state from successive attacks, and we have to adopt means to strengthen the digestive powers. A common practice in such cases is to administer the preparation of the phosphates of iron and lime known as "Parish's chemical food." This practice is pernicious on account of the syrup, in which the phosphates are dissolved, supplying materials for fermentation, each dose being soon followed by flatulence and acidity, so that the medicine really aggravates the mischief which it is intended to allay. The better plan is to give dialyzed iron, or, if there be any tendency to acidity remaining, the ammonia citrate of iron with a few grains of bicarbonate of soda sweetened with aqua chloroformi. After a time a change may be made to a solution of strychnia with the perchloride or permanganate of iron, given directly after food. During the same time a mild aperient should be given every few days, whether it seems to be required or not, to insure a proper relief to the bowels, and prevent the retention of any excess of mucous secretion.

In spite of this treatment, however, the child will not be secure against relapses unless special precautions be taken to guard the body against chills. The catarrhal state, whatever be the organ affected, tends constantly to repeat itself under the influence of slight causes, and there is little doubt that it induces an extreme sensitiveness to changes of temperature. A broad flannel binder is recommended to be worn

¹ Enstace Smith, M. D., F. R. C. P., London Lancet, November 20 and 27, 1880.

such children, applied tightly to the abdomen, so as to reach from the hips to the armpits, and the medical practitioner should look upon it as his first duty in these cases to see that it is properly applied. The binder should be considered as a part of the child's ordinary dress, and be cast off at night with the rest of his clothes. In many cases it is necessary, in addition to the above precautions, to fortify the resisting power of the child by cold bathing. Some circumlocution, however, is often necessary in recommending this step to parents. There is a method by which the most delicate child may take a perfectly cold bath with safety and advantage. The method consists in first stimulating the skin by friction, so as to enable the body to resist the shock of the cold douche, and then in lessening the shock itself by placing the patient in hot water. Thus, if a child, on rising from its bed, be well shampooed over the whole body, but especially over the back and spine, and be then made to sit in a few inches of quite hot water, a good douche of cold salt water over the shoulders will have a highly invigorating effect, and be followed by immediate reaction. After being dried the body may be rubbed with flesh gloves, and afterwards, if thought desirable, the child can be returned for a short time to his bed. Before beginning the process the patient should take a little bread and butter, or a drink of milk. The continued use of this bath, besides having a remarkably tonic effect on the system generally, confers great resisting power against changes of temperature, and considerably reduces the child's susceptibility to chills. Thus most obstinate cases of gastric catarrh may be treated with success, but success depends upon equal attention to all the points. A flannel binder will be of little value if the tendency to fermentation be encouraged by the immoderate use of starches and sweets, and even cold douching may not be sufficient to neutralize the ill effects of rapid changes of temperature acting upon a body imperfectly protected from the cold. In all cases it is advisable to avoid the use of syrups in making medicines palatable to young children. The Pharmacopœia syrups are not well borne by young subjects, and often do more harm than good. It is far better to sweeten a child's physic with glycerine or a few drops of spirits of chloroform.

LARGE HEADS IN CHILDREN.¹

The text to this lecture was afforded by two children in the hospital. While rare to be consulted by adults, it is not uncommon for children to be brought for an opinion about their heads, which are thought to be too big, and to indicate water on the brain. Owing to the rapid growth of the brain in childhood the cranium of the brain pan grows much more quickly than the face and the rest of the body, and hence the skull is often wrongly deemed to be unduly large, even in a perfectly healthy child.

When asked for an opinion about a big head the first thing to do is to study, not its size, but its shape. For this purpose the cystometer is a great help, and gives an exact outline of the head in any plane. The longitudinal vertical plane, which passes through the tuber occipitale, sagittal suture, and nasal eminences, is the most useful, the cystometric tracing passing from the deepest part of the nape of the neck, just below

the tuber occipitale, over the top of the head to the deepest part of the bridge of the nose, a little above the canthus internus of the eyelids. The shape of a natural head on this plane is that of an irregular pentagon with curved sides. The fifth side, belonging partly to the face, is somewhat of a constant, not changing with the cranial changes, and may be called the base line, inasmuch as it is a straight line joining the deepest part of the nape of the neck with the deepest part of the bridge of the nose, and corresponds roughly with the base of the skull. The greater number of big heads retain the pentagonal shape. Some do not. The former are called long heads, or *dolichocephalæ*, and the latter round heads, or *cyclocephalæ*. After describing the changes which lead to the long head, the author states the following propositions:—

(1.) The big brain in most cases is naturally big. It does not afford any signs of disease, either during life by lesion of functions, or after death by lesion of structure. The person has a head and brain too great for his body: that is all we have to say of him, but that is saying much, because it is saying that he is not suffering from the incurable disease which is always supposed in such cases.

(2.) The big brain is sometimes unnaturally big: it is said to be hypertrophous. Its functions during life are much impaired. Yet the naked eye cannot detect any structural changes after death. Some there are who affirm that hypertrophy of the brain is due to "diffuse interstitial hyperplasia of the neuroglia;" it would seem to be more agreeable with our present knowledge neither to affirm nor to deny this. For hypertrophy of the brain is an uncommon disease. One case that came under the author's care is here reported, with autopsy.

(3.) But in by far the greater number of dolichocephalæ which the author has examined the brain has not been larger than natural. Wherefore, in such cases, the brain does not fill the skull, and the space between them is occupied by serum. The effusion is both external and internal; it seems to be passive, simply filling up what would otherwise be a vacuum. Nor are there any signs of pressure, either upon the skull or the brain. In these particulars this kind of hydrocephalus, or water on the brain, differs altogether from the active hydrocephalus, which is ventricular or internal, which dilates the skull by equal pressure in all directions into a sphere, and which also compresses the brain. Most, if not all, of these children are rickety, as was well known by the earliest writers on rickets, as several citations by the author show.

The manner in which the head is enlarged by syphilis is then described. The enlargement is never great, and the big head, such as it is, is indicative, not of a cranial cavity larger than natural, but only of a thickened skull. The head of syphilitic children often possesses all the characters of the rickety head, and the author has always deemed these children both syphilitic and rickety, and has even gone so far as to believe that syphilis may be looked upon as a cause of rickets, though stoutly denying the doctrine of Parrot that it is always the cause.

In round heads the shape ceases to be a pentagon, and becomes a segment of a circle. Cyclocephalus is the shape proper to ventricular hydrocephalus, a disease characterized by an active distention of the ventricles of the brain by serum, and a much more serious

¹ Clinical Lecture delivered in St. Bartholomew's Hospital, June 4, 1880, by Samuel Gee, M. D., F. R. C. P., London. *Lancet*, September 15, 1880.

disease than the passive hydrocephalus above referred to. Hydrocephalus does not produce a round head after the fontanelles are closed and the sutures well united. Acute ventricular effusion, occurring in tubercular or purulent meningitis, does not produce a round head, even when the fontanelles and sutures are not closed; the pressure, we may suppose, does not last long enough. The peculiar change in the position of the eyeballs with respect to the eyelids, a condition due to excessive obliquity and drawing upwards of the orbital plates, a well-known effect of the active distention of the skull from within by fluid, is never met with in dolichocephalus. Optic neuritis going on to atrophy of the disks is sometimes caused by hydrocephalus, especially when it sets in after the fontanelle has closed. When the head admits of distention and becomes cyclocephalic the optic neuritis is often absent. In extreme hydrocephalus the head is sometimes seen to be translucent in a strong light, such as that of the sun.

(To be continued.)

Hospital Practice and Clinical Memoranda.

FRACTURES OF BOTH FEMURS, OF THE LEFT TIBIA AND FIBULA, OF THE RIGHT HUMERUS AND RIGHT RADIUS, WITH RIGHT RADIO-CARPAL DISLOCATION, IN THE SAME SUBJECT; RECOVERY.

BY F. N. GIBSON, M. D., NEW IPSWICH, N. H.

BESSIE S. H., of T., aged eight years, nervous temperament, spare build, active habits, while at play, October 18, 1880, near a perpendicular shaft in motion, was caught thereon by her clothing, and carried around at the rate of from one hundred and fifty to two hundred times per minute, till the machinery could be stopped.

I saw her about three hours after the accident: found the pulse feeble, eyes bloodshot, and the patient, although suffering greatly from shock and injuries, perfectly conscious. Stimulants were given, and as hospital advantages were inaccessible preparations were at once entered into for home treatment.

A hard husk mattress was placed upon an unyielding bedstead, and pulleys fastened to the foot of the bed. Upon this mattress, suitably covered with linen and rubber cloth, the patient was placed, and ether (Squibbs) administered by Dr. G. F. Munsey, of Greenville, who kindly assisted in caring for her during the first four days.

Anæsthesia was readily produced, and I found she had sustained the following injuries, namely: (1.) Oblique fracture of right femur, middle third. (2.) Transverse fracture of left femur, middle third. (3.) Transverse fracture of left tibia and fibula, middle third, (slightly comminuted). (4.) Transverse fracture of lower third of right humerus. (5.) Fracture of lower third of right radius. (6.) Partial right radio-carpal dislocation. There was manifestly much injury sustained by the soft parts at seat of fractures, particularly upon the thighs and arm, and there were several contusions and abrasions of the skin over other parts of the body.

Splints were prepared from leather board, adapted to each fracture, and covered with a few layers of soft linen; strips of rubber adhesive plaster, extending along both sides of the legs and well up on the thighs,

were connected with the weights by cords passing over pulleys, with which extension was made, the foot of the bed being elevated four inches. The fractures and dislocation were all adjusted without great difficulty. Dry compresses, splints, and roller bandages, with sand-bags for lower extremities, completed the dressings.

As might be expected, the general system suffered greatly from shock and the extensive injuries sustained. Stimulants were administered freely during the first twenty-four hours; almost complete syncope occurring several times.

Second day. Reaction and strengthening of pulse. Frequently awakes from sleep with a scream and look of terror and fright, and general muscular contraction. Tincture of camphorated opium combined with atropia, alternated with chloral hydrate and bromide of potash, were given and continued as required for five days. Third day. One convulsion, lasting three minutes; surgical fever not unexpectedly high. Fourth day. Much complaint from effects of involuntary passing of urine, which had completely saturated bandages of thighs. Fresh bandages and clean linen were consequently applied. To obviate this annoyance in future, pieces of rubber cloth, extending above the bandages and below the knees, were fastened together separately at the upper ends. Some excoriation upon the nates, to which vaseline and subnitrate of bismuth were applied. Sixth day. Fresh dressings to leg and arm; not an undue amount of surgical fever. Eighth day. Passing of urine not entirely involuntary. Failed in the use of various urinals, till we tried a piece of lead pipe, beveled at one end and closed at the other, of which we made use till patient left the bed, with good success. Ninth day. Swelling abating, so that bandages upon thighs are loosened; clean dressings applied. Probably owing to some injury to the nerve trunk, there has been daily considerable spasmodic muscular contraction of the right thigh, shortening the limb an inch or more, and allowing no union, which seems to be taking place in all other fractures. Twelfth day. Only two spasmodic displacements of right thigh; these were the last. Fourteenth day. Fore-arm, leg, and both thighs dressed; swelling much abated; excoriations and abrasions, to which soap-suds, vaseline, and subnitrate of bismuth have been applied, are mostly healed. Sixteenth day. Right thigh does not shorten on removal of extension, and shows first indication of union. Twenty-eighth day. Splints (lateral) removed from fore-arm. Forty-second day. All splints and dressings have been removed from arm and leg. Weights and pulleys removed, and plaster-of-Paris bandages applied to the thighs, firm union having taken place. There is neither ulcer nor excoriation anywhere upon patient, who now commences to sit up in bed and in a chair.

Careful measurements have been made almost daily from the first, and great attention given to retention of lower limbs *in situ*. Owing to the active habits and great restlessness of patient, I early found it necessary, in order to retain the parallelism of thighs with the pelvis, to somewhat confine the body, which was accomplished by placing a block of wood upon either side under the mattress, making a trough, out of which she could neither roll, wriggle, nor twist.

Fifty-sixth day. Plaster-of-Paris bandages loose, and are removed, and starch bandages substituted. Simple but nutritious diet has been allowed; the bowels moved

by compound licorice powder when diet and fruit failed to keep them sufficiently open. Patient sits up nearly all day, and looks as robust and healthy as previous to the accident.

Seventy-eighth day. Saw patient to-day, who is now recovering from an attack of measles. She presents no indication of deformity, and has firm bony union in all fractures: with the single exception of slight tilting upward of lower extremity of the upper fragment of left femur, there is complete coaptation of all fractures, and as this fracture was transverse there is no perceptible shortening.

To the parents, who have acted as nurses, and have been unceasing in their care and attention, is largely due any credit deserved for so successful a recovery.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

JANUARY 10, 1881. DR. JAMES C. WHITE, permanent chairman, presided.

OVARIOTOMY.

DR. JOHN HOMANS gave an account of twenty consecutive cases of ovariectomy operated on during the past twelve months. Vide page 50 of the JOURNAL.

DR. CHEEVER said that we all must feel much gratified with the success of Dr. Homans's cases.

Twenty-five years ago he twice saw the abdomen opened to remove ovarian tumors, with a fatal result. These cases occurred while he was a student. The operation fell into disuse in Boston, and was discouraged by many physicians. The coming of Mr. Spencer Wells in 1867 gave a new start to ovariectomy. Up to that time there had scarcely been a successful case in this city, certainly none in the hospitals. Subsequently, in 1872, he saw Mr. Wells operate, and his after-treatment, repeatedly in London. Returning to Boston, Dr. Cheever had two cases of recovery in succession in 1873. This gave him encouragement; and he had since operated with varying result. He had twice been so unfortunate as to meet with soft cancer of the ovary. In these cases there was fluctuation; and they illustrated the fact that it was impossible to distinguish by palpation the quiver of a soft solid from true fluctuation. Fibro-cystic tumor of the uterus and a suppurating cyst had twice given him fatal results. Latterly he had used the Lister method, the cautery, and the replacement of the stump in the abdomen, with perfect success.

He believed the patient's chance of living depended largely on the activity and vigor of her organic or nutritive powers. It was often a question of stock. Those who had good constitutions and good stomachs recovered from surprising mutilations. He had operated on an abdominal tumor where a large section of peritoneum was necessarily cut away, and the bowels closed in only by a flap of dissected skin, and the patient recovered. This was before the antiseptic method.

He thought replacing the pedicle in the abdominal cavity much superior to the clamp. The latter always gave after-pains (uterine) from traction. Haemorrhage from the uterus he had very frequently noticed after ovariectomy.

The division of adhesions by the cautery was a great improvement. He thought ventral hernia an exceedingly common sequence of abdominal incisions, and asked if others had not found it so.

In answer to questions by Dr. Fifield, Dr. Homans said that, in regard to feeding, until lately he had only given flour gruel during the first forty-eight hours after the operation, that he was not now so particular in this respect, and that he always had an enema given on the night previous to the operation, and solid food allowed as soon as the patient passed wind freely.

DR. HOMANS did not approve of administering morphia subcutaneously on account of its depressing effect; if it was necessary to employ opium he gave it by the rectum, but he seldom used it, and relied on hot ginger.

DR. BIXBY said he had been intensely interested in Dr. Homans's paper. He had been engaged in the study of ovarian disease and ovariectomy for many years. The contrast in the repute of the operation and of the operators twenty-five years ago and at the present time was most striking.

No department of surgery had made greater progress. Illustrative of this, in connection with Dr. Homans's experience, in 1857, he had seen a patient brought into the amphitheatre of the Massachusetts General Hospital for ovariectomy; he thought it must have been the same case referred to by Dr. Cheever.

A small incision disclosed what seemed to the operator to be extensive adhesions. After due consultation by the three or four surgeons present, the case was accounted a *noli me tangere*. The wound closed, and the patient returned to the ward. He should never forget the look of doubt depicted upon their countenances.

DR. BIXBY further stated that during the last twelve years he had performed ovariectomy with and without success before the days of antiseptic surgery. It had been his good fortune to witness the operation more than a hundred times. In a large number of these cases he had conducted the after-treatment, and in at least twenty-five cases, for the sake of the practical experience, had acted in the capacity of nurse.

In review of this extended and most instructive experience, in which all the different methods of operation, course, and results have been practically demonstrated, he looked back with regret that this wonderful discovery had not sooner dawned upon us. While there were many cases, undoubtedly, which might have been saved by this method, brilliant results were not infrequent long before this event, and under the most unfavorable circumstances. To illustrate, a patient, aged seventy-five, with double ovarian disease of long duration, was ruptured by a fall. On making an incision the parts were found universally adherent, the abdomen was exposed to the air for nearly three hours, large portions of peritoneum and omentum were removed, and nineteen ligatures left in the abdominal cavity, yet the patient recovered as if from the most simple illness. Again, in these times of antiseptic surgery he had seen the simplest case, without adhesions, short incision, not the slightest exposure of the abdominal cavity, die on the fifth day from peritonitis. While being a firm believer in antiseptic precautions in ovariectomy, the skill derived from the accumulated knowledge of the conditions of the pelvic and abdominal viscera should not be underrated in our estimates of diminished mortality in ovariectomy under the new departure.

CEPHALEMATOMA.

In reply to a question by Dr. Reynolds as to the best treatment of cephalematoma, and to some remarks of Dr. Fiffeld in favor of the treatment by opening freely, Dr. Fitz said that the dangers generally admitted as likely to follow a free opening were putrid absorption from the exposed surface and necrosis. To these might be added in the present instance the probability of hemorrhage on account of the jaundiced condition of the infant.

The increase in the size of the tumor since birth indicated that hemorrhage was still taking place, and it would therefore seem injudicious, for the present at least, to make an incision into the sac.

The reports of recent cases of this affection were not such as to encourage attempts at a rapid cure by means of a free opening, but in the absence of special symptoms favored either non-interference or the use of the aspirator if the blood were fluid.

HYDRENCEPHALOCELE.

Dr. O. W. DOE exhibited a specimen of hydrencephalocele. The case was seen in consultation with Dr. Pattee. The mother was a primipara. The child presented by the breech, and after puncturing, the head was easily delivered by forceps; the head measured twenty-four inches.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

PROLONGED GESTATION AND DIFFICULT LABOR.

MARCH 13, 1880. Dr. HOSMER, referring to an expected labor, reported at the December meeting as overdue, gave the further particulars of the case. He had first seen the patient for epithelioma of the cervix uteri (reported at the meeting in February, 1879, and published in the JOURNAL December 25, 1879), the operation upon which, performed December, 1878, had resulted in complete success, the os and cervix having been restored to a healthy condition. In January, 1879, there was slight uterine flow at two different times, and a regular menstruation began February 15th, and lasted six days. A closed lever pessary was soon placed in the vagina, but produced discomfort, and was at once removed. Conception soon after occurred. Motion continued from June 1st, six and a half months before labor. The patient expected to be confined late in October. Dr. Hosmer had calculated that labor would not be due before the 22d of November. Early in the pregnancy there was much gastric disturbance; later, great pain and discomfort in the pelvic region, and general oedema with sufficiently free secretion of urine. Genuine labor commenced at four P. M., December 16th, and had been supposed to have commenced at two or three different times after December 1st. The patient was delivered December 17th, at 5.20 P. M., the child, a male, still-born. Its weight was 4400 grms. = 9.68 pounds (average 3300 grms. = 7.26 pounds); length 57 cm. (average 50 cm.). The head was firmly ossified, and the fontanelles hardly to be felt. The circumference of the head was 37 cm. (average 34.5); the biparietal diameter 10.5 cm. (average 9); occipito-frontal diameter 13 cm. (average 11.5); width of shoulders 13 cm. (average 11).

The maternal pelvis was somewhat oblique in the superior strait, and the promontory was rather prominent. From March 12th (twenty-six days after the menses commenced) to December 17th was two hundred and eighty days. Dr. Hosmer gave the following detailed history of the labor: The occiput was at the right acetabulum. The early progress of the labor was extremely slow. The forceps were applied and abandoned, such was the sense of unyielding resistance. At this stage of the case the doctor and nurse both heard distinctly a repeated sound, which, seeming to proceed from within the body of the mother, could not be distinguished from, and under the impulse of the moment was declared to be, and is now believed to have been, the cries of the child in utero. Version was next resorted to, and delivery was accomplished with great difficulty. The perineum was torn, and was repaired by two or three sutures. Slight traction was made upon the cord and moderate pressure upon the fundus uteri, but the placenta did not descend, and was found to be adherent. While this was being detached and the effects of the ether were passing off the patient suddenly began to sink, and became extremely cyanotic. There was nausea, and the recurring efforts to vomit caused blood to escape in considerable quantity from the vagina, notwithstanding the fact that the uterus was carefully but firmly compressed by the two hands of the attendant, one being in the cavity of the imperfectly contracted organ, and the other applied to the abdomen. The condition of the patient was alarming, and there was an urgent demand for a stimulating subcutaneous injection. For the purpose of administering that the assistance of a neighboring physician was sought, but before he arrived the woman was tolerably safe. For a few days there was slight elevation of temperature, together with abdominal swelling, tenderness, and more or less pain in the right groin. The catheter was required for ten days. The urine drawn within the first twenty-four hours after delivery was thick, muddy, and highly albuminous. The albuminuria and oedema soon ceased. On the second day the left leg was reported to be heavy and numb, and later was the seat of severe pain from the knee to the ankle, with some contraction in the first-named articulation. These symptoms disappeared slowly. On the night following the eighth day and during the ninth day there were several profuse vaginal discharges, which came in the form of copious gushes of a colorless fluid, which had no smell and left no appreciable stain. This fluid was certainly not urine. A little later there appeared a cystitis, which got better and then became worse, the urine depositing a good deal of pus, but showing no mucus. Urination was rather frequent and somewhat painful. In February a double catheter was employed, and the bladder washed out with a solution of carbolic acid twice a day, and the patient is still under this treatment.

Dr. FOSTER asked why the placenta was removed so soon after the delivery of the child.

Dr. RICHARDSON inquired what advantage there was in pulling on the cord as compared with gentle pressure over the uterus. If the placenta is not adherent gentle continued pressure over the uterus will effect the expulsion in a safer way than traction on the cord.

Dr. HOSMER replied that the Vienna kneading had been discussed and objected to, and asked Dr. Rich-

ardson where he usually found the placenta after expulsion.

DR. RICHARDSON stated that he usually found it half-way down the vagina and caught in the os, and that he preferred to take hold of the placenta rather than the cord. He had never known of the occurrence of inversion, except when traction on the cord had been made in conjunction with pressure on the fundus.

DR. STEDMAN referred to the number of cases on record where inversion had occurred without traction on the cord.

DR. RICHARDSON remarked that he had seen several cases among the students where more or less tenderness over the uterus and pain were complained of, — the result of undue pressure or badly applied pressure over the uterus.

DR. BOARDMAN observed that his recollection of the teaching of the Vienna school, which he had always followed, was that we should employ at first gentle kneading until a full, firm contraction occurred, and then strong pressure in the proper axis. — With this method, there was no danger of inversion or other accidents, the secret of safety lying in waiting for the full uterine contraction.

DR. ABBOT said that he always pulled on the cord wound two or three times about the right hand, — a steady pull, with the left hand on the fundus, — and then seized upon the placenta as soon as it came within reach.

DR. INGALLS asked what would become of the placenta if let entirely alone, to be expelled by the natural efforts, or in what time would the placenta, on an average, be expelled.

DR. REYNOLDS replied that in one hundred cases the average time was found to be forty-five minutes.

DR. INGALLS said that he had never known the placenta to be retained over twenty minutes within the uterus. He further stated that he had never had an adherent placenta.

WARTY VAGINAL GROWTHS OCCURRING DURING PREGNANCY.

APRIL 10, 1880. — DR. RICHARDSON reported the following case: —

E. G., married, twenty-two, primipara, expected date of confinement June 1st, entered the hospital May 24th to await confinement, giving the following history: Had been perfectly well during the whole term of pregnancy until the sixth month, when she noticed a thin yellow discharge from the vagina. This became gradually more profuse, color yellowish-green, and was accompanied by a burning sensation of the vagina and vulva and considerable pain. Patient stated that she had felt no motion of the fetus for the past six weeks, and, feeling alarmed, consulted a physician, who sent her to the hospital for treatment. Examination was immediately made. By palpation the head was found above the pubes, the back to the left of the median line.

Auscultation discovered a distinct fetal heart to the left and below the umbilicus.

Per vaginam. First noticed was a profuse and extremely offensive ichorous discharge. Upon passing the examining finger into the vagina it was found to be filled with warty growths extending from the vulva to the cervix uteri and into both cul-de-sacs. These growths were so numerous about the cervix that the os was recognized with the greatest difficulty.

The patient suffered intensely, the warts being so sensitive that the least touch caused her to cry out with pain. A Sims's speculum was introduced. The warts were found to resemble syphilitic condylomata in appearance, extending from the mucous membrane into the vagina from a quarter to one half an inch. Both cul-de-sacs were completely packed, the only free surface being a circle about one quarter of an inch deep about the os. In the lower third of the vagina the growths were less numerous, the intervening free surfaces, together with the labia, being excoriated and covered with aphthous patches. The whole vulva was tender and swollen. A vaginal douche of carbolic acid, one drachm to the pint of warm water, applied every two hours was ordered. Under this treatment the discharge became in a few days less offensive and the warts less sensitive.

June 20th. Normal labor, presentation O. L. A. Child, weighing eight and one half pounds, perfectly healthy. The warts at this time had to a considerable extent disappeared, were very little sensitive, and seemed to offer no obstruction to the descent of the head.

June 22d. The warts were found to be breaking up and coming away with the lochia. Convalescence was normal.

July 2d. Os patulous, through which there was a slight sanguineous discharge. The warts had entirely disappeared, with the exception of a few small papules in the posterior cul-de-sac.

DR. FIFIELD said that he did not think the case exceedingly rare. He had found statements of this condition of the vagina in monographs by French writers, as Despres and others, the growths having been developed during pregnancy, and rather suddenly disappearing after labor. Sometimes there is an enormous development of the labia, as in a case he had cited at a former meeting of the society. In this instance the growth had been supposed to be cancerous, but was diagnosed by Dr. Fifield as warty. It was removed without recurrence.

DR. RICHARDSON said that there was an important difference of locality between the case described by him and some of those referred to by Dr. Fifield. He had himself seen a number of cases, in the hospital, of warty growths upon the vulva and extending up into the vagina slightly, but not, as in the present case, invading both cul-de-sacs.

DR. FIFIELD remarked that in special hospitals one sees the granular vagina not always due to gonorrhœa, just as in pregnancy a profuse acute purulent discharge is sometimes met with simulating gonorrhœa. Cases of vaginitis are not necessarily of gonorrhœal origin.

— The Walnut Hill Asylum at Hartford, Conn., for inebriates and opium takers, has been changed to a private institution, on the home and family plan, and is opened for the reception of patients. Dr. T. D. Crothers remains superintendent as before.

— The *British Medical Journal* quotes from a letter on the present state of affairs in Ireland: "I am at present attending at a landlord's house, he being very ill of fever. A doctor from a disturbed district having come to see him professionally, said, by way of comforting the family: 'Faith, its a fine thing for a man to be allowed to die in his bed these times.'"

Medical and Surgical Journal.

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THE SPRAY IN ANTISEPTIC SURGERY.

THE use of the spray in antiseptic surgery has been receiving critical attention of late from several different quarters, which merit consideration. Its value has been seriously called in question, one writer pronouncing it actually mischievous, and the well-known annoyances inseparable from it have been more fully dwelt upon. Prof. v. Bruns, of Tübingen, in a clinical lecture published in the *Berliner klinische Wochenschrift* for October 25, 1880, under the title of *Fort mit dem Spray*, gives the result of his hospital experience with and without spray. This lecture formed the basis of an editorial article in the *Medical Times and Gazette* of December 18th last, and has been translated in full in several American medical journals.

Prof. v. Bruns was led from a study of the subject to the belief that the employment and need of the spray during operations had not been sufficiently justified, and, indeed, that its use, from a theoretical standpoint, should be considered as an unnecessary addition to the antiseptic treatment of wounds. Putting this belief into practice, he substituted for the spray temporary irrigation — lasting a few seconds only — with a two per cent. or five per cent. carbolic solution. Several times during any long operation, and at the termination of short operations, and in addition at the end of any operation, he washed the whole wound-surface with the stronger solution. He says: "I endeavored by experience, and apart from all theory, to test the value or the worthlessness of the spray; and to this end, in the course of the year 1878, I performed a gradually increasing number of operations without the spray, which I published in 1879. Since this time, and especially since the spring of 1879, I have entirely banished the spray-producer from my wards, doing both my operations and my dressings without it, and experience has confirmed my views entirely. The result of all published major operations undertaken elsewhere *with* the spray, and here *without* it, not only as regards mortality, but also course and duration of the healing process, has proved more favorable in this than in any other hospital. The results are so substantial that they warrant the following assertion: 'The carbolic spray in surgical operations is not only useless and unnecessary, but also disagreeable and productive of interruption: it should therefore be abolished.'"

We offer our readers in our present number an interesting letter from a correspondent in Vienna giving an account of the antiseptic methods which obtain

at present in the hospital practice of Professor Billroth at the General Hospital, from which it will be seen that this distinguished surgeon also has abandoned the use of the spray, with satisfactory results. Reference is made to a paper by Dr. Mienliez, one of Professor Billroth's assistants, where are to be found experiments and calculations by which the writer strives to take the census, and determine the relative prosperity of the bacterial population of the surrounding air and of the wounds with and without the use of spray. Conclusions are arrived at evidently justificatory to the writer of the new faith now in him.

We are induced to call attention to these views about the spray in connection with a very successful series of ovariectomies performed by Dr. John Homans during the past year, a record of which is published in this JOURNAL. These were done with the usual Listerian precautions.

It seems to us that in all such operations as are enumerated by Prof. von Bruns, — none of them involved a cavity or sac like the abdomen, — and, in fact, all external operations the use of the spray is unnecessary if the wounds are thoroughly washed out and syringed out with carbolized water and all the sponges and other articles are also carbolized. But in ovariectomy one cannot wash out the peritoneal cavity two or three times during an operation, and one would not desire to, for it would make such an amount of handling of the abdominal contents necessary as to create, perhaps, peritoneal irritation and rise of temperature. By the use of the carbolic spray in ovariectomy the abdominal contents are kept as pure as air would be in a bottle with a stream of spray playing over the mouth of it. No matter how much a stump or the wound left after an excision of the breast may be washed and syringed, one can leave in a drainage-tube and feel no anxiety; but to wipe all around the liver, stomach, spleen, and all the nooks and crannies of the abdomen, when this may be avoided by the use of the spray, and when we do not wish to put in drainage-tubes, is to subject the patient to an amount of manipulation that is dangerous and unjustifiable. One may dress an external wound as often as one pleases; but the perfection of antiseptic ovariectomy and the very common result is to dress the wound but once, and that at the time that the sutures are removed.

Dr. Mienliez states that "practically the disadvantage of irrigation is that the subsequent discharge from the wound is apt to be greater than when spray is employed, and a more frequent change of dressings is thus necessitated." In all operations, then, except opening any of the great cavities of the body, such, for instance, as opening the thorax or abdomen, we would agree that the spray might be given up and irrigation substituted; but in the operation of ovariectomy the spray is a very essential part of the antiseptic process.

— Dr. Fordyce Barker has been unanimously re-elected president of the New York Academy of Medicine for the ensuing year.

ADULTERATION OF FOOD.

THE Supplement to the National Board of Health Bulletin for January 1, 1881, gives the extended report of Dr. Charles Smart, U. S. A., on his investigation to determine the prevalence of adulteration in food supplies, undertaken in accordance with instruction from the National Board of Health.

This report embraces the results of the examination of two series of samples, one of which was derived from sources whence purity might be expected, and the other from sources which might be presumed to yield low-grade, if not adulterated, goods.

A great deal of sensational writing has appeared from time to time concerning food adulteration, the text of which has mainly been derived from English experience. Loose statements have been made even in official reports, which have fostered the sensational outcry until it has reached such a pitch as to suggest the defeat of its object by creating a prejudice against itself. Compilations from Hassall's book have been published as personal experience, and quoted so often that people have become tired of hearing about food adulteration, and discredit the whole thing, except perhaps that milk may sometimes be watered. Statements of individual facts are required to place the subject on a sound basis, and for this reason, while a general summary of results is presented as the body of this report, there is appended an itemized list of the facts developed during the investigation.

A careful comparison of the results with the facts developed during the investigation by the English committee, twenty-five years ago, shows clearly that food adulteration is practiced in this country at the present time to as great, if not to a greater, extent than prevailed in England at the time of the agitation which led to the enactment of repressive laws. Our corn meal and lard are pure. Our wheat flour is not mixed with alum, but the bakers use it. Our sugars are cleaner, but we have glucose admixtures which the English had not; and if our coffees are better it is owing more to the practice of home grinding, bequeathed to us from the early days of the country, when grocery stores were not so common as they are now. The few samples of loose coffee which were found to be adulterated show that there is a tendency to debase the article, which would no doubt increase as the coffee-mills disappear from our kitchens, until the condition of the market would be represented by the trash which is now sold as package coffee. On the other hand, the remainder of the articles included in this report are found to be in as bad, and many of them, — as the pepper, allspice, cinnamon, etc. — in a worse, condition than were the English supplies when official attention was directed to them.

Fortunately, with such exceptions as the alum in bread and baking materials, the sulphate of lime, which oftentimes replaces cream of tartar in household baking, the debasement of milk by dilution, and the poisonous pigments used for coloring confectionery, the adulterations cannot be considered as deleterious. They affect the pocket of the individual rather than his health, so that, to use the words of the committee ap-

pointed by the National Board of Trade to award prizes for the best draught of an act repressive of adulteration, "the question of adulteration of food should therefore be considered not so much from a sanitary stand-point as from that of commercial interests, as being of the nature of a fraud in aiding the sale of articles which are not what they are represented to be."

There were examined 713 samples. Of these, 304 were obtained from sources which implied purity, and 409 from those which might be considered suspicious. Of the former 24, or 7.89 per cent., were found to be of such a character that under a law repressive of fraudulent adulteration prosecution might have been instituted with full prospect of effecting conviction. Of the latter, 183, or 44.74 per cent., would have been in like manner condemned.

But these percentages, although they appear to give expression to the prevalence of adulterations, in reality convey no meaning. Lard and corn meal were found to be unadulterated. If, instead of a few samples of these articles, enough to determine their general character, a large number had been included in the report, the percentages of impurity would have been proportionately diminished, but the facts would have remained the same. So, had the examinations of ground spices been multiplied, the percentage of impurity would have been increased. To appreciate fully the condition of things the facts relating to each article of supply must be considered separately, as given in the report.

 THE GOVERNOR'S ADDRESS TO THE MASSACHUSETTS LEGISLATURE.

IN the part of the late address of the Governor of Massachusetts relating to state charities several suggestions are made in regard to the provision for and disposition of the insane. The following is pertinent and judicious:—

"I trust that, both as a matter of treatment and economy, some other plan will be adopted than that of erecting another costly hospital [for the insane] like the last. It is desirable that there should be a more intelligent classification of the insane, instead of herding them all together. I see no reason why, taking some of our state or county buildings, which I understand are available for the purpose, separate provision should not be made, for instance, for the criminal insane, a hundred of whom, perhaps, could now be collected apart, thus humanely and justly relieving the others from what they and their friends rightly feel to be a reproach and a constant personal danger, and also relieving the growing pressure of numbers to be provided for in present quarters. I am advised that this classification should be made at an early date. It is also true that among the insane poor are many epileptic patients. Their presence in our hospitals disturbs the discipline and treatment of the ordinary insane, and they might well be placed in a separate establishment, not at present, but whenever a sufficient number shall warrant.

"Other classifications suggest themselves, after all

of which, however, the great body still remains to fill our hospitals. In the treatment of them the tendency is toward less and less restraint, both as a matter of personal right and of cure. An insane man is not often a criminal, and is entitled to personal freedom, except so far as restraint is necessary for keeping himself from harm and others from intolerable annoyance or danger. It is worth considering whether the system, which promises to be so successful, of finding cheap and good boarding-places for young children now at the State Primary School could not be applied also to the harmless insane. Many of these are able to labor, and would derive benefit from employment. Many patients of this class have been thus removed from hospitals in former years, and the same policy might now be further extended, as is done in Scotland and other countries. In that case every needful safeguard should be provided against abuse or neglect of this helpless class. Or, if the numbers increase so that the State should still itself prefer to board them, it could do so in cheap, wholesome tenements, and in the simplest atmosphere of inexpensive and comfortable homes. In either case there must of course be regular visitation and medical oversight.

"Connected with this change of opinion is the suggestion lately made to me, that, if it shall come to the erection of new buildings, these should be small hospitals, where the curables could have every available appliance for their recovery; while, for the incurables, buildings such as I have already referred to, constructed at no great expense, would be found sufficient to meet any exigency for some years to come.

"From all the information that has come to me, it seems that the laws for the commitment and detention of the insane are better understood and more carefully administered than ever before."

We must confess ourselves to be less in sympathy with the Governor's reference to the Board of Health, Lunacy, and Charity, as we continue fully persuaded that it was "hardly worth while" to try the original new experiment of consolidation, especially if it was one of form and not of substance, and no saving in expense was effected. The address says:—

"With regard to the board itself, I trust you will make no change. It embraces two or three subdivisions, formerly kept apart, yet closely affiliated and interdependent. Its work has been well done, and it is hardly worth while to try a new experiment every year or two in the mere form of the central supervision of the interests now intrusted to its charge. I am persuaded that the change of 1879 was rather one of form than of substance, and that any further change, or change back, would be the same."

The possible advantage of a metropolitan sewerage commission is alluded to in the following:—

THE CHARLES AND MYSTIC RIVERS DRAINAGE.

"The continued and increasing use of the Charles and Mystic rivers as reservoirs of sewage will be brought before you by the same board. The foul condition of either stream will be an injury to both

health and comfort in the towns near its mouth, however good their own drainage may be. As it is not possible for any one of these towns to carry out a system of sewerage that is not liable to injure a neighboring town, some sort of concerted action is necessary; and it is suggested that this board or some other competent authority have power to arrange, or at least to report upon, a comprehensive system for draining the entire area embraced within a semicircle of a radius of ten miles from the State House. How great their interest in this matter is appears in the fact that seventeen of them contain more than half the valuation and more than a third of the population of the whole commonwealth."

MEDICAL NOTES.

—Dr. C. F. Folsom has been appointed superintendent of the Danvers Insane Asylum. We have good ground to hope that at length suitable provision will be afforded for clinical instruction in insanity.

—The extent of the provision made for the maintenance of the poor, the sick, and the insane in the State of New York may be to some extent appreciated from the following statement by the Governor: The property, real and personal, held for charitable purposes in the State may be set down in round numbers as follows:—

By state institutions	\$6,900,000.00
By cities and counties	6,200,000.00
By incorporated associations	21,900,000.00
Total	\$35,000,000.00

The total expenditure during the past year for the support of the several charitable institutions, public and private, reached about \$8,000,000. The average number of beneficiaries was approximately as follows:—

In state institutions	4,800
In city and county institutions	15,700
In incorporated and benevolent institutions	24,200
Total	44,700

The total number of insane persons in the several state and local asylums, poor-houses, and private asylums, for the years stated, was as follows:—

October 1, 1880	9543
October 1, 1879	9015
October 1, 1878	8771
October 1, 1877	7921

The rapid increase of insanity is reported as truly alarming, both as to the individuals affected and the necessary provision to be made for their care. The average annual increase of insane for the last four years has been four hundred persons. The Buffalo asylum, which has been so far completed as to accommodate three hundred patients, cost about a million and a quarter of dollars, or more than four thousand dollars for each inmate. Such extraordinary expenditures for the care and treatment of the insane seem to the governor like a profligate use of the public funds. Whatever future facilities may be required for this purpose should, he thinks, be provided upon a much more economical scale.

— We cut the following from the remarks of Mr. Clement Lucas in the debate on Rickets at the Pathological Society of London:—

Children under nine months, suffering from rickets, will almost invariably be found to be bottle-fed, whereas children suffering from rickets at sixteen or eighteen months will often be found still hanging to the mother's nipple. In either case the diet is injudicious, and I will undertake to produce rickets in any child under three years of age that I may be allowed to feed improperly. As regards which child is most frequently attacked by rickets, my experience, in accord with what Sir W. Jenner said on the last occasion, was that the eldest child of the well-to-do and the later children of the poor suffer most. The eldest child of the rich suffers because it is an experimental child, and the parents learn by practicing upon it how best to feed those that follow.

NEW YORK.

— The public hospitals and insane asylums were decorated for Christmas with evergreens and bright cards and pictures, as usual, by the ladies of the New York Flower Mission, who also distributed a considerable quantity of fruit, jelly, beef tea, and groceries among the sick poor in tenement houses.

— In consequence of the crowded condition of the hospitals for small-pox and other infectious diseases on Blackwell's Island, Health Commissioner Janeway, with Assistant Sanitary Superintendent James and Dr. Taylor of the vaccinating corps, recently made a trip to North Brother's Island, with a view to securing a site for a new pavilion hospital for contagious diseases. This island is considered eminently suited for the purpose, and there is already a pavilion on it which was formerly used as a small-pox hospital for Queen's County. If immediate possession of the pavilion already on it can be obtained it will be used for the reception of scarlet-fever patients.

A suit for \$10,000 damages, for the loss of an eye, against Dr. Henry D. Noyes, professor of ophthalmology and otology in Bellevue Hospital Medical College, has recently been ended with a disagreement of the jury, ten being in favor of the defendant and two for the plaintiff. The patient came from Massachusetts to the New York Eye and Ear Infirmary, where Dr. Noyes has given his services gratuitously for many years. Cataract was found in both eyes, and it was recommended that both eyes should be operated upon. The patient and his mother, father, and sister testified upon the trial that they objected to any operation upon the left eye, and that the operation was performed without their permission. Dr. Noyes testified that objection was first made, but that afterwards he understood from them that he had authority to operate upon that eye. After the right eye had been operated upon he became satisfied that it would do but little good, while in the left eye there was every prospect of a very successful result. The patient was not seen for two days, and it was then found that dangerous inflammation had set in. The

sight of the right eye, however, had been measurably restored. Some time afterward Dr. Noyes had offered to perform another operation on the left eye, but had not been permitted to do so. During the course of the trial Drs. Loring, Roosa, and Grenning testified as to the skillfulness of Dr. Noyes's treatment of the plaintiff's eyes.

— The Physiological School for Weak-Minded and Weak-Bodied Children, which was established in New York by the late Dr. Edward Seguin, is to be continued by Mrs. Seguin, who has for a long time been associated with him in his educational work. It is the aim of this institution to develop the functions by the exercise of the organs, and to train the organs in view of improving their functions. Shortly before his death, Dr. Seguin spoke of the plan of training adopted in this school as follows: "Thus, in the youngest children the retrograde effects of isolation are at once prevented by an early drill of their activity. In children of an age to go to school the functions of relation are regulated and intellectualized. In the older ones the prevalent, though often hidden, aptitude is studied and trained, in order to prepare a redeeming capacity, be it ever so small, for some useful occupation. This application of physiology to education was the work of my youth, and has been the main object of my thoughts for forty-two years. I give it my last years, with the assistance of my wife, meaning to leave her the young and clear-headed exponent of the method I have scattered, but not exhausted, in many books, pamphlets, and living lessons."

— In view of the extraordinary number of emigrants and others arriving at the port of New York during the past year, constant vigilance was required to prevent the introduction of contagious diseases, as the Governor of the State informs the public in his annual message.

Nine hundred and sixty-eight vessels arrived from ports subject to yellow fever, and two hundred and ninety-one from ports actually infected. Of these, one hundred and thirty-seven vessels reported sickness at the port of departure or on the passage. Ninety-eight cases of fever were admitted to the quarantine hospital during the season, of which twenty-seven were yellow fever. Of the latter number, ten died; and of all other cases seven proved fatal, and eighty-one recovered. So far as is known no case of infectious or contagious disease has passed the quarantine.

The quarantine establishment, as the Governor informs us, has been visited during the past year by a number of eminent professional representatives of the health departments of other States and countries, who expressed their unqualified approval of its condition and management, and acknowledged the belief that the New York quarantine was superior to any other.

WASHINGTON.

— The International Sanitary Conference is now holding private sessions at the State Department; its progress is slow and diplomatic, and its proceedings will probably not be given to the public for some

time to come, the questions brought before it being of a nature to require further instructions on the part of some of the delegates from their home governments. Its members comprise the following: the English and German consuls-general at New York; the French, Spanish, Russian, Turkish, Japanese, Sweden, and Norway, Portuguese, Chilean, and Netherlands, ministers resident; Belgium, Italy, and Denmark by their *chargé d'affaires*; China by the assistant minister; Mexico by Don Manuel M. de Zamacoa; Austria by Count Bethel; Spain and Portugal have each sent a specialist in addition to their diplomatic representation; Canada is represented by Dr. Tache, deputy minister of agriculture, and the United States by Drs. Cabell and Turner, as president and secretary of the National Board of Health; assistant secretary of state Hay being our diplomatic representative.

ST. LOUIS.

— A short time ago there was so much talk about a prevalence of diphtheria in the city that several of the daily papers investigated the matter, and their statements that there were only a very few cases, and that there had only been a few deaths from this cause, were, in the main, correct.

Dr. J. M. Scott, a practitioner of long standing and prominent in the profession here, gave your correspondent the points in two interesting cases occurring recently in his practice. The first occurred in a family of three children: two of them had scarlatina; the third did not have scarlatina, but was taken ill with diphtheria, and died. This case was reported to the St. Louis Medical Society, and excited considerable discussion on the question of the identity of the two diseases. In the second case the circumstances were similar. Two (or three) children in a family had scarlatina; the other remaining child had diphtheria, from which it is at the present time convalescent. In the latter case the treatment was one-fourth-grain doses of calomel and five grains of soda bicarbonate every two hours.

Dr. J. S. B. Alleyne, professor of materia medica, St. Louis Medical College, related to your correspondent the following case: Scarlatina had run through a whole family of children; the last child taking it had a mild attack, but this was followed by diphtheria, from which the patient died. He considered it a well-marked case of diphtheria. None of the other children had diphtheria. The leading practitioners of the city, particularly those practicing chiefly among children, the physicians in the employment of the city, all report a few cases of diphtheria; quite a number of cases of scarlatina, some of these latter cases having severe throat complications; and a large number of cases of what is called follicular pharyngitis.

There are here, as there are everywhere else, a large number of practitioners of one kind and another who are fond of calling every bad case of sore throat they see diphtheria or a diphtheritic inflammation. It is their worthless statements that have caused some unnecessary apprehensions among the people of St. Louis on this score.

Miscellany.

LETTER FROM VIENNA.

MR. EDITOR, — Antiseptic surgery, as practiced at present in Professor Billroth's clinic, is not the least successful among the various attempts which have been made at simplifying Lister's method. The General Hospital of Vienna, situated in a thickly populated part of a large city, and containing three thousand beds, seven hundred of which are occupied by surgical patients, probably offers a more extended field for "Listerism" than any other hospital in the world. The inconveniences as well as the great advantages of employing Lister's method in such a place are keenly felt, and in Billroth's clinic the most inconvenient and disagreeable part of the whole Listerian apparatus — the spray — is now replaced by simple irrigation with an antiseptic solution.

The theoretical grounds for this proceeding are set forth by Dr. Miculicz, assistant in the clinic, in an article in Von Langenbeck's *Archiv*.¹ Dr. Miculicz believes that the air is the least dangerous of all sources of infection to which wounds are exposed. A liter of the air of an ordinary operating theatre has been found to contain ten germs, which, in a room which contains two thousand meters of air, would give a total of twenty million germs. Five times this number, however, are contained in a single drop of decomposing fluid; so that, as the author puts it, there may be more germs under one of the operator's finger-nails, or on the points of a single pair of forceps, than in all the air in the room. The atmospheric germs, moreover, are nearly all dry, and experiments show that dry germs are far more inert than moist ones, which are introduced into wounds by direct contact. It follows, then, that both in respect to the quantity and quality of its germs, the air is a comparatively insignificant source of infection. But as it is not so insignificant that its effects may be safely disregarded in a large hospital, and as the purpose of the spray is to guard against dangers from this source, Dr. Miculicz raises the question whether this purpose is as well answered by the spray as by irrigation. He finds, by a carefully conducted series of experiments, that the mechanical effect of the spray is to carry along with it and leave in the wound at least four times as many germs as would find their way there under ordinary circumstances. To the statement that this is unimportant if the germs are all destroyed by the spray the experimenter replies that, as the concentration of the spray varies greatly with the amount of pressure by which the spray is produced, the distance of the spray-producer from the wound, and the formation of the nozzle, it is difficult to tell whether the spray is always strong enough to destroy the germs which it throws into the wound. The chemical action of the spray is found to be nothing more than to render the surface of the wound slightly antiseptic. While in the air, the contact of the vapor with the germs is not of sufficiently long duration to destroy them.

In favor of irrigation, it is claimed that no extra germs are thrown into the wound; that all germs which inevitably fall in are washed away, instead of being allowed to stay; that, as the strength of the solution is always known, the operator can be sure that the wound is thoroughly disinfected, and that the patient is not chilled by being kept in a cool vapor bath during a

¹ Archiv f. klinische Chirurgie, Bd. xxv., p. 707.

long operation. In short, it is claimed that irrigation possesses positive advantages over spray without sharing its defects. The only practical disadvantage of irrigation is that the subsequent discharge from the wound is apt to be greater than when spray is employed. A more frequent change of dressing is thus necessitated, but Dr. Mienliez considers this a very slight disadvantage when the greater certainty of antiseptis afforded by irrigation is considered.

The antiseptic method, as practiced by Billroth, is as follows: Before beginning an operation, the part to be operated on is shaved, then scrubbed with soap and water, and finally washed with carbolic-acid solution. If the skin seems greasy it is washed with ether. The nail-brush and the carbolic solution are used in the same way on the hands of the operator and all the assistants, and everybody who is employed in the amphitheatre wears a long clean linen duster. All the instruments, ligatures, sutures, and needles lie in carbolic solution during the operation, while sponges and drainage tubes are always kept carbolized. A small tank against the wall contains the irrigating fluid, a three per cent. solution of carbolic acid, which is brought within reach of the operator by a rubber tube, whose nozzle is furnished with a stop-cock, by which the force of the stream is regulated. If the operation is a small or superficial one, irrigation is employed only at the close, just before sewing up, when the wound is washed out with great care; but the process is repeated a number of times during the operation if a deep hole is made. After the introduction of the drainage tube the wound is sewed up, a piece of gutta-percha paper laid over it, and a very large quantity of Lister's gauze applied. The innermost layers of the gauze are the only ones which are soaked in the carbolic solution, and they are not applied smoothly, but crumpled up and laid on loosely. The outer layers of the gauze are folded smoothly and put on dry, the mackintosh protective occupies its ordinary place, and the whole dressing is firmly held in position by a gauze bandage.

It will thus be seen that in guarding against infection the most scrupulous attention is paid to every detail. In changing a dressing, the same care is observed, the irrigator, of course, still taking the place of the spray. One point which deserves special notice is with reference to sponges. The sponge is regarded as one of the most dangerous sources of infection, and is never used except in the operating theatre, and there only on a freshly made wound. In doing ovariectomy, Billroth uses no sponges which have not been soaked at least fifteen days in a five per cent. solution of carbolic, as he has found living bacteria in sponges which have been kept twelve days in such a solution. In changing dressings and in wiping all wounds which discharge anything beside fresh blood, small "wads" of cotton batting, which are always soaking in carbolic solution and which are thrown away as soon as used, do the work of sponges. If, by any chance, a sponge has come in contact with pus, it is never used again.

In securing first intention, great importance is attached to compression of the wound and immobility of the part. The dressing is carefully adjusted and the bandage applied so as to afford a very firm and equable pressure. In wounds of any size, deep sutures are used, which are fastened with lead disks and pierced bullets. If the seam is a long one, the disks are replaced by two strips of lead placed one on each side of the seam and parallel with it. Immobility is secured by a

bandage of coarse muslin impregnated with starch and dextrine. The ordinary use to which this material is put is the stiffening of ladies' dresses, and it can be had at any dressmaker's. For surgical purposes it is made up into rollers, which are soaked in water and applied outside of everything else. The bandage stiffens in a few minutes, and although, of course, not so solid as plaster of Paris, it offers very effectual resistance to any ordinary movement on the part of the patient. It is especially useful in operations on the neck, such numbers of which are performed by Billroth. After one of these operations, the patient's head, neck, and chest are enveloped in this bandage, which renders motion of the head impossible. The bandage must be cut or soaked in warm water in order to remove it, but there is said to be no trouble in cutting it with a stout pair of shears.

It is now ten months since the use of the spray has been abandoned in Billroth's clinic. The experiment has proved in the highest degree satisfactory. Operations are even more successful than when performed under spray, and a troublesome piece of apparatus is dispensed with. The laparotomies which have been performed without spray show in a striking manner what results can be obtained by this method of operation. Since September Billroth has done laparotomy eleven times. Two of these operations were hysterotomies, one per vaginam, the other through the abdominal walls. The remaining nine were ovariectomies. These operations were all performed in the General Hospital, without spray or irrigation, and recovery in every case was perfect.

Litholapaxy is attracting a good deal of attention in Vienna, and has been performed six times by Billroth. The operation lasted, in the different cases, from fifteen minutes to two hours, and the calculi varied in diameter from one and a half to four centimeters. All the operations were successful, and the subsequent febrile reaction insignificant. In only one case, that of the two hours' sitting, was the operation followed by a chill.

A death under chloroform occurred in Billroth's operating theatre a short time ago, during an attempt to reduce a hip dislocation, the result of chronic hip disease. The patient was a boy fourteen years old. The anæsthetic used was a mixture of one hundred parts of chloroform, thirty of ether, and thirty of alcohol. This is the first death which has occurred from the administration of this mixture, which has been in constant use here for ten years. JOHN B. WHEELER, M. D.

VIENNA, December 26, 1880.

GROSS SURGICAL PRIZE.

THE Philadelphia Academy of Surgery offers through its president, Professor S. D. Gross, a prize of five hundred dollars for the best essay on the Surgical Pathology and Treatment of Tumors, or Morbid Growths of the Testis, Scrotum, and Spermatie Cord, to be open exclusively to American surgeons.

(1.) The essay must be founded solely upon original investigations, be illustrated by suitable drawings, microscopical and other, and be written in scholarly English.

(2.) The essay shall be the property of the academy, which shall, at its option, permit the author to publish it at his own risk or expense.

(3.) Each essay must be accompanied by a motto, and by a sealed letter containing the author's name.

(4.) The essay must comprise an amount of matter equal to two hundred and fifty pages octavo.

(5.) The award will be made at the meeting of the academy in January, 1884, by a committee of five of its Fellows.

The committee, which has been appointed, consists of D. Hayes Agnew, M. D.; William Hunt, M. D.; R. J. Levis, M. D.; J. H. Packard, M. D.; J. Ewing Mears, M. D.

All essays should be forwarded to the secretary of the committee, at a date not later than October 15, 1883, J. Ewing Mears, M. D., secretary of the committee, 1429 Walnut Street, Philadelphia, Pa.

FEES OF DOCTORS.

THE signal defeat of a bill — it was smothered in committee — introduced at the last session of the Kentucky legislature, to place the fees of doctors on the list of preferred claims now allowed by the statute,

causes the *Louisville Medical News* to invite communications upon the thesis, What will increase the Material Prosperity of Doctors? The discussion of the theme will of course involve the consideration of many subsidiary points. Prominent among these will be the vastness of the army which has to divide the rations of medicine. How are we to get rid of the overplus by other method than the slow process of starving? How are we to prevent ambitious schools from crowding the ranks beyond the power of pestilence to thin? Which promises to be the most successful bar against admission, — an educational, pecuniary, or legal standard? And the army being formed, does it fight in proper lines and under proper regulations? Are the officers to be trusted? Are they, or are they not, satisfied with getting the choicest spoils, and do they not exact discipline for selfish ends? Is, or is not, the code a humbug, — a mighty tower for the strong and a snare for the weak? Or, dropping the military and coming down to ordinary life, would, or would not, medicine be benefited in dignity as well as in worldly goods by putting it on a mere commercial basis? It is easier to suggest than to make reply.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 8, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	778	313	20.95	17.61	12.08	5.01	.90
Philadelphia.....	846,980	391	126	25.06	5.63	4.86	3.07	14.07
Brooklyn.....	566,689	332	142	25.00	—	18.98	3.31	—
Chicago.....	503,298	—	—	—	—	—	—	—
St. Louis.....	—	141	47	20.57	16.31	3.55	2.13	—
Baltimore.....	393,796	163	67	24.54	7.98	11.04	7.98	—
Boston.....	363,938	206	92	22.33	17.48	14.56	—	—
Cincinnati.....	280,000	109	37	10.09	21.10	3.67	—	—
New Orleans.....	210,000	—	—	—	—	—	—	—
District of Columbia.....	180,000	78	25	14.10	12.82	6.41	3.85	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	62	28	32.36	9.68	9.68	14.52	—
Buffalo.....	155,159	33	9	24.24	18.18	9.09	9.09	—
Milwaukee.....	127,000	47	28	21.28	14.89	8.51	10.64	—
Providence.....	104,862	40	9	17.50	22.50	2.50	5.00	—
New Haven.....	63,000	27	8	25.93	7.41	11.11	3.70	—
Charleston.....	57,000	35	10	5.71	17.14	5.71	—	—
Nashville.....	43,543	16	5	12.50	18.75	6.25	—	—
Lowell.....	59,340	24	10	12.50	12.50	—	4.17	—
Worcester.....	58,040	17	11	41.18	17.65	11.76	29.41	—
Cambridge.....	52,860	17	11	35.30	29.41	29.41	—	—
Fall River.....	48,626	14	5	14.29	—	—	—	—
Lawrence.....	39,068	12	2	16.67	—	—	—	—
Lynn.....	38,376	15	3	6.67	20.00	—	—	—
Springfield.....	33,536	10	1	10.00	50.00	—	—	—
Salem.....	27,347	9	2	11.11	22.22	—	—	—
New Bedford.....	27,268	15	2	13.33	—	6.67	6.67	—
Somerville.....	24,964	11	3	27.27	18.18	18.18	—	—
Holyoke.....	21,961	8	6	25.00	12.50	—	—	—
Chelsea.....	21,780	5	1	20.00	—	—	—	—
Taunton.....	21,145	7	1	28.57	28.57	28.57	—	—
Gloucester.....	19,288	3	—	—	—	—	—	—
Haverhill.....	18,478	8	1	—	—	—	—	—
Newton.....	16,994	5	2	60.00	—	60.00	—	—
Newburyport.....	13,470	6	4	33.33	16.67	16.67	—	—
Fitchburg.....	12,270	5	3	60.00	—	60.00	—	—
Nineteen Massachusetts towns.....	148,704	39	10	20.51	23.08	12.82	—	—

Deaths reported 2588; 1024 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 586, consumption 390, lung diseases 339, diphtheria and

croup 282, scarlet fever 108, small-pox 62, typhoid fever 31, diarrhoeal diseases 24, erysipelas 19, malarial fevers 18, measles 16, cerebro-spinal meningitis 11, whooping-cough 10, puerperal fever five. From *typhoid fever*, Philadelphia six, Boston five,

St. Louis and Providence three, Baltimore and Pittsburgh two, New York, Brooklyn, Cincinnati, District of Columbia, Lowell, Fall River, Lawrence, Springfield, Woburn, and Plymouth one. From *diarrheal diseases*, St. Louis six, New York five, Baltimore, Boston, and New Haven two, Brooklyn, Cincinnati, District of Columbia, Pittsburgh, Providence, Nashville, and Somerville one. From *erysipelas*, New York five, St. Louis four, Philadelphia three, Baltimore, Cincinnati, Buffalo, New Haven, Holyoke, Chelsea, and Newburyport one. From *malarial fevers*, New York five, Brooklyn and St. Louis four, Baltimore two, Boston, Pittsburgh, and Buffalo one. From *measles*, Boston seven, Brooklyn three, New York two, Baltimore, District of Columbia, Milwaukee, and Lowell one. From *cerebro-spinal meningitis*, New York five, Philadelphia and St. Louis two, Lawrence and Holyoke one. From *whooping-cough*, Cincinnati two, Philadelphia, St. Louis, Baltimore, Boston, Pittsburgh, Cambridge, Salem, and Waltham one. From *puerperal fever*, Cincinnati two, St. Louis, Fall River, and Lynn one.

One hundred and thirty cases of diphtheria, 113 of scarlet fever, 14 of measles, and two of small-pox were reported in Brooklyn; diphtheria 49, scarlet fever 17, in Boston; scarlet fever 41, diphtheria 11, in Milwaukee.

In 38 cities and towns of Massachusetts, with a population of 1,066,615 (population of the State 1,783,086), the total death rate for the week was 21.31, against 21.21 and 20.86 for the previous two weeks.

For the week ending December 18th, in 149 German cities and towns, with an estimated population of 7,708,627, the death-

rate was 22.5. Deaths reported 3334; 1540 under five: pulmonary consumption 451, acute diseases of the respiratory organs 302, diphtheria and croup 166, scarlet fever 83, typhoid fever 79, whooping-cough 56, measles and röteln 54, puerperal fever 17, small-pox (Königsberg two, Thorn, Wesel) four, typhus fever (Berlin) one. The death-rates ranged from 7.2 in Potsdam to 38.9 in Aachen; Königsberg 23; Breslau 23.4; Manich 23.8; Dresden 21.2; Berlin 21.4; Leipzig 15.9; Hamburg 27.8; Hanover 17.7; Bremen 19.1; Cologne 28.5; Frankfurt 13.6; Strasbourg 22.6.

For the week ending December 25th, in the 20 English cities, with an estimated population of 7,499,468, the death-rate was 23.7. Deaths reported 3408: acute diseases of the respiratory organs 353, scarlet fever 137, measles 84, whooping-cough 72, fever 48, diarrhoea 23, diphtheria 17, small-pox (London) 17. The death-rates ranged from 16 in Newcastle-upon-Tyne and Portsmouth to 30 in Wolverhampton, Liverpool, and Nottingham; Sheffield 19; Birmingham 21; Bristol and London 23; Manchester 24; Leeds 26. In Edinburgh 20; Glasgow 23; Dublin 36.

In the 20 chief towns in Switzerland for the week ending December 25th, estimated population 522,856, there were 23 deaths from acute diseases of the respiratory organs, diphtheria and croup 13, typhoid fever five, small-pox five, diarrheal diseases five, puerperal fever one.

NOTE. The returns from the new Swiss census not being ready, the populations and death-rates are not given.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																			
Jan. 2	30.159	15	25	3	50	48	49	49	W	W	W	8	4	7	O	F	C	—	—
" 3	30.112	26	38	12	51	45	75	57	W	W	W	7	12	11	O	F	C	—	—
" 4	30.262	20	28	12	62	61	100	74	NW	N	W	10	5	6	O	O	Snow.	5.00	.04
" 5	30.031	27	31	19	100	78	89	89	NW	NW	N	6	7	4	O	O	O	6.00	.20
" 6	29.696	33	36	27	100	100	100	100	NE	N	W	13	12	10	Snow.	Rain.	Rain.	19.00	.49
" 7	30.088	32	40	24	71	46	63	60	W	W	W	12	17	21	C	F	C	—	—
" 8	30.497	20	27	15	84	52	53	63	NW	W	N	14	12	8	C	F	C	—	—
Week.	30.121	25	40	3				70	W	W	W							30.00	.73

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 8, 1881, TO JANUARY 14, 1881.

MEACHAM, F., captain and assistant surgeon. Assigned to temporary duty at Fort Niagara, N. Y., during absence on leave of Assistant Surgeon Price. S. O. 6, Department of the East, January 10, 1881.

PRICE, C. E., captain and assistant surgeon. Granted leave of absence for one month and ten days, to take effect on arrival of Assistant Surgeon Meacham at Fort Niagara, N. Y. S. O. 2, Military Division Atlantic, January 10, 1881.

COMEGYS, E. T., captain and assistant surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 4, A. G. O., January 7, 1881.

BERTON, H. G., first lieutenant and assistant surgeon. Now awaiting orders at Boston, Mass., to report in person to the commanding general, Department of the East, for assignment to temporary duty. S. O. 7, A. G. O., January 11, 1881.

BOOKS AND PAMPHLETS RECEIVED. — Smithsonian Contributions to Knowledge. Fever. A Study in Morbid and Normal Physiology. By H. C. Wood, M. D. Philadelphia: J. B. Lippincott & Co., 1880.

Annual Report of the Board of Health of the City of Pittsburgh of the Year 1879.

Genital Irritation, together with some Remarks on the Hygiene of the Genital Organs in Young Children. By Roswell Park, M. D. (Reprint.)

Relapse of Typhoid Fever, especially with Reference to the Temperature. By J. Pearson Irvine, M. D. London: J. & A. Churchill, 1880.

Rocky Mountain Health Reports. An Analytical Study of High Altitudes in Relation to the Arrest of Chronic Pulmonary Disease. By Charles Denison, M. D. Boston: Houghton, Mifflin & Co., 1881.

Ringworm, its Diagnosis and Treatment. By Alder Smith, F. R. C. S. Philadelphia: Presley Blakiston, 1881.

A Manual of Ophthalmoscopy for the Use of Students. By Dr. Dagnenet. Translated by C. S. Juddreson. Philadelphia: Presley Blakiston, 1880.

The Human Face: Its Modifications in Health and Disease, and its Value as a Guide in Diagnosis. By Ambrose L. Ranney, M. D. (Reprint.)

Cases of Epileptiform Convulsions successfully treated by Hypodermic Injections of Sulphate of Atropia. By Thomas Legure, M. D.

Medical Diagnosis with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. Da Costa, M. D. Fifth Edition, revised. Philadelphia: J. B. Lippincott & Co., 1881.

Winter Health Resorts. The Climate of Atlantic City and its Effects on Pulmonary Diseases. By Boardman Reed, M. D. (Reprint.)

Original Articles.

JOHN HUNTER AND HIS PUPILS.¹

ABSTRACT OF AN ADDRESS DELIVERED BEFORE THE
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LIFE, CHARACTER, AND SERVICES OF JOHN HUNTER.

ALL intelligent readers of biography are more or less familiar with the labors and writings of John Hunter, his marvelous genius, and his vast contributions to science. In the medical profession his name is, and always will be, a household word throughout the civilized world; it is spoken with respect and reverence in every college amphitheatre, and is deeply engraved upon the mind of every student of surgery. Nevertheless there are, it may safely be asserted, many points of interest in his life, and many traits of character which have escaped our memory, or which have never been so thoroughly impressed upon our attention as to enable us to appreciate them at their full value.

With the exception of Hippocrates, the father of medicine, John Hunter is the grandest figure in the history of our profession. I make no exception in favor of Ambrose Paré, the father of French surgery and the inventor of the ligature for the arrest of hæmorrhage, a contrivance which has been instrumental in saving so many lives; of Albert von Haller, the father of scientific physiology; or even of Xavier Bichat, the founder of general anatomy, and one of the most remarkable men that have ever lived. Shall we make an exception in favor of William Harvey? No; I will not exclude from this list even the immortal discoverer of the circulation of the blood. Great as these men were, and vast as are the blessings which they have conferred upon their race, it is no disparagement to them to say that John Hunter was, in many respects, their superior: not in learning, for herein Haller had greatly the advantage; not in the amount of suffering which he has been instrumental in relieving by his surgical writings, for in this respect Ambrose Paré was fully his equal; not even in inventive genius, for here it will be found that Bichat, who created a new science before he was thirty years of age, was not a whit his inferior. While Hunter had many traits of character in common with these and other great men, he possessed some features that were peculiarly his own. He was not only a great surgeon, a wise physician, and a great anatomist and physiologist, human and comparative, but, above all, he was a philosopher whose mental grasp embraced the whole range of nature's works, from the most humble structure to the most complex and the most lofty. He was emphatically the Newton of the medical profession, and what Pope said of that great philosopher may, by paraphrase, be said with equal force and truth of Hunter:—

"Nature and Nature's law lay hid in night;
God said, 'Let Hunter be,' and all was light."

Hunter is peerless in the history of British surgery; and after the lapse of nearly a century the profession turns to his memory with increased reverence for his transcendent genius, his matchless ability, and his un-

equaled services. To say that he was simply the founder of scientific surgery would fall far short of his great deserts; to do him full justice we must add that he was the father also of scientific zoology and of comparative physiology.

To appreciate Hunter's character fully, or, in other words, to form a just idea of his merits as an observer, an experimenter, an investigator, a teacher, an author, and a man of genius, it will be necessary to take, as it were, a bird's-eye view of the history of surgery at the time he appeared upon the active stage of life; how he came to study medicine, who were his teachers and contemporaries, and what influence he exerted by his discoveries and improvements upon his age and upon future generations.

Of the boyhood of Hunter very little is known, and that little is not particularly creditable to him. He was the youngest of ten children, and was born at Long Calderwood, Lanarkshire, Scotland, on the 14th of February, 1728.² His father, who was nearly seventy years old at the time of his birth, was descended from an old family in Ayrshire, and cultivated a small landed estate, which afforded him but a scanty subsistence. That he was a man of refinement and of some education, added to a high moral and religious sense, is proved by several letters, copies of which are still extant. His mother was the daughter of the treasurer of Glasgow. At the age of ten John was left an orphan, in the sole care of his mother, who, although a woman of strong mind, failed to exercise much influence over him. At the age of seventeen, or thereabout, learning that his brother-in-law, a cabinet-maker at Glasgow, married to a sister whom he dearly loved, was laboring under pecuniary embarrassment, he paid him a visit, and for a time assisted him in his business, not as an apprentice, but a volunteer, working probably at small wages, or simply for his board and clothing. It was this circumstance which induced some of his envious contemporaries to assert that in early life he had been a wheelwright or a carpenter,—a statement for which there is not the slightest foundation in truth. Tiring of an occupation which, it may be presumed, had nothing genial in it, and hearing that his brother, Dr. William Hunter, who had been living for some time in London, was doing a large and lucrative practice, and rapidly growing in reputation, a desire seized him to visit what must have appeared to his heated fancy as a sort of Eldorado. The meeting between the two brothers was cordial, and arrangements were at once effected by which John became an assistant in William's anatomical rooms, which, although only recently opened, had already acquired marked celebrity on account of their educational advantages. It was there that young Hunter first became aware of his latent powers, and threw off the incubus which had so long oppressed his soul. A new life broke in upon him; his ambition was aroused; industry, steady and unremitting, took the place of idleness, and the undecided, wavering, erring youth, stimulated by the new atmosphere in which he was now daily immersed, assumed the attitude and the assured character of the philosopher and the student of nature. Who or what brought about these wonderful changes in the life and conduct of this young man, so sudden, so unexpected? It is not difficult to answer the question. It was simply William Hunter, and the influence of his example. John saw the wonder-

¹ This address is to be published in full by Presley Blakiston, of Philadelphia, in book form, making a small octavo of over one hundred pages. It will have a handsome portrait of John Hunter as a frontispiece.

² The parish register gives the 13th of February, but the College of Surgeons always celebrates the 14th as Hunter's birthday. Sir Everard Home in his Life gives the 14th of July as the proper date.

ful things which his brother was doing in building up a great anatomical museum, and it is therefore not surprising that his tastes should soon have taken a similar direction. However this may be, his proficiency as a practical anatomist was so very rapid that before the end of twelve months he was intrusted with the preparation of his brother's subjects for his anatomical lectures; and in 1755, seven years after his arrival in London, he was admitted to a partnership in his private school.¹ Long before this time he had acquired great reputation among his classmates as an expert dissector and an excellent anatomist. He had now become an active, industrious worker, thoroughly in love with his occupation. The summer of 1749 was spent by him at Chelsea Hospital, under the instruction of the celebrated Cheselden, who was then nearing his grave; and in 1751 he became a pupil at St. Bartholomew's Hospital, where he availed himself of the teachings of the not less renowned Percivall Pott, another great luminary of British surgery. It has been stated that Hunter's early education was sadly neglected. Whether it was that he was himself painfully conscious of the fact, or, what is much more probable, because his friends urged him to take the step, he entered, in 1753, as a gentleman commoner at St. Mary's Hall, Oxford. His brother William was very anxious that he should abandon surgery and study medicine, which was at that time regarded, and, perhaps, not without reason in the then existing state of the science, as a higher branch of the healing art. With this end in view it was deemed very desirable that John should have a respectable knowledge of Greek and Latin, as no physician was considered as being properly educated without it. The effort, however, proved abortive. Hunter was now twenty-five years of age, and he had no disposition to shut himself up within the narrow walls of a college, or to give up the idea, formed soon after he settled in London, of becoming a great surgeon. He looked upon such studies as a waste of time, and in referring to the subject, some years afterwards, he thus feelingly expressed himself: "They wanted," he said, "to make an old woman of me, or that I should stuff Latin and Greek at the University; but," added he, significantly pressing his thumb-nail on the table, "these schemes I cracked like so many vermin as they came before me."² One cannot but regret that Hunter did not carry out the wishes of his friends. A little "stuffing" of Latin and Greek would have been of vast benefit to him in preventing those errors of style and of literary composition which so greatly disfigure and obscure his writings.

In 1751 Hunter became a pupil at St. George's Hospital, where two years later he received the appointment of house-surgeon. This position he retained, however, only for a short time; for, owing to his incessant labors, his health was beginning to suffer, and fears were entertained that he was threatened with phthisis. This compelled him to seek safety in change of air and scene. Through the agency of his friends he was made a staff-surgeon, and was at once sent with the army to Belle Isle, an island off the western coast of France, where he enjoyed ample opportunities

for the study of diseases and accidents, and gathered materials for the composition of his work on gunshot wounds. These opportunities were further enhanced the following year during the war in the Peninsula. On the restoration of peace in 1763, Hunter returned to London, invigorated in health, and loaded with new knowledge, but poor in pocket, having saved little, if anything, of his pay as a military surgeon. His struggles as a young practitioner in the great metropolis were long, arduous, and disheartening. The few connections which he had formed before he joined the army were lost to him, and his place in his brother's dissecting-rooms and amphitheatre was occupied by Mr. Hewson, a young but rising anatomist, afterwards so celebrated for his discoveries in the lymphatic vessels. He had, therefore, now nothing to depend upon but his half pay and his own indomitable will, stimulated by his necessities and by his lofty ambition. Like many a young man destined to attain to eminence, he literally carried his fortune in his own hands. Although full of energy, he was not a man to make friends or to inspire public confidence rapidly. His manners were abrupt, and, at times, even coarse and repulsive. He possessed none of those arts which so easily please and fascinate people, and which so often do more in securing respect and business than the highest talent or the most consummate knowledge. The truth is he had too good an opinion of himself, and too little respect for that of his professional brethren. He felt conscious of his superior mental endowments, and therefore looked upon the world around him with a species of contempt, which seldom fails to recoil with interest upon its author. The humble Scotch youth, by his intercourse with army surgeons and gay society, was doubtless led to form a very humble estimate of the profession generally. Besides, the field upon which he had now entered was occupied by able men. Pott stood deservedly at the head of the profession; Hawkins, Bromfield, Sharp, and Warner also enjoyed a large practice; and there were a number of younger surgeons who were rapidly rising in public estimation. In order to increase his income, as well as to afford himself useful occupation, Hunter now opened a school of anatomy and operative surgery, and delivered regular courses of lectures. He also took private pupils, each of whom was apprenticed to him for five years, at a fee of five hundred guineas, a sum equivalent to about \$2650 of our money; but after all not so large when it is recollected that it included board and lodging. This practice of taking private pupils was continued until within a short time of Mr. Hunter's death. Among the list of the young men who enjoyed this privilege were, not to mention others, Edward Jenner, Abernethy, Physick, and John Thomson, the author of the celebrated treatise on inflammation.

In 1767 Hunter was elected a member of the Corporation of Surgeons, an institution which in 1800 was merged into the Royal College of Surgeons. Although the Corporation embraced some excellent men, Hunter had so little respect for it that he seldom attended its meetings or took any active part in its deliberations. Good anatomist and experienced surgeon as he had long been known to be, it was not until he was forty years of age that he received a hospital appointment. In 1768 a vacancy occurred in St. George's Hospital, to which, through the influence mainly of his brother, Dr. William Hunter, he was

¹ The first task assigned to him was the dissection of the muscles of an arm, which was so well and so rapidly done that he was next set to preparing an arm with the blood-vessels. This labor was also performed in so satisfactory a manner as to elicit the highest commendation from his brother, who predicted his future greatness as an anatomist, and told him "he should never want employment."

² Oltley's Life of John Hunter, Palmer's edition, vol. i. p. 14. London, 1837.

elected by a large majority over his competitors. This position, one always eagerly sought by young men, gave him a new start, and his practice immediately increased in consequence. Indeed, his fortune as a surgeon was now fully assured. He no longer lacked patients, and the rigid economy which he had been obliged to exercise in his daily outlays gave way to comparative affluence. He now bought a lot of ground at a place called Earl's Court, about two miles from London, and erected a large and commodious house, still famous as his former residence. In 1771, at the age of forty-three, he married Ann, the daughter of a surgeon in General Burgoyne's Light Horse, and a sister of Mr., afterwards Sir Everard, Home, whose ultimate career is so intimately connected with that of Hunter. Miss Home was a lady of varied accomplishments, elegant manners, fine æsthetic taste, a good musician, fond of society, and somewhat of a blue-stocking.

The house at Earl's Court was erected for the express purpose of accommodating his preparations, which already amounted to a cumbersome collection; but it also served as a summer residence for the family. On the spacious grounds now at his command he gathered a large number of animals, birds, fishes, and reptiles, as well as various other objects of natural history; and one of his favorite amusements in the summer and autumn, after the labors of the day were over, was to ramble among these creatures, in familiar intercourse, petting and talking with some, and preserving friendly relations with all. It was at Earl's Court that Hunter entered upon that career which invested his life with so much *éclat*, and established for him that fame which made him one of the most renowned men of his age. His house in town, which had hitherto been a sort of curiosity shop, he still retained. He also continued his lectures on anatomy and surgery, took pupils, as formerly, into his house, as was then the custom all over England, and spent all the time he could snatch from his practice in the study of comparative anatomy and natural history and in making preparations for his museum. His habit was to rise at four o'clock in the morning, to spend from four to five hours in his dissecting-rooms, and then to step into his carriage to make his daily rounds among his patients. He had no fondness for surgical practice or consultations, and attended to business only because it afforded him the means of purchasing objects of curiosity or of natural history, saying, as he laid aside his scalpel and forceps, "Well, Lynn," a pupil and an intimate friend, "I must go, and earn that d—d guinea, or I shall be sure to want it to-morrow." It is obvious enough that a man with such feelings could not have much love for the drudgery of his profession. Whatever interfered with his studies and his philosophical contemplations was regarded by him as a serious interruption. He was lavish in his expenditures, and was often obliged to borrow money to meet his obligations. Whenever he had accumulated ten guineas from his earnings, he invariably appropriated a part to the purchase of material for his museum. Every available source was laid under contribution for specimens of animals, birds, fishes, reptiles, and insects,—the Zoölogical Garden, then in the Tower, traveling menageries, sea-captains sailing to different countries, and persons at home or abroad. With his friend and pupil, Dr. Edward Jenner, the discoverer of vaccination, he carried on a life-long correspondence respecting material of this kind, and the habits of birds, bees, rep-

tiles, and fishes. In one of his letters he asks, "Have you large trees of different kinds that you can make free with? If you have, I will put you upon a set of experiments with regard to the heat of vegetables." He asks a similar question with regard to bats, the hedgehog, and other animals. Indeed, he must have kept Jenner often very busy, for nothing short of thorough work answered Hunter's purpose. He took nothing on credit. In one of his letters to Jenner he asks for information about the temperature of the hedgehog. He observes, "I think your solution is just; but why think? Why not try the experiment?" and then adds, "Try the heat; cut off a leg at the same place; cut off the head, and expose the heart, and let me know the result of the whole." The temperature of insects, animals, and vegetables occupied much of Hunter's thoughts, and he eventually published a valuable paper upon the subject in the *Philosophical Transactions*. In 1767 he was elected a Fellow of the Royal Society; and in the following year he sent to that body a memoir on the means to be employed in the resuscitation of drowned persons. In 1776 he was appointed Croonian lecturer by the Royal Society, and the subject which he selected for discussion was muscular motion, into which, as usual, he introduced much novel and interesting matter. The course was completed in 1782, and the society asked for a copy of it for publication; but to this demand Hunter demurred, on the ground that he had not completed his investigations. Much of the matter, however, found its way afterwards into some of his various writings, so that, probably, nothing of value has been lost.

We must next inquire into Hunter's merits as an author. Notwithstanding his want of scholarship and the labor with which he composed, he was a prolific writer. Many of his contributions, especially those on comparative anatomy and physiology, found their way into the *Transactions of the Royal Society* and other publications, in which they generally elicited much attention. His first systematic work was his *Treatise on the Natural History and Diseases of the Human Teeth*, the first part of which was issued in 1771, and the second seven years later. The work was well received, and greatly enhanced his reputation as an acute observer and investigator. His attention seems to have been originally directed to the subject by the deplorable state of dentistry, which was almost solely confined to the barber or ignorant mechanic, whose chief occupation consisted in extracting and plugging teeth. Although vast improvements have been effected since the time in which he wrote,—improvements which far exceed those of any other specialty in surgery, save that of the eye,—to Hunter is justly due the great merit of rescuing dentistry from the hands of empiricism, and of placing it upon a broad and scientific basis by pointing out, in distinct terms, the physiological and pathological relations which the teeth bear to the rest of the system. It is in this work that we find the first notice of the operation of transplanting teeth from the mouth of one person into that of another,—an operation first practiced by Hunter, and frequently repeated under his supervision, until, owing to the serious consequences which so often attended it, it was finally abandoned. It was ascertained that, although the transplanted tooth, in many cases, readily contracted adhesions and even vascular connections with the gums, it either soon dropped out, or caused so much irritation as to require its removal. Occasionally, in-

deed, the operation was followed by syphilis, as when a tooth was transplanted from a tainted to a healthy person. We may imagine how delighted Hunter must have been when he found that he could transplant a human tooth to the comb of a cock, or the testicle of a cock to the abdomen of a hen,—operations which, in several instances, he performed most successfully.

The *Treatise on the Venereal Disease* appeared in 1776, followed by a second edition in 1778. Having been long and impatiently expected, it at once attracted general attention. Although extraordinary care had been bestowed upon its preparation, it abounded in blemishes, for the correction of which the author availed himself of the services of a committee of three of his most learned and accomplished friends. His account of venereal affections was for upwards of a third of a century the best authority on the subject in any language, and his description of the indurated chancre is so graphic and distinct that it will always be called by his name. True, it had been recognized by previous observers, as Torella, De Vigo, Fallopius, and Ambrose Paré, but no one had ever so clearly delineated its distinctive features.

The *Treatise on the Blood, Inflammation, and Gun-shot Wounds*, a work of vast labor and the most patient research, and upon which Hunter's fame as a surgeon and a medical philosopher largely rests, was published, in 1794, under the supervision of Dr. Matthew Baillie and Sir Everard Home, only about one third of the proofs having been revised by the author at the time of his death. Notwithstanding Hunter strove to render the work as perfect as possible, it was obscured by numerous errors of style, and the punctuation was execrable. A *Life*, by Sir Everard Home, is prefixed to the volume, but this, for some reason or other, was omitted in the succeeding editions of 1812, 1818, and 1828. These editions were, it would seem, simply reprints of the first, with all the original errors.

His work on the *Animal Economy*, consisting mainly of a series of papers considerably altered in matter as well as style, and previously printed in the *Philosophical Transactions*, was published in 1786. The articles relate chiefly to anatomical and physiological subjects, and evince that rare spirit of generalization and mental acumen so characteristic of Hunter.

One reason, apparently, why Hunter's lectures and writings were marked by such glaring obscurities was that he was obliged to invent so many new expressions in order to meet the wants created by his own labors and discoveries. He was the first, for instance, to use such expressions as "adhesive inflammation," "ulcerative absorption," "morbid poisons," and others of a similar kind, unknown to his contemporaries, who felt little inclination to acquaint themselves with their import. Hunter never verified Bacon's maxim that "writing makes an exact man." His style seems to have been little, if any, better in his later than it was in his earlier years, when, as a raw student, he entered upon his gigantic work. There are men who never speak or write grammatically; they cannot overcome the defects of their early education; and of this class of men John Hunter was a remarkable example. His genius soared above the regions of grammar and of rhetoric.¹

¹ In reading the works of Hunter and of Bichat one cannot fail to be struck with the peculiarities of their style; both were slovenly writers, and their language is often so obscured by blemishes as to render it difficult to comprehend its proper meaning. Hunter composed slowly, Bichat rapidly; the latter never revised his MSS., and it is sad that his *General Anatomy*, in four volumes, was written and published in a single year.

He had a high opinion of putting one's thoughts into writing. "It resembles," he said, "a tradesman taking stock, without which he never knows what he possesses or in what he is deficient."

With the exception of an attack of pneumonia in 1759, Hunter enjoyed excellent health during the first forty years of his life. In 1769 he was seized with a severe fit of the gout, which greatly alarmed him, as it was attended with excessive pallor of his countenance, and, for nearly three quarters of an hour, with total extinction of the pulse, and almost entire absence of breathing. Notwithstanding this he soon resumed his labors, which now, however, began seriously to undermine the powers of his constitution, which was still further impaired in 1775 by a spasmodic affliction of different parts of the body, preceded by symptoms of his former complaint. The heart at length became involved, and on one occasion the paroxysm was so violent as to cause syncope. These attacks compelled him for a time to relax his efforts, and to avail himself of the use of the mineral waters of Tunbridge and of Bath. Although his health was greatly benefited by the change, it ever afterward remained in a precarious condition, his cardiac disorders frequently recurring upon the slightest exertion, fatigue, or mental irritation. In December, 1789, four years before his death, he was suddenly seized, while on a visit to a friend, with total loss of memory. He knew not in whose house he was, the name of the street, the object of his call, the name of the family, or, in short, anything he had ever said or done; the machinery of his mind seems to have been almost completely suspended, and a full half hour elapsed before the engine resumed its accustomed work. During all this time, however, consciousness remained, and special sensation was unimpaired. Hunter was so painfully sensible of his situation that he was wont to say to his friends that his life was in the hands of any rascal who chose to fret or worry him. It is therefore not surprising that these attacks should have rendered him nervous and irritable, and less capable of controlling his naturally impetuous temper. His final hour came at last: death, sudden and unexpected, overtook him at St. George's Hospital, at a meeting of the governors and of the surgical staff of that institution, called on business of importance connected with the admission of pupils and the mode of instructing them. During the discussion which ensued Hunter made a remark which one of his colleagues considered it necessary at once flatly to contradict. Choked with angry and tumultuous emotions, Hunter immediately ceased speaking, and, hurrying into an adjoining room, fell, with a deep groan, lifeless into the arms of one of the attending physicians. All attempts to revive him proved abortive. An event so sad and so unusual called forth a wide-spread sympathy, and created a profound sensation wherever his name and fame were known and appreciated. His carriage, drawn by two elegant bay horses, returned soon after without its master, whose body followed in a sedan chair, a sad and appalling spectacle for the family and friends of the great surgeon. Like Caesar, Hunter was murdered by his friends, not in the senate-chamber, but in the consulting-room of a hospital which had so long been the recipient of his services, of which he was the chief ornament, and which should have overlooked his infirmities, some of them inherent in his nature, and others the result of long-continued overwork of mind

and body. An examination of the body revealed the existence of ossification of the mitral valves of the heart and dilatation of the aorta, with thickening of its valves and degeneration of its coats. The coronary arteries were converted into long, rigid tubes. The heart itself was uncommonly small. At the time of his death, on the 16th of October, 1793, Hunter was in his sixty-fifth year. His body was interred in the Church of St. Martin-in-the-Fields, the funeral being strictly private, a few of his medical friends alone being present. His widow was anxious to deposit it in Westminster Abbey, but the fees demanded for admission exceeded her means, and it was not until March 28, 1859, that, through the influence of the medical profession and of public sentiment, it found a final resting-place in that sacred depository of England's illustrious men, of whom he was one of the greatest and most remarkable.¹

For finding the remains of Hunter the profession is solely indebted to the late Mr. Frank Buckland, the well-known naturalist, and a son of a former dean of Westminster Abbey.² He knew that Hunter had been interred in the Church of St. Martin-in-the-Fields, and learning, casually, that it was the intention of the church to reinter the bodies that had been so long confined in its vaults, he took advantage of the opportunity, and after sixteen days of hard work, during which he and his assistant removed three thousand and sixty coffins, and inhaled, much to their detriment, the foul vapors of this horrible necropolis, he at length, when almost in despair, came upon the much-coveted object of his search. The coffin was, in the main, well preserved, and upon a brass plate bore this inscription:—

JOHN HUNTER,
Esq.,
Died 16th Octr.,
1793,
Aged 64 years.

It also represented Hunter's arms,—a hand with an arrow in it, and the three horns of the hunter.

There is not, as has been justly observed by Dean Stanley, a more curious narrative of a chivalrous devotion to the relics of a great man than that displayed in this extraordinary labor of Mr. Buckland, which ended in the triumphant recovery of the remains of the founder of scientific surgery.³

I visited, last summer, the tomb in Westminster Abbey in which the mortal remains of the great man now repose, and found upon the tablet which covers it the subjoined inscription:—

"O Lord, how manifold are thy works."

Beneath
are deposited the remains of
JOHN HUNTER,

Born at Long Calderwood, Lanarkshire, N. B.,

on the 13th of February, 1728,

Died in London on the 16th of October, 1793.

His remains were removed
from the Church of St. Martin-in-the-Fields to this Abbey
on the 28th of March, 1859.

¹ Mrs. Hunter spent her widowhood in a state of retirement, devoting herself to the education of her two children, and to the composition of a small volume of poems, which she published in her latter years, and which is said to have possessed considerable merit as a light effort. She wrote a glowing epitaph in memory of her late husband, intended for a tablet to be placed over his remains; but this was never done, as it was contrary to the rules of St. Martin's Church. She died early in the present century, universally beloved and esteemed.

² *Curiosities of Natural History*, vol. ii. p. 160-179.

³ *Historical Memorials of Westminster Abbey*, page 335. London, 1868.

The Royal College of Surgeons of England has placed this tablet over the grave of Hunter, to record its admiration of his genius as a gifted interpreter of the divine power and wisdom at work in the law of organic life, and its grateful veneration for his services to mankind as the founder of scientific surgery.

In the same year that his remains were interred in the great Abbey, the Royal College of Surgeons adopted measures for the erection of a marble statue to him, and through the efforts mainly of Mr. John F. South, its vice-president, the sum of £1172 was promptly raised for that object. The work was intrusted to Mr. Weekes, the eminent sculptor, who, availing himself of the portrait by Sir Joshua Reynolds and of a cast of Hunter's face taken after death, produced an admirable likeness, a sort of copy in marble, which was completed in 1864, and now graces the museum of the college.

(To be concluded.)

ARE FREE DISPENSARIES ABUSED? ¹

BY J. H. WHITTEMORE, M. D.

Superintendent Massachusetts General Hospital.

THE subject of free dispensaries and the question of their abuse, both in this and foreign countries, had attracted so much attention and consequent discussion, that in 1877 the trustees of the Massachusetts General Hospital requested me to investigate the out-patient department of said hospital, and ascertain, if possible, if a large class of people did not come there for free treatment, who, by reason of their ability to pay for medical services ought not to be allowed this privilege. Sufficient was learned to show that the charity was abused. Since that time the number of patients has steadily and rapidly increased. Inquiry at the Boston Dispensary, and at the Boston City Hospital Dispensary, shows that the same feeling of abuse of their dispensaries exists in the minds of their respective superintendents. With this general feeling existing in the minds of the trustees and superintending officers of the three principal dispensaries of the city, I feel that the subject ought to come before the profession to be discussed, and plans for correction made, if abuses are really believed to exist worthy of notice. To this end I wish to lay before the society certain statistics and facts, perhaps not new, but to refresh your memories, if need be, so that discussion of the subject may be had, and the feeling of the society on this subject may be learned; also to see if any action to correct abuses seems advisable, and if so, what the course to be pursued shall be.

The Boston Dispensary was opened in 1796 "for the purpose of affording medical advice and relief to the sick poor of said town." To July, 1856, there had been treated in this dispensary 118,802 patients. The population of the city of Boston when the dispensary was opened was about 21,000 and had increased in 1856 to about 162,000. In 1860 the number of patients treated in the Boston Dispensary was 16,000. In the Massachusetts General Hospital Out-Patient Department, which had been open fourteen years, the number for 1860 was 4133, making 20,133 the total number treated in the Boston and Massachusetts General Hospital Dispensaries. The population of the

¹ Read before the Boston Society for Medical Improvement and before the Suffolk District Medical Society.

city at this time, 1860, was 177,840, so that there was one free patient to every eight and eight tenths of the population. During the next ten years, to 1870, the number of patients had more than doubled, being in 1870, at the Boston Dispensary, 25,928; at the Massachusetts General Hospital Dispensary, 8767; at the Boston City Hospital Dispensary, — which had been open six years. — 8899; total during the year 1870, 43,594; population of the city, 250,256, — one patient to every five and seven tenths of the population. The last reports of the three above-mentioned dispensaries give the Boston Dispensary 31,618; Massachusetts General Hospital Dispensary 20,566; Boston City Hospital Dispensary 10,309, and in addition to these, I find that during the last year, or in their last reports, the following dispensaries treated patients as follows: Homœopathic Hospital Dispensary 11,826; New England Hospital Dispensary 5212; Charlestown Dispensary 1103, making a total in the six dispensaries of 83,664. Population of the city about 360,000, and one patient to every four and three tenths of the population. In addition to the above dispensaries, Dr. Charles W. Williams in a report to the common council in March last, showed that there were fourteen other free dispensaries and hospitals in the city of Boston.

It has been impossible to get full reports from all of these hospitals and dispensaries. Is it unreasonable to estimate, with above facts, that more than one fourth of all the inhabitants of Boston receive free medical treatment?

The Boston Dispensary, previous to three years ago, admitted all who applied from the city, and furnished them with medicines, the only care taken being to prevent, if possible, non-residents from being treated. Three years since a man was employed to see every person who came for treatment, and an attempt was made to exclude non-residents and undeserving people, especially those, who, on inquiry, did not seem worthy or needing charity; this plan is still kept up with satisfactory results, as the number has fallen from 48,000, in 1877, to 31,618 at their last annual meeting. The superintendent believes that there is still a decided per cent. of those now treated who are unworthy, from their ability to pay for medical services. In June last the dispensary stopped giving medicines and charged ten cents for all prescriptions, except in cases of extreme poverty. Dr. Hastings says the result has been most satisfactory to the financial interests of the dispensary.

In the Massachusetts General Hospital Out-Patient Department, prior to 1877, there were placed in conspicuous places in each room of the department, a box with a card over it, inviting all those liberally inclined, who came there for treatment, to deposit in these boxes what little money they felt disposed to. The amount was never burdensome to the hospital, and never exceeded one hundred dollars a year. In 1877 a person was employed by the hospital to see every person who came for treatment, and asked them if they could afford to pay for medical treatment or not? If not, they were at once admitted after giving their name and address. Those who said they could pay, were asked to give according to their means, but less than twenty-five cents was not desired. Those who could pay a dollar and over were told not to come again after the first visit, as they were not of the class for whom the department was opened, but that they must seek advice outside, at the physicians' offices. This did not result in any

diminution of patients, and in a short time but very few could afford to pay over twenty-five cents. This system is not satisfactory and seems to act as a premium on deceiving. In November, 1877, a competent and experienced man was employed to investigate the condition of all who came to the department from Boston (old city) and South Boston. The result was as follows: number of visits, 386; number of deserving poor, 254; number giving wrong addresses, 79; number amply able to pay, 53. Of the fifty-three able to pay, nineteen owned their houses and other property in the city. The number giving wrong addresses were classed as undeserving, as is the custom in other cities and countries; with these and those able to pay we have one third of the whole number considered as undeserving applicants. The Massachusetts General Hospital Dispensary gives no medicines only in extreme and recommended cases.

The Boston City Hospital Dispensary, when first opened in 1864, furnished medicines and advice free to all residents of the city who applied. In 1869 (?) they stopped giving medicines except in the most extreme cases. They continue the same plan at present, and strive to exclude non-residents.

The classes of people who come for advice and treatment are nearly the same in the three mentioned dispensaries, and are as follows: (1) The needy and deserving poor; (2) those who come because they can be treated free, or nearly so; (3) those who come for free examination and opinion, to see if they are being treated correctly by their own physician; (4) those sent by their physician for free examination, to find out what really is the matter; (5) and last, patients brought by their physicians to get a free consultation. All of these classes visit the different dispensaries, but the last three classes are found more in abundance at the City Hospital and Massachusetts General Hospital dispensaries, and particularly so at the Massachusetts General Hospital, as *one third* of the patients there come from outside of the city, some even as far as forty miles away.

Let us for a short time see what has been done in similar conditions in England. The subject had received much attention prior to 1870; in that year at a meeting presided over by Sir William Fergusson, at which one hundred and fifty-six members of the medical profession were present, the following resolution was passed:—

"That this meeting is of opinion that there exists a great and increasing abuse of out-door relief at the various hospitals and dispensaries of the metropolis which urgently requires a remedy; and, that in the opinion of this meeting, the evils inseparable from the system of gratuitous medical relief administered at the out-door department of hospitals and in free dispensaries can be in great measure met by the establishment on a large scale of provident dispensaries throughout the kingdom and by improved administration of poor-law medical relief." Following this were meetings of various societies, and in April, 1875, the following memorial, of which I quote only a part, was made to the president and committee of council of the British Medical Association: "We, the undersigned, members of the British Medical Association, and others, beg most respectfully to request the committee of council to take into consideration the relation of the medical profession to the hospitals and free dispensaries throughout the kingdom. Your memorialists are convinced

that the manner in which these institutions, with some few exceptions, are at present conducted inflict a serious injury upon many most deserving members of our profession; while the indiscriminate (or almost indiscriminate) bestowal of gratuitous medical relief upon all applicants lowers the whole scale of our professional remuneration, it is far from being a real boon to the working classes themselves, and cannot fail in the long run to have a prejudicial influence upon the nation at large." At this time investigation was made as to the number receiving free medical aid in London, and it was found that one fourth of all the inhabitants were receiving free medical care. In a report of the Medical Committee of the Charity Organization Society I find the following: "It is the out-patient departments of hospitals that are most abused, and it is in these departments that your committee desire to see the indiscriminate relief at present given largely curtailed." They believed that this could be done without seriously affecting the supply of cases which are needful for clinical instruction at those hospitals which have medical schools attached to them and without limiting the true province of Christian charity.

"Under the present circumstances, when there are in the metropolis about one hundred and five hospitals and dispensaries to which the artisan or laborer can turn at any moment, and which may almost be said to be bidding against one another for his patronage, it is obvious that the inducements to providence and self-reliance are entirely taken away. This state of things your committee regard as a very great evil, and they believe that there is no one class of charities which is doing so much to pauperize the population, to undermine their independence and self-respect, and to discourage habits of providence as the medical charities. The committee are well aware of the great benefit that these institutions, if properly used, are capable of conferring upon the humbler ranks of our population. These benefits it would be difficult to exaggerate, but the committee deplore the almost indiscriminate relief which is given."

The outgrowth of this movement in England was the establishment of provident dispensaries, which I presume are more or less familiar to all of the society, and I will only briefly describe them. They do not care for those provided for by the poor-laws, or what we call paupers, but receive those of the lower middle class who, under the ordinary circumstances of life, can care for themselves, but are unable to obtain medical care when sickness comes. This class pay a small amount each month, say a shilling or twenty-five cents, and then when sick are cared for by the provident dispensary, who, on being notified of the case, send some of their physicians, who, in turn, are paid a small fee by the dispensary. Thus the patient has proper medical care, and the physician is not deprived of his entire fee. The result of these provident dispensaries has been most satisfactory, according to recent reports.

Should any change from the present course be deemed advisable, to my mind the first and most important step to be taken is the earnest, hearty, and complete coöperation of all the hospitals and dispensaries in some one distinct plan of work.

When the associated charities were first started I hoped we could find aid in this work from them, but further thought and examination induces me to believe that such aid as now organized would entail so much delay that suffering would follow.

The provident dispensaries are quite satisfactory in England, but from my imperfect knowledge of them my impression is that the detail and machinery connected with their working would render them impracticable here at present.

My last suggestion — and the one in which I have at present the most faith — is that of a competent and experienced paid inspector at each of the large dispensaries.

Such an officer should examine each and every person who applies for treatment, and should have power to exclude *all* except the deserving poor. He should personally examine each case, and after the hours of admission to the dispensary should devote the remainder of the time to visiting and examining into the condition of those who have been treated, in order to ascertain if they are as represented — poor and deserving people.

VITAL STATISTICS IN MASSACHUSETTS.

THE report on the births, marriages, and deaths in Massachusetts for 1879, made under the direction of the secretary of state, and edited by the secretary of the State Board of Health, Lunacy, and Charity with the assistance of Dr. D. F. Lincoln, has recently been presented. The summary of the facts, there stated, is as follows: —

POPULATION.

The rapid rate of increase of the population of the State from 1870 to 1875 (2.538 per cent. annually) was very largely due to immigration by land and sea, which reached its highest point in 1873. The succeeding depression, which began in 1873, was greatest in 1876, when there was a considerable emigration from the State, quite exceeding the immigration. The census of 1875 showed 191,561 more people in the State than in 1870; the natural increase by excess of births over deaths was 55,307, leaving 139,251 to be accounted for by immigration. There came to Boston by sea 130,205, and large numbers must have arrived by land, for many of the immigrants by water simply passed through the State. Those who came overland represent, to a certain extent, a floating population, who go to and from our cities and towns for employment. The extreme industrial depression of 1876 drove many of them from the State. It has seemed fair to suppose that the population did not increase at all during 1876, and only a few thousands in 1877; while the excess of births over deaths (9935), it is thought, would cover all the increase for 1878. An estimate of population consistent with a consideration of the vital statistics of the last five years, during which there has been a gradual annual decrease in the number of births from 43,996 to 40,295, and in deaths from 34,978 to 31,801; while the marriages fell, though not so uniformly, from 13,663 in 1875 to 12,893 in 1878, the increase to 13,802 in 1879 being an indication of the returning prosperity, and consequent increase of population since 1878. The estimate for 1879 has been placed at 1,717,200, the census of 1880 showing a population of 1,783,812.

BIRTHS, MARRIAGES, AND DEATHS.

There were recorded, in 1879, 40,295 births, 13,802 marriages, and 31,801 deaths; or 913 births *less* than in 1878, 909 marriages *more*, and 498 deaths *more*.

The excess of living births over deaths, as recorded, was 8494, indicating a natural increase in the population of 1441 less than in the previous year. The estimated population for the middle of the year 1879 (1,717,200) would give the following rates for that year:—

Births	23.46 to 1000 of population.
Marriages	8.04 " " " "
Deaths	18.52 " " " "
Excess of births over deaths	4.95 " " " "

The same assumed population would indicate one living child born to every 42 persons, one married in each 62, and one death in every 54 living.

In 1873, the year when the expansion following the war had reached its climax, and when the material prosperity of the people had attained its highest point, the number of marriages (16,137) was the greatest ever recorded in the State. In the succeeding year, naturally, the number of births (45,631) was the greatest; while still one year later the great comparative mortality of infants asserted itself by a larger number of total deaths than in any other year except 1872, when typhoid fever, measles, whooping-cough, and small-pox showed the greatest number of deaths in ten years; when scarlet fever was thirty per cent. more fatal than for the average of those years; and when the proportion of deaths from "zymotic" diseases to the total from all causes rose from twenty-three to nearly thirty-one per cent.

The progressively decreasing rate of increase of the population since 1860 is indicative probably, in part at least, of the fact that native Americans who remain in the State have smaller families now than those who formerly constituted its population.

BIRTHS.

During the years 1863-65, which were most influenced by the war, the birth-rate was low (24.08). In the years 1872-74 the rate was higher (28.28), when the expansion and extravagance following the war had reached their greatest height, and the influx of foreign laborers showed its greatest influence. There has been a considerable decline in our birth-rate in the twenty-nine years. The birth-rate for 1879 is 1.27 per 1000 less than for 1878, is less than that of any previous year, and is 3.65 per 1000 less than the average for twenty-nine years. During the sixteen years, 1864 to 1879, 53.6 per cent. of the births occurred during the latter half of the year, 46.4 per cent. in the first half; 23.02 per cent. in the first quarter, 23.31 in the second, 26.76 in the third, and 26.88 in the last. In 1879 as in 1878 and 1877, and for the aggregate of the previous twenty-five years, the general law of an excess of male over female births found expression in very nearly the same proportions (105+ to 100).

ILLEGITIMATE BIRTHS.

Seven hundred and sixteen births were recorded as illegitimate in the State during the year 1879, with an increasing population. During all the years of the recent industrial depression (1873-1878), the rate was unusually high, while the annual number of marriages declined in the same period very nearly one fourth. During the last seven years the reported number of illegitimate children born in the State has been much higher than ever before. In England, on the contrary, the foreign country most similar to ours in laws and social customs, there has been a progressive improve-

ment in that respect, the rate per 1000 of births having steadily diminished from 59 in 1867 to 47 in 1877, still remaining, however, three times as great as the average of our worst seven years, 1873-79.

MARRIAGES.

In 1879 the marriages recorded were 13,802, as compared with 12,893 in 1878, 12,758 in 1877, and 12,749 in 1876. The rate for these three previous years had been lower than at any other time since 1849. This decrease and the following increase are probably due in great part to fluctuations in the business prosperity of the country.

DEATHS.

From 1875 to 1878 there was an annual decrease in the number of deaths from 34,978 to 31,303; in 1879 there was an increase to 31,801. The death-rate fell from 21.17 per 1000 living in 1875 to 18.78 in 1878, and 18.52 in 1879. It is thought that few deaths escape registration now, and that under the new law the causes of death are more accurately stated than formerly, although there is still room for improvement in that respect.

The year 1879 has been one of average good health. No great epidemics have occurred. Of the five diseases noted in last year's report as having been prevalent and fatal to an unusual degree, measles has hardly prevailed at all in a fatal sense, whooping-cough and dysentery have diminished a good deal, diphtheria and croup somewhat. Scarletina, however, caused twice as many deaths as in 1878. Cholera infantum has steadily diminished for four years, and now the deaths are but little more than one half what they were in 1875. The number of deaths registered is a little larger than that for the past three years, but the death-rate is the lowest since 1869, and is 0.7 below the average of thirty-one years.

In 1879 the deaths of females exceeded the deaths of males by 514; 15,628 of the latter having been reported, and 16,142 of the former (unknown, 31). This proportion, 96.8 to 100, is chiefly due to the excess of females over males in the population (857,529 to 794,383, showing an excess of 63,146 in 1875; in 1865 the excess was 63,011, and in 1855 it was 32,301). In the three State-census years, 1855, 1865, and 1875, the ratio of females to males in the population was respectively 105.87, 110.46, and 107.95.

Of the total mortality, a trifle under one fifth was of infants under one year of age; a little over one third was of children under five. By comparing the last ten years' results, it is found that the infant proportion has been quite small for the past three years, a fact which is partially compensated by the smaller number of births in those years.

The deaths from "zymotic" diseases—those commonly considered as most indicative of the sanitary condition of a country—were in 1879 fewer in proportion to the others than in any of the other years; constitutional diseases were proportionately more fatal than the average; local diseases caused a very much greater mortality than in any other of the ten years; developmental diseases for the last four years have held a position much lower than the average; and violent deaths occupied the usual place.

Dysentery and whooping-cough were less fatal than usual; diphtheria and cholera infantum remain at the head of the list, as for the previous three years, but

with a considerable annual decrease since 1876; the mortality from measles was extremely low; typhoid fever, dysentery, measles, and cholera infantum showed very much the lowest death-rates obtaining in the decennial period, while the total deaths from the nine above-mentioned causes number 1313 less than the average for ten years, and only 23 more than in 1879, with a population, probably, at least 260,000 greater.

Of the principal *local diseases*, the increase in those of the central nervous system is striking. The increase in deaths from heart diseases is due probably in part to the same cause which increases nervous disorders, and in part to more accurate registration. The mortality from bronchitis and pneumonia, of the *pulmonary diseases*, has increased at a more rapid rate than the population.

The order of fatality of the principal twelve *causes of death* for the year is as follows: *Consumption* maintains, as usual, the first place. *Pneumonia*, as in 1874, 1875, and 1878, is second; in 1872, 1873, 1876, and 1877, it was third. *Diphtheria* maintains the same position as in the previous year, having declined from the second place in 1876 and 1877. *Heart Disease*—too often a vague term—stands fourth, although only sixth to eighth in the preceding seven years. *Old age* is fifth, and holds a tolerably steady relation to the diseases, being, since 1872, fourth or fifth. *Cholera infantum* has steadily declined from the second place in 1872 and 1873, the third in 1871 and 1875, the fourth in 1876 and 1877, fifth in 1878, to sixth in 1879. *Paralysis*, as in 1877 and 1878, occupies the somewhat high place of seventh. *Cancer*, too, has risen from the tenth, eleventh, and twelfth places, to the eighth. *Scarlet fever* is higher than last year; in 1874 it was fifth, in 1872 sixth, and in 1875 and 1876 seventh. *Cephalitis*, *bronchitis*, and *apoplexy* are rather high. The twelve causes of death constituted 59.38 per cent. of the total mortality of the State for the year.

Typhoid fever has shown the extraordinary decline from fourth place in 1872, sixth in 1873, seventh in 1874, eighth in 1875 and 1876, ninth in 1877 and 1878, to *thirteenth* in 1879. The other prominent causes of death appeared in the following order: Convulsions, 589; croup, 559; atrophy and debility, 574; tabes mesenterica, 511; infantile, premature, etc., 492; drowning and lost at sea, 461; hydrocephalus, 439; Bright's disease, 435; enteritis, 392; dropsy, 380; dysentery, 372; diarrhoea, 370; whooping-cough, 302; casualty, 300.

Considering the five principal causes of death for the various ages, diarrhoeal diseases of the hot months, diphtheria, pneumonia, scarlet fever, and obscure diseases, largely of the brain and intestines, characterize the first period. From five to ten the infectious diseases and obscure diseases of childhood occupy the most prominent places; pneumonia is less prominent. From ten to fifteen, consumption and typhoid fever follow diphtheria. From fifteen to twenty, consumption occupies the first place; typhoid fever is second; pneumonia is prominent from thirty upwards, and heart disease is next; cancer is in the list only from forty to sixty; paralysis and apoplexy gain more prominence from forty upwards; and, over seventy, the greatest portion die of old age.

In *infancy* diarrhoeal diseases caused nearly one seventh of the total mortality; diphtheria, nearly one tenth; pneumonia, as last year, a little over one fif-

teenth; scarlet fever, one eighteenth; and obscure diseases of which the prominent symptoms are referred to the central nervous system, not far from one twentieth. In *childhood*, diphtheria, croup, and scarlet fever caused more than one half of the whole number of deaths; pneumonia and brain diseases, next in order, were very much less fatal than in the previous period. From *ten to fifteen*, diphtheria is at the head of the list, without the great prominence it had from five to ten; consumption, typhoid fever, and scarlet fever are next; while brain diseases do not appear. From *fifteen to twenty*, consumption causes nearly one half of all the deaths; typhoid fever, heart disease, and pneumonia follow; diphtheria falls out of the list, and child-birth appears. Consumption appears as causing more than half the deaths from *twenty to thirty*, and thence upwards of less and less importance up to seventy, when old age is the first cause. From the same age (twenty), through life, pneumonia stands second, with a very uncommon prevalence and fatality for the year; heart disease and paralysis become more frequent; typhoid fever and child-birth reach their highest points between the ages of twenty and forty. The excess of mortality from pneumonia, diarrhoea, and contagious diseases in early life, the great fatality of typhoid fever from fifteen to thirty, and the high death-rate from consumption from youth to the age of fifty, are very striking.

Small-pox was most fatal in midwinter. Measles gradually increasing from October to July, the diminution apparently appearing about the time of closure of schools. Scarlet fever increases from September to March, and then declines. Diphtheria is least fatal in summer, most so in early winter; the possibly kindred disease, croup, following the same law, but more irregularly. Typhoid fever increases suddenly from July to August, September, and October, when the decline continues to June. Dysentery, like cholera infantum, prevails in hot weather. The highest mortality from consumption is in March; the lowest, in the pleasant month of June. Pneumonia increases steadily from August to March, and then declines.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF CHILDREN.¹

BY D. H. HAYDEN, M. D.

ON THE MANAGEMENT OF INFANTILE ECZEMA.

DR. L. DUNCAN BULKLEY read a paper upon this subject at the annual meeting of the Medical Society of the State of New York, held February 3, 4, and 5, 1880,² including under this head all cases occurring in children of five years old and under, and starts with the proposition that this disease invariably signifies an error of some kind which medical thought should avert, and that it is, like any other aberration of health, a condition of affairs which medical skill should remove! In nursing children the cause of the trouble will commonly be found in the mother. She should never, while nursing, be allowed to take any fermented liquors, and the quantity of tea drunk often needs cutting down. The free use of milk is regarded as the best food upon which the mother may form milk. It is necessary to be on one's guard that the breast milk

¹ Concluded from page 61.

² Transactions for 1880.

is not too weak to sustain the child properly, in order to promptly remedy this should such be the case. When necessary to supplement the milk the author continually gives cod-liver oil, or, where it can be had, cream. The oil may be administered by intunction, using either cod-liver oil, linseed oil, or sweet-almond oil. The numerous errors connected with artificial feeding require attention if we really desire to effect a permanent removal of the disease.

For the constipation which often accompanies infantile eczema the author uses lactopeptine in doses sufficient to produce the desired effect, given two or three times daily, or after each meal, suspended in orange-flower water or dry on the tongue. In the beginning of a case nothing suits so well, for the robust and ruddy-faced child, to unload the bowels and make an impression on the eczema, as calomel. For this purpose, for a child under one year of age the dose employed is one grain rubbed up with a little sugar or bicarbonate of sodium. The dose should be increased by half a grain for each additional year of life. The powder may be repeated every other day, if necessary, given, preferably, in the morning. It need often be given only once or twice a week, or even only as occasion may demand. Any irregularity of the bowels, and especially any tendency to pulmonary congestion, should at once be treated by one of these powders. If the tendency to constipation is not thus overcome the diet must be modified to suit the individual case. Sometimes to avoid starchy food animal food is given in too large proportions.

In the medical treatment alkalies play a prominent part, and are well borne by young children. In case of nursing infants the author generally gives the mother fifteen grains of acetate of potash with nuxvomica and a bitter infusion three times daily after eating. He is very fond of using with the milk Vichy water, using it freely, and when the bowels are constipated he has a siphon of Kissingen water and one of the Vichy provided, using them conjointly in sufficient doses. Children also do well with a few drops of liquor potassæ, — two to five drops to the tumblerful, according to the age. Where there is a good deal of restlessness at night, and the skin is rather dry and hard, he gives the acetate of potassium three or four times daily, in doses of one to five grains in a teaspoonful of the liquor ammoniæ acetatis, and if much arterial excitement be present he adds a drop or a part of a drop of the tincture of aconite.

Arsenic acts well in these cases given to a child one year old in one-drop doses three times a day. Any gradual increasing of the dose is not recommended. In combination with the other measures arsenic should seldom if ever be neglected in the treatment of eczema. After the first year of life the author uses this considerably in conjunction with wine of iron. The French arsenical mineral water, the eau de Bourbonne, is often very serviceable, and children may take a small wineglassful alone or with the milk.

Besides alkalies, cod-liver oil, and arsenic, iron must never be forgotten. Wine of iron, the ammonio-citrate, tartrate of iron and potash, and dialyzed iron are especially applicable. Rabuteau's tasteless syrup of iron is also valuable, and very acceptable to children; also the syrup of the hypophosphites of lime, soda, and iron. The syrup of the iodide the author does not use so much as some do, for he has seen it very ineffectually employed by others. In dispensary

practice very many children with eczema receive the standard rhubarb and soda mixture (one grain of each in a teaspoonful of peppermint water). This well-tried combination is too much neglected in private practice for the substitution of more agreeable and less serviceable remedies. The older French writers speak very well of the extract or tincture of viola tricolor, and this remedy has been lately revived. The author has no experience to offer on the subject. The exact indications for these various remedies are only to be learned by a careful study of each *patient*, who, it must be borne in mind, we are to treat rather than the *disease*. There are, however, tolerably clear lines of distinction between classes of cases which call for an alkaline and depurative treatment and those where cod-liver oil and more powerful tonics are at once demanded.

The remainder of the paper is taken up with a careful consideration of the local treatment, and "he is poorly qualified," the author writes, "to treat infantile eczema who knows only oxide of zinc ointment, and that as directed to be made in the Pharmacopœia." The official ointment often irritates the skin. Cold cream is a better vehicle than lard, — better even than unguentum petrolei or cosmoline; but this latter, as well as glycerite of starch, is preferable to lard. The proportion of oxide of zinc (one in six) is often too strong, and the author seldom employs it stronger than one in eight, and far more often one in sixteen. The tincture of benzoin is also omitted by him, as it sometimes irritates.

The old-fashioned tar ointment is a remedy that has fallen into unmerited neglect. As directed in the Pharmacopœia (equal parts of tar and suet) it is far too strong, but tar, diluted with three times its quantity of cold cream, and oxide of zinc added in the proportion of half a drachm to one drachm in the ounce, forms one of the most valuable antipruritics in eczema. Thus made it can be applied to a very young child with the happiest effects. Subnitrate of bismuth forms a very good ointment in the strength of half a drachm or a drachm to the ounce. Tannin, also, acts very happily where there is a dry, red, and somewhat scaly surface; likewise a weak precipitate ointment.

Too frequent washing does harm, and it is generally preferable that the baby should be wiped off as much as cleanliness demands. When baths are used medicated ones are recommended, the author employing a mixture of carbonate of potash, carbonate of soda, and powdered borax, equal parts. Of this mixture two to four teaspoonfuls should be employed for each gallon of water with about half that amount of starch. Lycopodium should be used afterwards over the whole surface if there is a tendency to the development of acute papular eczema. When the parts are at all acutely involved they should not be washed oftener than once or twice a week. Cod-liver oil is a valuable agent for penetrating and removing crusts when thick. Poultices should never be used except where the crusts are obstinate, and then only for a night or two, removing the crusts in the morning and immediately reapplying the ointment.

When the eczema has lost its very acute elements we may, as in the adult, resort to stimulating applications. For this purpose Hebra's compound tincture of green soap is of great value, composed of equal parts of oil of cade, green soap, and alcohol. It can be diluted with water at the time of using if too

strong. The surface is to be quickly but firmly rubbed with a cloth dampened in it, then dried off, and the appropriate ointment immediately applied. When this is used it is better to have the ointment laid on on a rag, as the extra friction might be too much. This is an excellent antipruritic, and is preferred to that used by many consisting of zinc ointment rubbed up with oil of cade. The addition to each ounce of one drachm of the tincture of camphor or a few grains of powdered camphor often increases its antipruritic properties. Stronger ointments are sometimes called for, but the danger is rather that they will be too strong than too weak. In cases of localized thickened patches the author uses a good deal the unguentum hydrargyri rubri oxydi diluted with three times its quantity of cold cream. Even thus diluted he has repeatedly seen this to be too irritating, exciting fresh papular eruptions. Citrine ointment, diluted three, four, or more times, will also be well borne where the patches are chronic and infiltrated.

The author desires to show in his paper that "oxide of zinc ointment and arsenic are not the only weapons to be employed against this very frequent and distressing disease, and that as it depends upon many causes the measures for its relief must be multiform." It is also desired to call attention to its frequency, and to the neglect with which it is so often regarded by the physician, and consequently by the laity; likewise that its cure should be and will be, if properly accomplished, followed by or accompanied by the improvement in health of the patient, and that therefore there is absolutely no danger in curing infantile eczema.

PERINEPHRITIS IN CHILDREN.

Dr. V. P. Gibney, of New York, reports¹ fifteen cases of this disease in children: these cases are a continuation of nine in a paper in the *American Journal of Obstetrics and Diseases of Women and Children*, April, 1876, of three in another paper in the *American Journal of the Medical Sciences* for April 1877, and of one in the same journal for October, 1878, thus completing a total of twenty-eight.

The following remarks are appended to the clinical records of the cases:—

In typical cases the disease generally begins with a rigor or two, febrile exacerbations more or less severe, according to the acuteness of the attack, lancinating pains in lumbar region, loss of appetite, and general indisposition. In fact, the invasion does not differ materially from that of other acute inflammatory lesions, unless, perhaps, the pain be more localized; and if the child be very young the locality of the pain is not discovered. Constipation is always present. Very soon we have preternatural immobility of the spine, a stooping forward, with elevation of the shoulders. After a week or ten days spasm of the psoas muscle occurs, and the gait becomes characteristic of that so commonly regarded as the second stage of hip-joint disease. The urine is of high specific gravity, and is loaded with urates. The tumefaction appears and the pain becomes excruciating. If an exit be given to the pus a speedy recovery follows; if this be delayed, and the contents of the sac be really pus, it burrows along the cellular tissue, producing an immense abscess. A spontaneous opening is effected, and the convalescence is protracted. If, on the other hand, the inflammatory process has not

resulted in suppuration the contents are most likely serum, and resolution is effected.

In twenty-seven of the twenty-eight cases the disease ran its course in an average period of about three and one half months. The analysis gives: two cases terminating in one month, three in six weeks, eight in two months, six in three months, two in four months, three in five months, two in six months, one in one year, while one seemed to extend over a period of two and one half years.

In sixteen there was suppuration more or less extensive, while in twelve there was no suppuration at all. We see, then, that nearly one half the entire number underwent resolution.

As to the constitutional disturbance produced, in thirteen cases this was very great, and at times very alarming, in eight it was moderate only, and in six was very slight. The complications were few. In one there was an alarming hæmorrhage, easily controlled, however; in one there was a cellulitis of the thigh, or rather a periarthrititis of the knee; one had a femoral abscess, one a subscapular abscess, one a nephritis, and one a pyelitis. In several there was incontinence of urine, and at times painful micturition; yet these are rather symptoms than complications.

In nineteen no exciting cause could be found. In eight the cause was a contusion, a strain, or a fall, while in one a nephritis seemed to be the starting-point. It is the author's opinion that perinephritic inflammation is induced as is inflammation in most other localities, namely, by excesses of heat or cold.

The ages of the patients varied between one and one half years and fifteen. Five were under three years of age, twelve between three and six, eight between six and ten, and three between ten and fifteen.

The sexes were about equally represented; the lesion was on the right side in fourteen cases.

The treatment employed varied a little, yet was chiefly expectant. No specifics have been discovered, and the author is fully convinced that in the management of the cases lay the secret of success. One ran the entire course without medical or surgical aid; and the result is one that any medical man would be proud to get! Four were treated on the purely expectant plan,—no surgical interference, nothing to promote resolution. The general condition of the patient was regarded as the one essential feature demanding attention. Two of these terminated in resolution, two in suppuration, all making perfect recoveries.

The hot-water douche was employed in five cases, and two of these went on to suppuration despite the douche, while three made a speedy recovery, terminating by resolution. Hot fomentations were used in four instances, with good results in two; that is, two got well without suppuration, and the other two got well after abscess. In five cases blistering and subsequent poulticing constituted the treatment, with four recoveries without any suppuration.

An early incision was made in three, a late one in eleven, while in two cases the abscess opened spontaneously. In one instance only was there any delay in recovery and any annoying complication. All, with a single exception, made perfect recoveries, there being some lameness left behind in the one case excepted.

The author in concluding insists on a careful examination, several times if need be, a history obtained without bias, an unalterable conviction that hip disease is from the beginning a chronic and a slowly

¹ Chicago Medical Journal and Examiner, June, 1880.

progressing disease, these points being absolutely essential in making diagnosis. In this connection the author expresses his firm belief that ninety per cent. — yea, a much larger per cent. than ninety — of the cases of hip disease reported as cured without lameness or deformity, cured completely, are not and never have been cases of hip disease, but more likely cases of perinephritis, of perityphilitis, of peri-arthritis, of primary traumatic periostitis, of the various neuroses of the hip, of subacute rheumatism about the hip, or of acute primary synovitis of the hip, all of which affections are insignificant as compared with that terrible malady, with the advanced stages of which we are all so painfully familiar, despite the great improvements in orthopaedic surgery.

At the end of this article is appended a list of the large bulk of authors who have written on the subject of perinephritis.

Hospital Practice and Clinical Memoranda.

CONTINUED TOLERATION OF FOREIGN BODIES WITHIN THE EYE-BALL FOR FIFTEEN AND TWENTY-TWO YEARS.

BY HENRY W. WILLIAMS, A. M., M. D.,

Professor of Ophthalmology in Harvard University.

THE following exceptional and rare cases, which came under my care during the past month, are worthy of record among the instances showing that foreign bodies may sometimes be retained at the fundus of the eye for a long period without giving rise to active symptoms.

CASE I. December 15, 1880, I saw in another city Mr. —, aged thirty. He had consulted me fifteen years before on account of an injury from a bit of gun-cap, which had penetrated his left eye some short time previously, passing through the cornea and iris, and probably through the margin of the lens, to lodge at the deeper parts of the eye. A cicatrix in the cornea near its centre, and a hole through the iris towards its inner part, indicated the direction which the foreign body had taken; but it could not be seen on account of haziness of the crystalline lens. As the eye was then quiet, and free from injection and sensitiveness to touch, I advised no immediate interference; but that the eye should be carefully watched and shown to me at once in case of the manifestation of any active symptoms.

Two years since he came to see me with slight vesication of the cornea of this eye, which yielded readily to treatment.

At present the eye has no perception of light. The pupil is of normal size, and shows behind its lower two thirds a shrunken, cataractous lens; the upper third of its field being clear. Dilatation by atropia does not enable the foreign body to be seen. The perforation in the iris behind the corneal scar is still visible, as when the eye was first seen, fifteen years previously. Below the cornea there was a large bulging of the sclera, which pushed the lower lid outward. The projection had a very dark color, was not translucent when examined with oblique illumination, and the conjunctival vessels over its surface were much enlarged, so that it had been thought possible that a melanotic or other intra-ocular tumor existed. The mass,

however, was easily indented by pressure with a probe; there was no general injection of the globe or vascularity or tenderness of the ciliary region; no tension of the eyeball, and no pain. I therefore regarded the change as a staphylomatous thinning of the sclera.

The case required an operation for the relief of the steadily increasing deformity; the large extent of the staphyloma and the undoubted presence of a foreign body indicating enucleation rather than excision of a part of the globe. After the preliminary dissecting up of the conjunctiva to spare as much of this as possible, the thinned sclera gave way during the division of the recti-muscles, allowing escape of the vitreous, which had become completely fluid; and in the removal of the collapsed globe the bit of copper was probably sponged away with the blood. It was not within the shrunken lens, nor was it found encapsulated at the fundus, as is sometimes the case.

CASE II. Two weeks after the above, I saw J. H. W., aged thirty, whose right eye was penetrated by a bit of gun-cap exploded near him by his brother, twenty-two years since, when he was only eight years old. The eye soon recovered, and remained quiet, with, as he says, considerable vision, until last spring, when he began to have pain and injection of the eye, which continued four months. These symptoms subsided, and he had vision as before until within six weeks, since which time he has had agonizing pain in the circumorbital regions. I found the globe much injected and very sensitive to touch. There was a linear scar near the lower border of the cornea, and a little to the temporal side of this cicatrix there was a hole through the iris, not far from its outer edge. A yellowish reflex, deep in the eye, could be seen through the pupil. No perception of light.

Optico-ciliary neurotomy might have been done, with hope of relief and of the prevention of sympathetic inflammation of the other eye, if the patient could have remained under observation; but as he was obliged to return immediately to his home in Maine, enucleation was performed. The foreign body was found at the fundus, near the antero-posterior axis of the globe, enveloped in the yellowish mass of limited extent, which had previously been seen through the pupil, a process of suppurative softening having evidently begun in the inclosing material. The relief from pain was immediate, and the patient returned home two days later.

15 ARLINGTON STREET, January 13, 1881.

A CASE OF CONGENITAL TOTAL COLOR-BLINDNESS.¹

BY HUGO MAGNUS, M. D., BRESLAU.

EXTENSIVE as has already become the literature of color-blindness, yet cases of entire absence of the color-sense are extremely rare. Hence the value of any such when carefully observed and recorded.

Miss C. S., a lady teacher thirty-eight years old, not a Jewess, came to me during the past year to have her

¹ Centralblatt f. Augenheilkunde, December, 1880. Translated for the JOURNAL by Dr. B. Joy Jeffries. Two very interesting cases of red blindness in one eye from Dr. Hippel and Professor Holmgren, and a case of monocular violet blindness from the latter will be presented to the readers of the JOURNAL, whom they will interest, as also scientists, in reference to the Young-Helmholtz theory of color-perception. A case of monocular total color blindness is reported in the JOURNAL, May 6, 1880.

color-perception examined. She is perfectly healthy, and has not the slightest symptom of hysteria. Every bodily function is normal, except the sense of color, which has always been wanting. She comes of a large family in which color-blindness is prevalent. Of eight children, three — two brothers and herself — were color-blind. As to the precise character of these two brothers' defect the lady cannot give exact data. She thinks one brother, who has meantime died, was like herself totally color-blind. She is convinced of his defect from practicing with him, comparing sensations, testing with colors, etc. This was also confirmed by the several professors of the university whose lectures he attended. Such proof is not of course absolute, but is of value in reference to our case. The parents were certainly *not* color-blind, and *not* blood relatives. The grandparents also were normal-eyed as far as I can find out through my patient.

The lady herself is very confident that she has been totally color-blind from earliest childhood. She cannot recall having seen colors, and cannot associate the loss of color-perception with any serious disease. The fact of the two elder brothers being color-blind seems to have induced the parents to have had those coming after carefully tested, leading to the very early discovery of the patient's defect.

From childhood she has had great intolerance of light. She sees better towards dark, being quite blinded by full sunlight. That this is not due to scrofula is proved by the patient's always having been as she now is. She has, moreover, never had any periodic trouble of the eyes. She suffers still in daylight when it is strong, and wears a colored glass for protection till dark comes. Her deceased brother suffered in the same way.

The lady's visual power is poor: right eye $\frac{1}{2}$, left $\frac{1}{3}$, not improved by any glass. She is myopic dioptries 2.50 (concave glass of 15 inches' focus) in each eye. Visual field normal. With Förster's photometer she requires an illuminating surface of 2.33 mm. square. There is then slight nystagmus. The ophthalmoscope reveals not the slightest pathological change in either eye, but a perfectly normal fundus. Her hair is dark brown; the iris grayish-blue, and reacts normally. Distance between the pupils 56 mm.

As to subjective sensations, the patient says she cannot see any color. Colors vary to her only in being lighter or darker. In sorting bundles of variously-colored worsteds she is guided only by similarity in shade. The whole world appears to her but different shades of gray. The spectrum (in reference to which we shall speak again further on) she describes as simply an illumination consisting of varying degrees of brightness. From one point of greatest brightness the light decreases to each side, so that the impression she has of the spectrum is exactly that of a penciled drawing shaded out darker and darker each side of a bright line. From most careful tests and examination I am convinced that the patient sees no one color from which she can get any sensation other than that of simply more or less light. In Becker's case of monocular total color-blindness¹ *brown* appeared to the person as a color. Our patient has no one color-impression, each and all appearing to her as gray only. Her visual sense is but the feeling of light and darkness and the intermediate gradations.

The various objective methods employed to test the

subjective sensations confirmed the diagnosis of total color-blindness. They were as follows: Holmgren's *Test I., with the light green worsted*. To this was matched bright red, bright yellow, bright blue, gray, bright bluish green.

Test II., with the purple (magenta). As like it were matched various shades of brown and olive-green.

Test III., with bright red. Brown and purple were placed as identical.

Test with blue. To this were matched as identical green, yellow, and pale purple.

Test with yellow. As identical were laid out blue, gray, and purple.

In sorting the worsteds the patient repeatedly asserted that she was guided in her choice of this or that skein simply by the relative brightness of the individual bundle as compared with the test bundle selected.

Examined by the spectroscope, the lady declared she had only a sensation of light, as was previously noted. She said she saw an illuminated band in which a portion was particularly bright, the light shading off from here to either side, more rapidly towards the red end of the spectrum than towards the violet. This shading away from the brightest portion of the spectrum was to her so even and gradual as to recall to her the most careful shading of a pencil drawing. She could not get from the large collection of worsteds the special spectral impression, saying that the gradations in the spectrum were too *gradual* to be matched by the worsteds. The best description she could give of the impression the spectrum made on her was that of a very carefully shaded pencil or chalk drawing from white to black.

The spectrum was not shortened to her at either end, but recognized as far each way as by the normal eye. The greatest brightness was for each eye in the sodium line. These two important points, namely, no shortening and place of greatest brightness, I determined by repeated tests at various times on different days, and always with the same result.

The examination of the individual colors of the spectrum resulted the same, namely, that each gave simply a greater or less impression of light.

Stillings' shadows were all gray to her. No matter what colored glass I used she saw only a lighter or darker shadow. The same with Weber's tissue-paper test.

Stillings' cards, the first edition of which only I had at hand, were not immediately read, but when more carefully examined deciphered with some hesitation.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

DECEMBER 11, 1880. The meeting was called to order by Dr. HODGES at 7.45 P. M.; twenty-six members present.

Dr. F. H. HOOPER reported two cases of subcapsular abscess, attended in one instance by perforation of the lung. The paper was reserved for publication.

Dr. F. C. SHATTUCK said that he had seen both cases, and had been interested in them. When he was told of the first case he thought it one of latent empyæma which had burst through the chest wall as

¹ Translated in this journal, May 6, 1880, page 441.

well as into the lung; an examination had shown that this was not so, but that it really was an abscess which had opened into the lung. He did not agree with Dr. Hooper in thinking that there was a cavity in the lung, but thought rather there was a fistulous tract communicating with a primary bronchus.

Dr. F. L. KNIGHT said that he had never seen such a case. He had been much interested in the cases of peripleuritic abscess reported by Bartels, and thought that Dr. Hooper's might be classed with these, although he admitted that the reader's explanation was a fair one. He thought it a little singular that such cases had not been more frequently reported.

Dr. MORRILL spoke of a case in a young girl ill with phthisis, where a cavity in the lung had opened externally through the chest wall. It was not a case of empyema.

Dr. BLODGETT asked if the abscess in Dr. Hooper's case might not have originated from some necrosis of the under surface of the scapula. He thought that in necrosis the abscess might form without any symptoms acute enough to call attention to it.

Dr. HOOPER said that he was not aware that necrosis could take place without more acute symptoms than were present in this case.

Dr. HODGES said that subscapular abscess was of frequent occurrence in horses, probably of traumatic origin due to sprains, and thought that the same thing might be caused in a child by wrenching the arm. In the Polish case the cause was attributed to carrying a heavy weight.

Dr. HOOPER then presented a larynx from a little girl one year and nine months old. She had had measles six weeks ago, since which time she had been ailing, having a constant but not severe cough. When called to see her a week ago, he found her with a cough of a decidedly "crowing" character and "crowing" breathing. The pharynx was healthy, and there were no glandular enlargements. The child was pale, but was playing on the floor. She was so much improved on the second day that he discontinued his visits, but in a few days was summoned again, to find her in about the same condition as at his first visit, with perhaps the laryngeal symptoms more pronounced. The respiration was crowing and quick, with a shrill cough. Yesterday symptoms of laryngeal stenosis were still more marked, and the condition was such that tracheotomy was performed. After this the breathing was easier, and she slept until two o'clock this morning, when she began to cough and grew cold. Considerable mucus was coughed up through the tube. She died at six o'clock.

Before opening the larynx it was seen to be completely occluded by the swelling and exudation. On section, the mucous membrane was found red and roughened, the aryepiglottic folds were swollen, and an exudation could be seen in places. The trachea was healthy. The pharynx had been free from exudation throughout the trouble, and there were no glandular enlargements.

Dr. CORNELL reported a severe case of cholemia in a young woman twenty-four years of age, which had yielded to a mixture of valerian with Hoffman's anodyne, after treatment with various other remedies had failed.

JANUARY 8, 1881. Forty-one members present. Dr. R. M. HODGES in the chair. Dr. J. H. WHITE-

TEMORE read a paper entitled, Are Free Dispensaries, Abused? ¹

In the discussion which followed, Dr. HICKS and Dr. CORNELL called attention to the great extent of the evil, and instanced a number of cases in illustration.

Dr. STREET said that he once had the misfortune to have a dispensary district, and had had excellent opportunities to know the extent of the abuse of medical charities; if there were any unconvinced he would cite a few cases out of many which had come to his notice. He thought that this wholesale medical aid breeds indolence, poverty, and crime, and demoralizes the community beyond imagination; that the Massachusetts General Hospital makes a great mistake in charging twenty-five cents, thereby leading people to understand that such a fee is all physicians think their services are worth, and that they are paying for what they receive. According to the statistics quoted in the paper just read, it would appear as though the day was approaching when everybody would avail themselves of the privilege of free treatment. The Boston Dispensary had improved their finances by charging ten cents for medicine furnished. This helps the apothecaries, not the doctors. Dr. Street proposed a plan which, in lack of better, might be of service. "I would have cards giving the name, age, residence, and occupation of the person applying for medical charity, and stating that said person is worthy of gratuitous medical aid for a period of sixty days to six months, the time being filled in by the physician giving the card; because a patient, although not now able to pay, at a future time may be; under this system I would have no one treated at the out-patient department of any hospital or dispensary unless a card is presented; when given the party should understand that he can receive treatment at any hospital that he prefers; when presented I would have such hospital stamp it; it could not then be used at another. In that way an interesting case would not be lost by going to another institution. These cards I would have distributed by physicians only, and no one able to pay would ask his doctor to give him a card for free treatment; neither would any suffer for the whole territory of the city is covered by the district physicians of the Dispensary, and if any family is not acquainted with a doctor, they can call on these physicians for a card."

Dr. E. W. CUSHING stated that he saw grave objections to the plan proposed of restricting the advantages of public medical charities to those bringing cards from members of the Massachusetts Medical Society.

It was doubtful whether the trustees of the City Hospital, representing the city government and the public, would ever consent to such an arrangement, so that it would either be necessary to invite coöperation in the use of cards on the part of all "other physicians," or to urge the medical staff of the City Hospital to enter on a course of opposition to the public authorities which might develop into something very like a medical strike. It is not likely that either alternative will be found judicious.

Dr. Cushing was of opinion that if the clinics were much restricted it would proportionately increase the number of those who employ physicians and never pay them, a large band of persons, who can never be made to pay until physicians in general are much stricter in demanding and receiving their fee when their service is rendered.

¹ Vide page 77 of the Journal.

Many of the most interesting hospital out-patients come from a distance, and cannot get at home the special treatment required, while they are of value for purposes of special study and instruction.

The real difficulty lies deeper, and consists in the fact that twice as many young men enter medicine in the city as can reasonably expect to succeed therein. Nothing will ever limit the number of physicians except the bitter suffering, from hope deferred and real pecuniary want, inevitable to the struggle for existence.

If any sweeping restrictions are made in our medical charities, in the face of medical custom everywhere, it can only be accomplished with difficulty and after much discussion; then it will be represented that Boston is a paradise for doctors, because the clinics do not spoil business, and enough more physicians will come here to bring incomes back to starvation limits. We shall have lost our reputation as an extraordinarily charitable and humane profession, we shall have interfered gravely with the study of the specialties in Boston, and greatly injured the school — *cui bono?* — in order that a few more physicians may struggle along together, gracefully hiding by urbanity and professional etiquette the grim difficulties of getting a living out of their profession.

DR. BARNES thought there could be no conflict between the homœopathic and regular schools, as we were concerned merely in the abuse of our own institutions, and in its prevention.

DR. KINNEAR said that the Associated Charities had registered 20,000 of the very poor in the city, and that the card system had been used with success.

DR. PARKS approved of Dr. Street's plan, and thought the objections to it not serious; that the abuse of medical charity told most severely on the younger men in the profession, and must be fought by them; that the root of the evil was that physicians did not conduct their practice on business principles, — they were too delicate to insist on their pay. He had made a careful study of this abuse, while doing district dispensary work, and had come to the conclusion that at least one third of such applicants were unworthy.

DR. PRINCE thought the card system would merely shift the responsibility to the district physicians, as they could not be expected to give the necessary time to form an intelligent decision.

DR. CUSHING stated that agents of the Associated Charities existed in nearly all the wards, and would be glad to coöperate in remedying this abuse.

DR. FARLOW said that the apothecary had been instanced as always a gainer; he wished to call attention to the undertaker. It was often true that a family who could not pay the doctor could pay the undertaker.

DR. C. M. GREEN spoke of a number of cases of abuse of medical charity which he had seen.

DR. BIGELOW said it was easier to see the evil now under discussion than to devise its remedy. It is not limited to this country, nor is it new. The main alleged difficulty is that the medical profession is defrauded of fees by persons who, being able to pay for medical advice, procure it gratuitously from institutions under a false pretense of poverty. The argument that such institutions considerably encourage pauperism had little weight with him. Pauperism may be increased by the indiscriminate giving away of money, but hardly of medical advice. If anything justifies promiscuous charity it is sickness. Still the injustice done to the medical profession may be, upon

a small scale, a real one. The principal remedy suggested to-night is that cards or certificates should be furnished to the worthy poor by physicians. A fatal objection to this plan is that the judge of pauperism in such a case should be a disinterested party, and that a physician may not be so. Another remedy proposed to exclude the doubtful class is a fee exacted from all who can pay. This has been tried by the Massachusetts General Hospital, and has been found to make such patients feel that they have a right to have advice at a minimum price. The experiment is about to be abandoned. A certificate of worthiness from a central board of charity is not free from objection. In the emergency of illness it could not be waited for, nor could the judgment of such a board be permanently relied on for the proper distribution of cases to different institutions. This opens another consideration: the rights of medical men who give their time to public institutions. They treat with equal care all applicants, but justly prefer cases of scientific interest. Such cases should not in any way be sifted off or withheld from a general service attended by them. This consideration is also of the first importance for the education of the student, in behalf of whom a small sacrifice may be fairly asked of physicians. Dr. Bigelow strongly favored the plan of Dr. Whittemore, the able superintendent of the Massachusetts General Hospital, of appointing an efficient officer at a good salary to devote his whole time to sifting applicants. But the existence of friction in admission to one out-patient department would only drive patients to another. There is no remedy for the existing evil here without the coöperation of all our local institutions. It should be distinctly recognized that the present honest effort to correct an alleged injustice to the medical profession comes in the first instance and spontaneously from the trustees of the Massachusetts General Hospital, but Dr. Bigelow could not learn that other institutions in this city were prepared to coöperate in this or in fact in any movement to diminish the size of their out-patient departments.

Recent Literature.

Practical Histology and Pathology. By HENEAGE GIBBES, M. B. Philadelphia: Presley Blakiston. 1881.

The author of this little work has endeavored to give in a small space a set of practical rules to guide those wishing to learn to work with the microscope. He does not aim at originality, but at giving the results of his experience with various methods. Most workers are apt to have their favorite modes of hardening, staining, mounting, etc., and to make little use of others that may be equally good. This is probably the reason that in this work many points are not touched on. The part which has interested us most, and we imagine the author, also, is that devoted to staining. Mr. Gibbes mentions many aliline colors that are but little used, and gives directions for double and treble staining. This is a branch which offers a wide field for study, and this book will be a useful guide to beginners in it. Our own experience has been that most methods of double staining are very unreliable, and the results transient. Any one who will overcome these difficulties will do a great service to histology. We hope Mr. Gibbes's studies will be carried further both by himself and other observers.

T. D.

Medical and Surgical Journal.

THURSDAY, JANUARY 27, 1881.

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No. 4 PARK STREET, BOSTON, MASS.

THE HARVARD MEDICAL SCHOOL DURING 1879-80.

THE annual report of the president and treasurer of Harvard University for 1879-80, which embraces reports from the officers of the different departments of the university, contains interesting information concerning the Medical School.

The whole number of students in attendance during the year was two hundred and sixty-three; during the first term, two hundred and fifty-six; during the second, two hundred and thirty-nine. Of these, one hundred and twenty-one had a literary or scientific degree. There were seventy-four applicants for the degree of Doctor of Medicine, of whom ten withdrew their names, and nineteen were rejected. Forty-five passed the examinations and received their degrees.

Since their establishment in 1877, English and any one of the five subjects, French, German, algebra, plane geometry, and botany, have been added to the two subjects, Latin and physics, formerly required in the examinations for admission.

The results of these examinations since 1877 are given by Dr. Ellis, dean of the medical faculty, in the following table:—

	1877.				1878.				1879.				1880.			
	June.		Sept.		June.		Sept.		June.		Sept.		June.		Sept.	
	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.
Physics.	13	5	25	3	22	4	41	18	23	5	24	7	15	3	24	8
Latin.	9	2	16	5	12	2	22	10	10	3	11	3	8	4	11	6
French.	4	1	8	1	8	1	18	0	13	5	9	0	7	3	10	3
German.	0	0	1	1	2	1	2	2	0	0	2	0	0	0	2	0
Total rejected.	2		1		4		5		2		3		3		5	

In commenting on the effects of these preliminary examinations the president of the university says:—

It is notorious that medical students have been, as a rule, a rougher class of young men than other professional students of similar age. In this university, until the reformation of the school in 1870-71, the medical students were noticeably inferior in bearing, manners, and discipline to the students of other departments; they are now indistinguishable from other students. A corresponding change in the medical profession at large would be effected in twenty years, if all the important medical schools of the country should institute a reasonable examination for admission.

In regard to the four years' course of study in preparation for the degree,—a plan adopted by the medical faculty during the past year,—the course being recommended to all students, though not prescribed, the president remarks: "This measure has grave inconveniences; for it makes it necessary to maintain in the school a three years' course and a four years' course at the same time. The four years' course is not made by simply adding another year to the three years' course, but differs from the three years' course in important respects from the beginning of the third year, and differs somewhat even in the second year. Two full years from October, 1880, must therefore elapse before there can be a proper fourth year's class, composed of persons who have planned from the beginning of the second year to remain four years in the school. Again, so long as it is possible to get the degree in three years, some students will crowd their studies into that period, in spite of the advice of the faculty, to their own disadvantage and the injury of the school. Furthermore, the trouble and cost of maintaining the two courses simultaneously are much greater than the trouble and cost of maintaining the longer of the two courses by itself." Notwithstanding these drawbacks, the faculty preferred to maintain the three years' course for the present, and to make the adoption of the four years' course optional with the student. It believed that the advantages of the four years' course would be so conspicuous that all the more intelligent students, who were not straitened in their circumstances, would adopt it, and that the school would then gradually pass from one system to the other without suffering any very serious reduction of numbers. The president believes that these reasonable anticipations can hardly fail to be realized in due time.

In discussing the question of clinical instruction, the number of teachers having been considerably increased of late, and this branch of study having an especial importance in a fourth year, he says: "The most valuable clinical instruction is that which two or three students at a time receive from a skillful instructor, who allows them to see, touch, and listen for themselves. If it be said that it is impossible to give such personal instruction in a large school without a great number of clinical instructors, the answer is twofold; first, that the number of clinical instructors ought to be as large as the community can well supply; and, secondly, that the university should be more concerned to have a very good school of medicine than a very large one. The faculty fully realize that the task to which they have this year addressed themselves is a difficult one; but their experience during the past ten years, in similar attempts to improve medical education, encourages them to expect a favorable issue in their present undertaking. They confidently rely upon the coöperation of intelligent students, and of observant parents who have sons in the school, and upon the support of all the best-educated part of the medical profession."

We are very glad that the university is not only willing, but able to take so dignified and elevated a position. We would have nothing sacrificed to mere

numbers; but though the number of students should remain comparatively small,—and, as a fact, we believe it has slightly decreased during the past year,—we do hope that in some way the funds of the medical school may be made to grow with its reputation, so that eventually the zealous devotion of assistants and instructors may be less a labor of love and expectancy. If rumor speaks truly, the teaching of medicine in Philadelphia is, like the carrying trade of some of our great Western railroads, so prosperous, that the temptation to the construction of parallel roads to learning is irresistible.

A certain competition is doubtless desirable, and in Boston would not be without its uses; but we are afraid to carry the foregoing simile farther, for the inevitable reduction in rates and schedule time in reaching a medical degree, always attendant upon a multiplication of schools, does not inure to the advantage of the public.

The dean of the faculty gives a table which we regret is too extended for insertion, in which will be found the statistics of rejections in different subjects at the annual examinations of the school in June for the past four years. The statistics, however, show the general recognition by intelligent students of the advantages of spending the whole time to be devoted to medical studies in a school properly equipped for giving instruction, as may be seen from the following table, with which the dean closes his report.

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	Spent six terms.	Spent five terms.	Spent four terms.	Spent three terms.	Spent two terms.	Total graduated.
1872	3	0	8	18	27	56
1873	5 per cent.	3	14 per cent.	32 per cent.	48 per cent.	41
1874	22	2	6	5	3	38
1875	14	7	6	0	3	30
1876	47 per cent.	5	4	2	10 per cent.	36
1877	25	13 per cent.	11 per cent.	5 per cent.	9	61
1878	69 per cent.	9	8	1	3	61
1879	40	4	3	0	0	45
1880	65 per cent.	2	3	2	1	70
	41	2	4 per cent.	2 per cent.	1 per cent.	
	85 per cent.	1	4	0	1	45
	62	2 per cent.	5 per cent.	2 per cent.	2 per cent.	
	88 per cent.	1				
	39					
	86 per cent.					

We sympathize with the regret expressed by the president of the university that similar statistics are not published by other prominent medical schools, and hope that they may be stimulated to an honorable rivalry accompanied by such a "fair count" as may make the figures really valuable for comparison.

—Mr. Luther Holden, a few days since, delivered his last clinical lecture at St. Bartholomew's Hospital previous to retiring from the post of acting surgeon to this institution, after a service of more than forty years.

OUT-PATIENT ABUSE AND THE PROFESSION.

DR. CHALMERS, writing of the abuse of charities and the tendency of indiscriminate alms-giving to pauperize a nation, expressed his belief that there was no danger of overdoing medical relief for the poor; that people were willing to become paupers if they could be supported in idleness, but that no increase in hospital accommodations could increase the amount of disease. Were the distinguished divine alive to revise his writings he would find it necessary to add a note to the effect that unlimited sick relief tended to increase the number of those willing to accept its benefits, and was not an exception to the general rule as to the debasing effect of indiscriminate giving.

It has lately become the fashion to condemn almost universally the out-patient charities of the hospitals and dispensaries, and many members of the profession seem to look upon them as simply a system of robbery, by which they are deprived of a legitimate source of income. That abuses exist there can be no question; but there are certain reciprocal relations between the dispensaries and the profession at large that do not seem to have been sufficiently considered. In the first place, no matter how guilty the dispensaries may have been themselves in "extending their usefulness," the general profession has contributed very largely to their enormous growth.

Almost every physician in the cities must have found it more convenient at some time to refer a patient to the dispensary than to treat him,—perhaps the patient was a troublesome one, or the doctor had not the time to unravel a puzzling case, or he preferred to send it to a hospital that had a special department devoted to similar cases. It may have been a perfectly legitimate method of disposing of the case; but so far as that patient or his friends were concerned, it threw the influence of the doctor in favor of a charitable institution.

Again, certain physicians wish it to be known that they practice only for those who can pay. Sometimes it may be they demand their fee in advance, and patients who can no longer pay are sent in a sort of disgrace to receive charity. Such a patient finding the reality not very disagreeable, influences others, and they in their turn their neighbors, till no one can calculate the result of that one refusal to give charitable advice.

Physicians at a distance send patients for gratuitous consultations at the hospitals, teaching them how to take advantage of the out-patient departments with which their student life has made them familiar, and are surprised to see others follow whom they have not sent, and in their complaints that the metropolis absorbs all their important cases, forget that they themselves have helped to bring about the result.

On the other hand the out-patient system relieves the busy practitioner of much responsibility. The patient who paid his fee regularly for years and is now destitute, the superannuated nurse, the worn-out domestic, all the numerous dependants whom the prosperous man gathers about him, and who look to him for medical direction, are cared for, for him, by the

younger generations of dispensary physicians. Suppose the dispensaries closed, what an amount of work would be thrown upon the general profession which they could not conscientiously throw aside. What a number of patients unable to bear the burdens of sickness, and yet not paupers, would appeal for aid. It would be but a short time before the custom of former years would be forced upon certain members of the profession, of opening their offices upon certain days for free treatment of such as chose to apply; a custom superseded by the out-patient system but undoubtedly equally abused in its day.

We have made no attempt at the solution of the problem how to do away with the abuses complained of. We have tried to show that the profession as a whole has a responsibility in the matter and that the abolition of the dispensaries would bring to the profession at large additional burdens and would not do away with the abuse. The inference is not hard to draw, the profession as a whole needs to encourage the feeling of independence and pride on the part of people able but not always willing to pay for medical attendance, and to take care that those who have paid and will be able to do so again do not, in the period of temporary poverty, form the habit of getting assistance without return.

That is, the coöperation of the profession as a whole is desirable in treating the subject. The hearty coöperation of the three largest charities could probably be secured for such a scheme as that proposed in the article we publish to-day, although the abuses at the City Hospital are observable among the in-door rather than the out-door patients, and the dispensary has already reduced the attendance by one third. We would gladly do something to attract the notice of each and every medical man to his personal responsibilities in the matter.

MEDICAL NOTES.

— Dr. Charles F. Folsom has resigned his position as a member of the Massachusetts Board of Health, Lunacy, and Charity, and Dr. Alfred Hosmer, of Watertown, has been appointed to the vacancy. The appointment is a very excellent one, but we fear that no fitness of individual members, however eminent in certain departments, can be made to counteract the inherent defects of the present organization of that Board.

— An examination for three resident physicians for the Western Pennsylvania Hospital, to serve for one year from April 1, 1881, will be held at the hospital, Pittsburgh, Penn., on the fourth Wednesday in March.

— A Hospital Sunday Society has been recently formed in Lowell, with Dr. Nathan Allen as chairman. We quote a portion of their plan of organization:—

(1.) The third Sunday in January each year is recommended as the most convenient day to be observed as Hospital Sunday. (5.) Upon the third Sunday in January it is expected that every clergyman will preach a charity sermon, setting forth the condition and needs of the poor and suffering in our

city, and take up a collection for their relief, allowing every person, by envelope or otherwise, to designate the object of his charity; each church shall also have direction of its own collections so far as they are not designated by individual donors. (6.) If donations are made inside of any church for an object not within the church or parish, they shall be transmitted through the treasurer of the general society; also donations made outside of any church, not designated, may be transmitted to the treasurer, and distributed as the executive committee direct, and be noticed in the annual report of the year.

— In the *Medical Record* for October 30th will be found a report of a case of rapid lithotripsy, in which the patient, aged seventy, died eighty hours after the operation, supposably from "suppression of urine and uremia, resulting from the shock of lithotripsy, — the shock being the result of urethral distention rather than from irritation of the bladder."

— The *British Medical Journal* says: "A most extraordinary and inexplicable piece of blundering came to light at the last meeting of the Kidderminster town council. Certain unpleasant rumors have of late been pervading the town as to the alleged percolation of sewage into the auxiliary well of the water-works; and the borough engineer was, therefore, questioned on the subject. This official was very indignant at the idea that such percolation existed: 'It was simply impossible and absurd to suppose that such could have been the case. The sewage-pipe passed through the well, but the pipe was well cased, so that it was impossible for any sewage to enter the well.' The accuracy of this confident assertion may very well be questioned; but how so extraordinarily perverse a piece of ingenuity as the passing of a sewer-pipe through a well should have been dreamt of, much less carried out and defended, passes our comprehension."

NEW YORK.

— The eighth annual meeting of the New York Training School for Nurses in connection with Bellevue Hospital, which is the pioneer institution of the kind in this country, was held at the Nurses' Home in East Twenty-Sixth Street, opposite the hospital grounds, on the evening of January 11th. There were sixty-three pupils present, and the graduating class numbered twenty-nine members. In addition to their relatives and friends, many prominent ladies and gentlemen interested in the work attended the exercises. The report of the secretary, Mrs. Robert Woodworth, stated that since the opening of the school in 1873 one hundred and twenty nurses had been graduated, of whom one had died, four had married, twenty-four were in positions in training-schools, hospitals, and other public institutions, three were nursing the poor, two had entered sisterhoods, three had been deprived of their diplomas on account of unbecoming conduct, and the others had established themselves as professional nurses in New York and elsewhere.

In 1880 thirty-seven pupils were received, of whom seven proved incompetent. The school has under its charge all the female and two of the male wards of

Bellevue Hospital, and also the Sturges Pavilion and other special departments attached to the hospital. The demand for nurses by private families is greater than the school can supply. There were five hundred and nine such applications in 1880, of which one hundred and eighty-nine were supplied from the school, two hundred and twenty-six were referred to graduates established as nurses in the city, and ninety-four were necessarily refused. At the school a list of all the graduates and their addresses is kept for the convenience of the public, as well as for the purpose of securing employment to the nurses.

—At the stated meeting of the New York Academy of Medicine, January 6th, Dr. Samuel Sexton read a paper on False Hearing and Autophony in Singers, Speakers, and Performers on certain Musical Instruments. On this occasion the annual election of officers also took place, and resulted as follows: President, Dr. Fordyce Barker (re-elected); vice-president, Dr. Robert F. Weir; trustee, Dr. S. T. Hubbard (re-elected). Various members of committees were also elected. During the evening the president announced that Mrs. John Jacob Astor had given \$500 for the purpose of improving the journal and circulating department of the library, and a vote of thanks to Mrs. Astor was passed. The library of the academy, which is open every day from nine A. M. to nine P. M., and is free to all, now contains more than seventeen thousand volumes, and receives regularly one hundred and twenty-two American and European medical journals.

—At a meeting of the Medico-Legal Society, held January 5th, Clark Bell, Esq., ex-president of the society, read a paper on The Coroner's Office, in which he maintained that the office should be abolished, and that of medical examiner, as in Massachusetts, substituted for it; by which arrangement he believed that the desired work could be accomplished at a very much less cost to the public and in an infinitely more satisfactory manner than was now the case.

—Professor Chandler, president of the Board of Health, recently said that it was his opinion, based on careful study, that at least ten thousand died every year in this city solely because they were too much engaged in money-making to see that the water they drank and the air they breathed were not polluted by disease; and as for every death there was an average of twenty-eight well-defined cases of illness, we had two hundred and eighty thousand cases of sickness each year which were equally unnecessary. "But people are beginning to acknowledge," he continued, "that it may be just as well to keep out sewer-gas from their houses as not, and the laws upon the subject of the proper ventilation of soil-pipes in tenement-houses are such that we can now save many persons from sickness in spite of themselves. The Board of Health has been hammering away about the necessity of pure air and the ventilation of soil-pipes ever since it was organized. It may be said to have got to work in 1867. Children under five years of age are the most liable to be killed off by disease arising in this way, and if, therefore, we take the statistics of the deaths of children under five since

1867 to the present time the result of better plumbing may be judged. In 1867 the ratio of deaths of persons over five years of age to those of persons under five years of age was 17 to 53. In 1879 the number of deaths of persons over five years of age was 15,561; and if the same ratio of deaths may be assumed as in 1867, it follows that the number of deaths under five years of age would have been 17,551. But, instead of this there were only 12,788 deaths of persons under five years of age — a saving of 4,773 lives. Leaving out of the question any such conclusion, however, the statistics show that though the city's population has risen steadily in the last twelve years, from 899,092 to 1,171,740, the death-rate among young children for the last three years is actually less than for 1867, 1868, and 1869. This is due largely to proper plumbing in tenement-houses."

—During the last three months there were seventy-eight small-pox patients in the Riverside Hospital, on Blackwell's Island, of whom twenty-nine were discharged and twenty-two died, leaving twenty-seven in the hospital at the beginning of the year.

—Dr. George Ford died on Ward's Island, January 7th, from cancer of the stomach, at the age of seventy years. Dr. Ford organized the State Emigrants Hospital on Ward's Island, with which he was connected from 1847 to the time of his death. Since 1855 he had been physician-in-chief to the institution.

—At a special meeting of the County Medical Society, January 10th, Dr. Charles L. Dana read his prize essay entitled On the Benignity of Syphilis, being a Study of the Disease especially as it affects Seamen. From statistics and a careful personal investigation of the United States Marine Hospital Service he concluded (1) that syphilis, as a rule, ran a mild course in American seamen, and (2) that it often got well without proper treatment, and in spite of the worst hygienic surroundings. Consequently he thought that the syphilitic poison had probably become lessened in virulence, as compared with what was formerly the case.

—Dr. Clinton Wagner, of New York, has been appointed professor of diseases of the throat and nose, and Dr. William J. Morton, of New York, professor of diseases of the mind and nervous system, in the medical department of the University of Vermont.

—On New Year's night one of the Nautch dancers, who arrived a few weeks ago from Hindostan, and said to be only in her thirteenth year, was delivered of a male child, the first Hindoo baby ever born on American soil. The infant weighed only four pounds and four ounces, and lived but a day or two.

—The records of the bureau of vital statistics show that there were 31,866 deaths in this city during the year 1880, an increase of nearly 3500 over the mortality of the preceding year. There was, however, an increase of 1920 in the number of births during the year, the whole number in 1880 amounting to over 27,500. The number of deaths from phthisis was 4769 in 1880 as against 1313 in 1879; from alcoholism, 222 in 1880 and 198 in 1879; from disease of the heart, 1148 in 1880 and 1164 in 1879; from

Bright's disease, 1425 in 1880 and 1348 in 1879; from pneumonia, 2848 in 1880 and 2551 in 1879; from bronchitis, 1395 in 1880 and 1263 in 1879. The suicides numbered 155 in 1880 and 117 in 1879, while there were 242 deaths from drowning in 1880 as against 149 in 1879.

CHICAGO.

— Dr. H. P. Merriman has resigned his position as one of the physicians to the Cook County Hospital. Dr. Lester Curtis has been appointed to take his place.

— There has been during the past two weeks in Chicago quite an epidemic of diarrhea, among people of all ages and conditions. These cases are rarely severe: they last only a few days, and are mostly painless. The epidemic is now (January 13th) passing off. With this tendency to diarrhea has come frequently duodenal and gastric irritation, that has made a large number of people sick. Some tenderness in the epigastrium, occasional slight pain, and vomiting, and in a few instances symptoms of icterus have characterized these cases. A few days' rest and abstinence from food, with very little medicine, have sufficed for the recovery of most of the cases. Quite a large proportion of these attacks are among business men.

It has been endeavored to explain these wholesale attacks of sickness by charging that our drinking-water from the lake tunnel was polluted, but a most thorough examination of the water supply has developed the fact that it was never purer, and that no city is furnished with a better article. Whatever might justly have been said of it last spring, when some contamination from the city sewers did reach out to the crib two miles in the lake whence our supply comes, it is certain that now it is a drinking-water that is ideal.

There has been offered the theory, too, that as bad sewers and bad ventilation often make people sick, and as Chicago always has a lot of bad sewers and many badly ventilated houses, therefore these must explain the epidemic referred to. As all the unsanitary conditions we have have existed through the months and years past, with only slight fluctuations in degree of badness, and as latterly they have not been worse than usual, of course all such theories are failures.

— Dr. O. C. Oliver, pathologist to the State Insane Hospital at Elgin, Ill., died a few days ago of typhoid fever. The profession has sustained in him a serious loss. He was young in years, but his life had been devoted to the most thorough preparation for original work in pathology. Had he lived there is no doubt he would have made his mark in this field. He had been for several years curator of the museum and director of the histological laboratory of Rush College, and had become very proficient in micro-photography. He spent a year abroad in the study of pathology and biology; returned a few months ago, and accepted the new position which he occupied at the time of his death. Very few of the profession in Chicago were well acquainted with him, but those who knew him best knew that beneath an exterior of modest de-

meanor there was an ambition for knowledge and excellence that is always admirable.

— Our annual visitation of a wail from our neighboring towns along the Illinois and Michigan Canal and the Illinois River has not failed to come up this winter. This wail is a just one. We cannot and do not complain that the people of the injured cities and villages find fault, and we would say to them, If you sent us annually such odors as we send you, we should not only wail, but we would strike back. Chicago is a city now free from bad smells. The blessed river is frozen over, the open ditches are frozen up, and for some reason the rendering works in the outskirts are still, or, rather, well behaved, and the air sweeps across us from the prairies as fresh and pure as that from the mountains. But our sewers still empty into the river, and the river empties thousands of cubic feet of water per minute into the canal, which flows down toward the Illinois River, carefully preserved from any loss of odor by the covering of ice, till it reaches Joliet, forty miles away, where the locks are, and the water flows over a dam, and of course comes in contact with the air. The result may be imagined. The people of Joliet say no one can fully appreciate it without a residence within reach of the dam, and as the wind shifts all the people of that city find in turn that they are within reach of it. It must be very bad, as these temperate people are in search of more adjectives with which to describe their affliction. Other towns suffer in like manner, but none so sorely as Joliet.

There is only one remedy for all this, namely, more dilution of our sewage as it passes into the canal. This means either pumps here to force more water into the canal, or the deepening and enlarging of that channel to a ship canal. Something of this sort we are coming to inevitably. In the summer, when for forty miles the water in the canal is exposed to the oxidizing influences of the atmosphere, there is no complaint. All classes of people are advocating one or both of these remedial measures; the money necessary for pumping works is already appropriated; the belief in the West seems unanimous that a ship canal we must have eventually. Yet the law makers and the law executors find obstacles and reasons for delay that make our relief seem distant indeed.

— Small-pox is increasing in our midst, not to an alarming extent, but enough to stir people up to a wholesome desire for revaccination. The superintendent of schools has, on the recommendation of the health commissioner, ordered that hereafter no pupil shall be admitted to the public schools without a physician's certificate that vaccination has been performed within seven years. This is a most wise step, and the surprise is that it has not been taken before. Heretofore a pupil was admitted with a vaccination certificate at six or seven years of age, the vaccination having been made in infancy, perhaps, and thereafter in his case no attention was paid to the matter, notwithstanding the testimony of experience that vaccination to be protective must be repeated every five to ten years.

Nearly all the vaccinations now made here are with bovine virus. Indeed, the writer would find it impossible to name a physician who uses from choice the humanized virus.

While the bovine virus generally "works" more vigorously, and often produces enormously swollen arms and severe constitutional symptoms, there is no prejudice against it among the people. For these severe results the profession is never blamed. Under the old practice with the humanized virus a bad arm always led to criticism, often to severe censure, of the practitioner, and not a little practice changed hands as a consequence.

Miscellany.

PELLETIERINUM-TANNICUM AS A REMEDY FOR TENIA.

MR. EDITOR, — So far as my observations have extended, the profession, as well as myself, have long felt the need of a more reliable taniacide than has yet been found in the use of filix mass, kamula, turpentine, pepo, or the ordinary preparations of pomegranate.

This want is now well supplied by the alkaloid or active principles of the bark and rind of the pomegranate.

Having had occasion recently to test the latter in a family with four cases of tenia, I am convinced that the active principles of the pomegranate as now prepared are the remedies *par excellence* for this parasite.

In the *Practitioner* for December, 1880, appears a short account of the drug: It says: M. du Jardin-Beaumetz read a paper before the French Academy of Medicine upon the use of the drug, and in reference to its use as a remedy in tapeworm he declares that the sulphates of pelletierin and isopelletierin possess energetic taniacide properties, when exhibited in doses of 0.30 grain in a solution containing 0.50 of tannin; since, in the great majority of cases (thirty-seven times out of thirty-nine), they caused the expulsion of the parasite, with its head.

Laboulléne used it in nineteen cases, and secured the head in every instance. The preparation which I used was the pelletierinum-tannicum, procured by my local druggist from Gehe & Co., of Dresden. It comes put up in small bottles, containing a single dose of one and one half grams of the powder.

There was no griping pain or other unpleasant sensations in the bowels, which so often attends the use of the other taniacides, and the only unpleasant effects noted were (as expressed by the patient) "a cracking headache and quite a profuse perspiration." The latter may be readily accounted for from the fact that the drug produces more or less cerebral congestion.

According to the two French authorities quoted, out of fifty-six trials of the remedy there were but two failures in securing the head; hence it would appear that in the sulphates and tannates of pelletierin we are likely to find as perfect a specific against tenia as we can hope for.

I forward this brief sketch of the drug for the benefit of those who, perchance, have not become acquainted with it, either by its use or through the columns of some of the various medical journals.

G. S. STEBBINS, M. D.

SPRINGFIELD, MASS., January, 1881.

QUARANTINE BILL.

UNDER the title of Quarantine Bill, or the Last of the Louisianas, the *Cincinnati Lancet and Clinic* publishes a sensational sanitary tale of the period, from which we extract the opening part of Chapter II. : —

"Quarantine Bill was sitting in his richly furnished office, at the corner of St. Louis and Royal Streets, on a hot day in August. He was amusing himself reading one of Gilson's beautiful essays on How to Skim Yellow-Fever Germs from the Top Layer of Disinfectants. A bland smile played across sweet William's features, and he softly murmured: 'This is equal to Bell's method of boiling up a man-of-war in steam, and ironing it out afterward in a navy-yard laundry. I much prefer the refrigerating method; a frozen ship on ice, like a quail on toast, has charms for me. I believe in the old flag and an appropriation of one hundred thousand dollars for the germ-freezing experiment. When germs are valued at a dollar apiece they are worth looking after.' Tilting his chair back, he pulled out a carbolic-acid cigar, and tenderly touched it off with a sulphur match; a few bacterians, wafted up from Plaquemines Parish, grew sick at the stomach, turned up their saffron-lined bellies, and dropped dead on the floor. 'Strange!' muttered Quarantine Bill, 'how easy it is to kill a bacterian, how hard it is to find a germ. If the yellow-fever germ is ever discovered, my days are numbered along with those of Yellow Jack.' A thousand curses on the National Board of Health and their too inquisitive agents! The audacity of the United States government sending a fever commission to Cuba is damnable. Their agent, Sternburg, is even now in this city experimenting in germ culture, and God only knows what he may discover. White and Bemiss are traitors to render him assistance. Do they wish to rob the city of New Orleans of her principal medical attraction, Yellow Jack? Do they wish to make the Crescent City great, healthy, prosperous, and destroy the living of a few Creole doctors? Mon Dieu! Parbleu! Nouvelle Orleans n'est pas parfait sans la fièvre Plaquemines.' He expectorated a thin stream of abuse on a small unopened package marked Bulletin of National Board of Health, and subsided into momentary silence; only momentary, however, for he almost immediately commenced to hum that beautiful Louisiana legislative *chanson* : —

Oh! a source of wealth
Is our board of health,
When New Orleans grows ill.
For each politician
Discovers the mission,
Of jolly old Quarantine Bill.
Chorus.
Here's to Yellow Jack!
May he soon come back.
We wait for him expectant.
Until summer is over
We live in clover
On the price of our disinfectant.

"A knock was heard on the door. Quarantine Bill ceased singing, and shouted, 'Come in!' Yellow Jack entered after making a profound bow. On his entrance William jumped up, and grasped the welcome visitor's feverish hand. The thermometer on the wall promptly jerked its mercury up to 105° F.; a cloud of wiggle-waggle germs appeared upon the slide of a microscope in the corner; the urine in the test-tubes precipitated albumen; all the office, in fact,

seemed to respond to the presence of the dread visitor. 'Welcome! Welcome! Yellow Jack, when did you arrive from Havana?' queried Quarantine Bill, as he handed his guest a chair."

HERBALIST'S SURGERY.

AN important case came before the Coroner's Court at Old Basford on the 8th inst., which from its surgical and medico-legal aspects is alike important. From the report in the *Nottingham Daily Guardian* we gather that a man, thirty-seven years of age, was suffering from some trouble in connection with his bladder or urethra, and on hearing from a friend of his—Mr. Marlow, a herbalist—that if sent for he could do him good, he sought his aid. The herbalist "attempted to draw his water, but instead of that drew blood." Mr. Maltby, a surgeon, was then called in, and found the man collapsed, in great pain, and passing bloody urine; he quickly developed symptoms of peritonitis, from which he died. At the autopsy no urethral stricture was found, but there was a false passage, about three inches long, from the urethra, and piercing the neck of the bladder, which was probably the exciting cause of the fatal peritonitis. It is obvious that considerable violence must have been employed in this case, and while forcible catheterism is not justifiable, even where the passage is obstructed by a stricture, it is still less pardonable where there is no obstruction at all. The fact that skillful surgeons sometimes make false passages in front of tight strictures has no bearing whatever on such a case as this, where there appears to have been no obstacle whatever to the passage of an instrument properly used. The surgical point in the case, however, is obvious, and we need not further allude to it. The coroner was at great pains to instruct the jury as to the principles by which they were to be guided in coming to their verdict, which was that the man died from peritonitis. It is to the coroner's law that we would specially call attention. He said "a mistake had been made," but that Marlow could not be held to be criminally responsible. He argued that as the operation of passing a catheter has been done very frequently by patients for themselves, it was an operation which an unskilled friend was qualified to do for the deceased. But he seems to have lost sight of the fact that Marlow offered his services to the man with the assurance that he could relieve him, and there can be no doubt that he gave the patient the impression that he was skilled in the treatment of such cases, and professed to be qualified to pass a catheter. Had he possessed a qualification to practice, an action for mal-praxis would undoubtedly have laid against him.—*Lancet*.

PURE BOURBON WHISKY REDIVIVUS.

It happens now that the difficulty of obtaining pure Bourbon whisky, properly aged, is about to be done away with in what we think a very practical manner.

The Newcomb-Buchanan Company distillery at Louisville is the largest distilling company of straight whiskies in the Union. Their rank in the United States is similar to that of the four great Dublin firms which gave the name and fame to Irish whisky. In 1873, in view of the fact that the genuine and old Bourbon whis-

kies were being so rapidly exhausted, they erected as a business venture an additional distillery, known as the Anderson Distillery Company, on a large scale, and put into it the best machinery their large knowledge could dictate and their immense capital command. They constructed the original old-fashioned copper stills of former days, and in them they manufactured, from sour mash by open fires, as of old, the Bourbon whisky of former days. This they have stored to obtain age, supplying the demand for new whisky from their other distilleries. The earlier crops of these whiskies are now sufficiently old to obtain a proper excellence, and the best judges in Kentucky have declared that they are fully up to the standard of the best Bourbon of equal years. Acting upon the advice of medical friends, the company have determined to offer these whiskies through the medical profession, and in such a way as to insure consumers that they have not been adulterated after leaving their hands. They will be bottled and sold in cases. Each bottle will be protected and sealed with the trade-mark of the company, which mark will be a guarantee that the whisky contained in the package is old-fashioned, hand-made sour mash, fire-distilled whisky of the Anderson Distillery Company, and not less than five years of age when corked.

Knowing the high character and standing of the Newcomb-Buchanan Company, we can testify to the good faith with which it will perform its promises. As the company has unlimited facilities for introducing their manufactures throughout the United States, there will soon be no community which cannot command genuine and old Bourbon whisky, and this, too, at a moderate cost; for the company proposes to get very little more profit for the bottled whisky than for the same when sold in quantity. Retail dealers may sell it at the same cost or at a very little advance upon that which they have demanded for inferior articles.

We trust good will spring from this move of the Newcomb-Buchanan Company, and that the day is not far off when their guaranteed brand (or that of other equally good Bourbon distillers) will take the place of much of the liquor which goes by the name of whisky in our pharmacies. Certainly it needs but an acquaintance to make its way.—*Louisville Medical News*.

RIGHT HEMIPLEGIA AFTER SCARLATINA, WITH EMBOLISM OF THE MIDDLE CEREBRAL ARTERY, DESTRUCTION OF BROCA'S CONVOLUTION WITHOUT APHASIA, AND DEATH FROM DIPHTHERIA.

At the meeting of the Clinical Society of London, November 26th, as reported in the *Medical Times and Gazette*, December 11, 1880, Dr. F. Taylor related a case of right hemiplegia after scarlatina, with embolism of the middle cerebral artery, destruction of Broca's convolution without aphasia, and death from diphtheria. The patient was aged five years, and was seized two weeks after an attack of scarlatina with hemiplegia of the right side. There was no aphasia; but the boy answered questions intelligently and in long connected sentences. There was sensation in the leg, but not at first in the arm, and there were occasionally attacks, apparently of the nature of convulsions. Two or three weeks later sloughs occurred on the back of

the hand and fingers; later still the right arm and leg became œdematous; and the urine was subsequently found to be albuminous." About nine weeks after the onset of his illness he was attacked with nasal and pharyngeal diphtheria, of which he died in a few days. At the post-mortem examination there was found embolism of the left middle cerebral artery, with extensive softening of the left hemisphere, involving the posterior portions of the second and third frontal convolutions, the lower parts of the ascending frontal and parietal, the supra-marginal convolution, the island of Reil, the corpus striatum, and the anterior part of the inner capsule. The heart showed a few minute vegetations on the mitral valve; it was not dilated. The right kidney had two large embolic infarcts; and the right hand presented over the abductor indicis one large irregular ulcer as a result of sloughing, and three smaller sloughs on the fingers. Dr. Taylor called attention to the frequent occurrence of attacks of cere-

bral hemiplegia in connection with exanthems in children, in many of which no opportunity was afforded for demonstrating the exact manner in which the paralysis was brought about. Thrombosis of the cerebral vessels was considered to be a frequent cause, but this case showed that obstruction of the vessels might also arise from embolism as a result of an acute disorder of the heart. In relation to the persistence of the faculty of speech, it appeared from the history that the child had been *left-handed* in consequence of some enfeebled condition of the right arm, which was noticed from birth. This places the case in the category of those which appear to show that the speech-centre tends to be located on that side of the brain which is most educated for muscular movements. A third point of interest with the case was the occurrence of diphtheria; its late appearance renders it probable that it was independent of the previous infection of scarlatina.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 15, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	719	295	24.20	19.47	10.43	5.84	1.11
Philadelphia.....	846,880	366	110	24.32	7.65	4.37	3.82	10.93
Brooklyn.....	566,689	274	118	31.02	16.03	21.17	4.74	—
Chicago.....	503,298	—	—	—	—	—	—	—
St. Louis.....	—	136	53	10.29	26.47	2.94	.74	—
Baltimore.....	393,796	143	58	18.88	12.59	7.69	9.09	—
Boston.....	363,938	174	68	24.14	15.59	15.52	4.02	—
Cincinnati.....	280,000	111	48	9.01	15.32	2.70	.90	—
New Orleans.....	210,000	115	41	16.55	16.45	1.38	3.45	—
District of Columbia.....	180,000	82	27	7.31	24.79	—	1.22	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	69	34	31.98	11.60	11.60	14.50	—
Buffalo.....	155,159	49	16	24.49	10.20	14.20	—	—
Milwaukee.....	127,000	50	21	22.00	20.00	8.00	8.00	—
Providence.....	104,862	47	14	8.51	19.13	4.25	2.13	—
New Haven.....	63,000	27	4	7.41	18.52	—	—	—
Charleston.....	57,000	40	13	—	15.00	—	—	—
Nashville.....	43,543	19	9	15.79	21.05	5.26	10.53	—
Lowell.....	59,485	19	6	26.32	5.26	5.26	—	—
Worcester.....	58,235	17	9	35.30	29.41	11.76	17.65	—
Cambridge.....	52,740	23	7	8.70	21.74	—	—	—
Fall River.....	49,006	22	16	27.27	—	9.09	—	—
Lawrence.....	39,178	17	7	17.65	5.88	—	—	—
Lynn.....	38,284	12	2	8.33	41.67	8.33	—	—
Springfield.....	33,340	1	—	—	—	—	—	—
Salem.....	27,598	12	2	16.67	8.33	8.33	—	—
New Bedford.....	26,875	9	4	11.11	33.33	11.11	—	—
Somerville.....	24,985	5	2	40.00	20.00	40.00	—	—
Holyoke.....	21,851	11	6	18.18	18.18	18.18	—	—
Chelsea.....	21,785	15	2	26.67	—	13.33	—	—
Taunton.....	21,213	22	5	18.18	13.64	4.55	4.55	—
Gloucester.....	19,329	4	1	—	25.00	—	—	—
Haverhill.....	18,475	4	3	50.00	—	50.00	—	—
Newton.....	16,995	4	2	25.00	75.00	—	—	—
Newburyport.....	13,537	5	0	20.00	—	—	—	—
Fitchburg.....	12,405	6	2	16.67	33.33	16.67	—	—
Nineteen Massachusetts towns....	153,964	62	18	22.58	4.84	16.13	—	—

Deaths reported 2721 (no report from Chicago); 1021 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 582, lung diseases 434, consumption 408, diphtheria and croup 246, scarlet fever 118, small-pox 49, typhoid fever 40, diarrheal diseases 30, malarial fevers 27, erysipelas 25, whooping-cough 20, measles 13, cerebro-spinal meningitis 13, puerperal fever one. From *typhoid fever*, Phil-

adelphia nine, New York seven, New Orleans five, Brooklyn, Boston, Pittsburgh, Milwaukee, and Taunton two, St. Louis, Baltimore, Cincinnati, District of Columbia, Buffalo, Lowell, Fall River, Chelsea, and Clinton one. From *diarrheal diseases*, New York nine, New Orleans six, Boston four, St. Louis and Baltimore two, Brooklyn, Cincinnati, District of Columbia, Buffalo, Lowell, Cambridge, and Fall River one. From *malarial fevers*, New York 10, Brooklyn and New Orleans four, St. Louis

and District of Columbia three, Cincinnati, Buffalo, and New Haven one. From *erysipelas*, New York seven, Philadelphia four, Brooklyn three, Boston, Cincinnati, Buffalo, Providence, New Haven, Lowell, Fall River, Lawrence, Salem, Newburyport, and Chicopee one. From *whooping-cough*, New York five, Philadelphia and Brooklyn three, Cincinnati, Pittsburgh, and Lawrence two, Boston, Buffalo, and Lowell one. From *measles*, New York five, St. Louis two, Brooklyn, Worcester, Cambridge, Fall River, Newton, and Quincy one. From *cerebrospinal meningitis*, New York five, Philadelphia three, New Orleans Milwaukee, Chelsea, and Malden one. From *purpuræ fever*, St. Louis one.

One hundred and eight cases of diphtheria, 82 of scarlet fever, six of measles, three of whooping-cough, and one of typhoid fever were reported in Brooklyn; diphtheria 44, scarlet fever 12, in Boston; scarlet fever 27, diphtheria 12, in Milwaukee; small-pox one, in Fall River; diphtheria two, scarlet fever two, in Somerville.

In 38 cities and towns of Massachusetts, with a population of 1,070,975 (population of the State 1,783,986), the total death-rate

for the week was 21.62, against 21.31 and 21.21 for the previous two weeks.

For the week ending December 25th, in — German cities and towns, with an estimated population of 7,698,024, the death-rate was 23. Deaths reported 3396; 1585 under five: pulmonary consumption 458, acute diseases of the respiratory organs 300, diphtheria and croup 177, scarlet fever 73, typhoid fever 59, measles and *rotheln* 53, whooping-cough 48, puerperal fever 20, typhus fever (Danzig) one, small-pox (Breslau) one. The death-rates ranged from 14.1 in Leipzig to 29 in Würzburg; Königsberg 28.1; Breslau 27.7; Munich 25.3; Dresden 22.2; Berlin 24.5; Hamburg 27.4; Hanover 18.6; Bremen 20.5; Cologne 18.4; Frankfurt 20.8; Strasburg 21.1.

For the week ending January 1st, in the 20 chief towns in Switzerland, estimated population 522,856, there were 35 deaths from acute diseases of the respiratory organs, diarrhoeal diseases ten, diphtheria and croup eight, whooping-cough five, small-pox five, typhoid fever two, measles one.

The meteorological record for the week in Boston was as follows: —

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																			
Jan. 9	30.493	23	30	6	77	57	88	74	W	N	SE	5	3	10	C	F	Snow.	3.20	.02
" 10	29.846	35	41	28	100	100	79	93	E	NW	NW	20	4	17	R	R	F	15.00	2.86
" 11	30.109	27	33	23	87	57	63	69	NW	N	N	12	5	8	F	F	O	—	—
" 12	30.041	22	29	19	85	43	56	61	NW	NW	W	11	13	13	O	C	C	—	—
" 13	29.907	36	48	16	57	46	73	59	SW	SW	S	5	20	11	F	F	O	—	—
" 14	29.701	35	47	20	74	76	64	71	S	SW	NW	5	6	27	O	O	O	4.05	.13
" 15	30.118	14	22	6	55	29	46	43	NW	NW	NW	15	9	11	C	C	C	—	—
Week.	30.031	27	48	6					NW	NW	NW							22.25	3.01

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 15, 1881, TO JANUARY 21, 1881.

BAILY, JOS. C., major and surgeon. His leave of absence granted him in S. O. 188, December 13, 1880, military division of the Pacific and Department of California, is extended one month. S. O. 13, A. G. O., January 18, 1881.

COLES, E., captain and assistant surgeon. Having reported in person, is assigned to temporary duty in the office of the medical director of the department. S. O. 1, Department of Arizona, January 3, 1881.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the hall, No. 19 Boylston Place, on Saturday evening, January 29th, at seven and a half o'clock. Dr. Henry O. Marcy will read a paper entitled The Development of the Osseous Callus in Fractures of the Bones of Man and Animals. Dr. A. T. Cabot will open the discussion. Supper at nine o'clock.

All members of the Massachusetts Medical Society are cordially invited to be present, and to take part in the discussion. H. C. HAVES, M. D., Secretary.

Dr G. H. BIRNEY has been appointed gynecologist at the Carney Hospital. Patients in this department are seen at the hospital on Monday and Thursday at two o'clock p. m.

BOOKS AND PAMPHLETS RECEIVED. — The Bacteria. By Dr. Antoine Miquin. Translated by George M. Sternberg, M. D., Surgeon United States Army. Boston: Little, Brown & Co., 1880.

United States Official Postal Guide, January, 1881. Boston: Houghton, Mifflin & Co.

Minor Surgical Gynecology. A Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice. By Paul F. Mundé, M. D. New York: William Wood & Co. 1880. (Wood's Library.)

Wood's Library of Standard Medical Authors. A Treatise on Albuminuria. By W. Howship Dickinson, M. D. New York: William Wood & Co. 1881.

Thirty-Third Annual Report of the Massachusetts School for Idiotic and Feeble-Minded Youth at South Boston, for the Year ending September 30, 1880.

Revelations of a Boston Physician. By Charles Wistar Stevens, M. D. Boston: A. Williams & Co. 1881.

Proceedings of the Louisiana State Medical Association at its Third Meeting, held in the City of New Orleans. 1880.

Neurological Contributions. Vol. I. No. 3. By William A. Hammond, M. D., assisted by William A. Morton, M. D. New York: G. P. Putnam's Sons. 1881.

Otitis Media Non-Suppurativa Chronica. A paper read before the Maine Medical Association, June 15, 1880, by E. E. Holt, M. D. Portland, Me.: Stephen Berry, printer. 1880.

Compendium of Microscopical Technology. By Carl Seiler, M. D. Philadelphia: D. G. Brinton. 1880.

Massachusetts Institute of Technology. Sixteenth Annual Catalogue of the Officers and Students. 1880-1881.

A Treatise on the Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M. D. Fifth Edition, revised and largely rewritten. Philadelphia: Henry C. Lea's Sons & Co. 1881.

A Manual for the Practice of Surgery. By Thomas Bryant, F. R. C. S. Third American from the third revised and enlarged English Edition. Edited and enlarged for the Use of the American Student and Practitioner by John B. Roberts, M. D. Philadelphia: Henry C. Lea's Sons & Co. 1881.

The Official Gazette of the United States Patent Office for January 11, 1881.

The Asylums of Europe. By George M. Beard, M. D. (Reprint.)

Original Articles.

JOHN HUNTER AND HIS PUPILS.¹

ABSTRACT OF AN ADDRESS DELIVERED BEFORE THE
ACADEMY OF SURGERY, PHILADELPHIA, JANUARY
12, 1881.

BY PROFESSOR S. D. GROSS.

In person Hunter was of middle height, but very strong and robust, with a very short neck, broad shoulders, and a broad expansive forehead, denotive of high cerebral development. His eyes and complexion were light, his brows heavy, his cheeks rather high, and, as one of his biographers expresses it, his mouth was somewhat underhung. His hair, in youth, was inclined to red, but as he advanced in life it became gray, and at length partially white. He possessed great powers of endurance and required little sleep, often working, with hardly any intermission, for nearly twenty hours out of the twenty-four. In his manners he was most ostentatious and rather cold and reserved; in his dress plain and simple, and not always particularly neat. He wore, as was then the custom, short breeches, with knee and shoe buckles.² His temper was warm and impulsive, and, although he was naturally kind, he often betrayed ill-feeling, especially when any one "galled his patience," or when he was overcrowded with business, unusually fatigued, or entirely occupied upon some interesting and absorbing investigation requiring uncommon patience, deep thought, or persistent effort. At such times his irritability occasionally got the advantage of his judgment and good breeding. It is related of him that, returning late one evening more than ordinarily worried and fatigued, he found a large party of ladies and gentlemen assembled in his drawing-room. Feeling excessively annoyed at this unexpected sight, he gave way to his passion, exclaiming: "I ought to have been informed of this kick-up, and as I have come home to study I hope the company will now retire," which they of course at once did. He had little taste for society or amusement. And yet Hunter, ascetic as he apparently was, was by no means insusceptible of social enjoyment. When not too intently occupied he took pleasure in the conversation of his friends, loved to talk with his pupils, and often played with his children, taking a lively interest in their studies and amusements. Nay more, he was very fond of animals, and not unfrequently spent hours in watching their pranks, and at times even participating in their sports. Such conduct is certainly not, to say the least, reconcilable with the idea of a bad temper, or a cross, ill-grained disposition. On the contrary, it places Hunter in the very best light of a kind-hearted, if not amiable man; snappish at times, when overworked, but, in the main, thoroughly good-natured. In his boyhood, and even for some time after he settled in London, he was a merry, rollicking fellow, inclined to mischief and to gross hilarity, especially in the dissecting-room, in the company of the noisy students and the resurrectionists,

among whom he always went by the name of "Jack Hunter." One of his favorite amusements was to visit the shilling gallery to assist his boisterous friends in damming an unpopular play, in which he was, it would seem, an expert. He was a great swearer, a practice by no means uncommon in those days, even in polite society,³ and he was often deficient in courtesy, so characteristic of the well-bred gentleman. To his patients he was kind and liberal, and not a few were warmly attached to him. Whatever his faults may have been as a young man, in after years he became more sedate, and found it more difficult to unbend himself. Hence people who met with him only casually, or who knew nothing of his habits, naturally concluded that he was austere and unsocial. His sly humor, however, never entirely forsook him. He was always, even in his later days, fond of a good joke and of a well-told anecdote, and he himself occasionally indulged his fancy in placing things in so ludicrous a light as to excite merriment.

For many years, as previously stated, he spared neither pains nor expense in procuring all kinds of living animals, birds, and reptiles, with a view, not only of studying their habits, but also for experimental purposes, and for the illustration of comparative anatomy and physiology. Even insects were laid under contribution, and the study of the honey-bee was for a long time an object of special interest with him. The numerous specimens which were here accumulated including some in mineralogy, conchology, and even in palaeontology, now grace the museum known by his name, while of many of them an account is to be found either in his collected writings or in the *Philosophical Transactions*. The labors at Earl's Court were not of a flickering or paroxysmal character, but were continued with hardly any intermission through his whole professional career, the daily sustenance and stimulus of his existence. They always formed the early exercises of the day, generally from six to ten o'clock, when he was obliged to abandon them in order that he might earn that "damned guinea," as he was wont to call it, which stood so much in the way of his tastes and his happiness, and yet was so necessary for the supply of his daily wants.

The kind of life led by Hunter was not calculated to make him a popular practitioner. His manners, as stated in a former part of this discourse, were blunt, and he was sometimes overhearing, even to men of his own rank in the profession, or his equals in social position. His colleagues at St. George's Hospital especially disliked him, and the feelings of animosity engendered by his disagreeable conduct occasionally broke out into open hostility. His practice for many years was large and lucrative, and greatly increased in both these respects after he was appointed court surgeon. All accounts go to show that he was most patient and painstaking in the investigation of his cases, and most cautious in the expression of his opinions. If he found himself at a loss in determining the diagnosis, he did not hesitate to acknowledge it and to ask for further time. He would merely say: "I cannot tell, at present, what to recommend; I must think of it." With Hunter, as with every honest and conscientious man, every case

¹ Continued from page 77.

² Of the various portraits that are extant of him that by Sir Joshua Reynolds is by far the best. It represents him as sitting in a chair in deep thought, with a pen in one hand and the other supporting his chin. From this portrait an admirable steel engraving was made by Sharp, a celebrated artist, copies of which were widely disseminated, and still adorn many a surgeon's study. After his death a bust of him was made by Flaxman, in the execution of which he was assisted by a cast taken during life.

³ The habit is perhaps not entirely extinct, even at the present day, in certain parts of England. We have the authority of Macaulay for saying that Wellington invented the expression, "I don't care one two-penny damn;" a small oath, adds the historian, altogether disproportionate to the duke's greatness. *Life and Letters*, by Trevelyan, vol. ii. p. 221.

was a study, not to be lightly passed over, or treated with heartless indifference. He was always particularly condescending to his poorer patients during consultation hours at his own house. No matter how many "grantees," as he called them, might be present, he generally gave precedence to the former, saying they had no time to spare, whereas the others, having nothing to do, could afford to wait. He would sometimes deduct largely from a stipulated fee for an operation if he found that the person had unusual difficulty in raising the money.

Notwithstanding his profound knowledge of anatomy, Hunter never ranked high as an operator. Pott and Bromfield, not to mention others of his London contemporaries, were his acknowledged superiors in this respect, and fully his equal in practical surgery.¹ He was a surgical pathologist rather than an operator; a lover of principles, and a hater of knives. It is said of him that he never invented an instrument, as it was of Cullen that he never introduced a new remedy. The fact is, Hunter had no very exalted opinion of operative surgery. An operation, he remarks, is a reflection on the healing art, a tacit acknowledgment of the insufficiency of surgery.

Whether Hunter was ever extensively engaged in operative surgery does not seem to be known. Largely as he was occupied, for many years, in private and hospital practice, frequent opportunities must have occurred for the employment of the knife, but whether he performed this duty himself, or confided it to others, I have no means of determining. Home refers to two successful operations which he performed for the removal of two huge tumors, one on the head and the other on the neck. The latter was so large, and involved such important structures, that one of the best surgeons in England declared no one but a fool or madman would attempt its excision. There is no record going to show that he ever cut anybody for stone in the bladder. Hunter was one of the first surgeons who taught that the only way of preventing hydrophobia was to excise the wounded structures. The only very remarkable operation with which his name is associated is the one in which he tied the femoral artery for the cure of a popliteal aneurism, a feat which had never been achieved before, and as the procedure involved a new principle it has ever since been designated by his name. The subject of aneurism had long occupied his thoughtful study, and he was painfully aware of the insufficiency of the various methods of treatment in use up to the time when he entered upon the active duties of his professional life. Having ascertained from numerous dissections that the artery in the immediate vicinity of the disease is usually in an unsound condition, he came to the conclusion, after much reasoning and reflection, that the only rational plan was to tie the vessel in a healthy portion of its extent, at the cardiac side of the tumor, and consequently at some distance from it. The first case in which this theory was put into operation was one of popliteal aneurism in a coachman, forty-five years of age, a patient in St. George's Hospital. The operation, a memorable one in the history of surgery, was

performed in December, 1785, and was followed by a complete cure, notwithstanding that four ligatures were applied, instead of one, as is now and as has long since been the custom. Hunter's excuse for this bungling, unscientific piece of surgery was his fear of secondary hemorrhage, not apparently knowing that such an amount of exposure of the artery as the application of four ligatures necessitated would add greatly to the liability of its occurrence and the danger of a fatal issue.

I shall not stop here to inquire into the claims of Hunter to the honor of being the first to perform this operation upon correct scientific principles. These claims have long been generally, if not universally admitted by surgeons, excepting the French, who have invariably ascribed the merit of it to their countryman, Auel. No impartial historian, however, can fail to award it to the Englishman. The case of Auel was a traumatic aneurism of the brachial artery at the bend of the arm caused by the prick of the lancet in venesection. The ligature was applied close to the tumor, and the artery was perfectly sound. Hunter's case was one of spontaneous aneurism dependent upon a diseased condition of the vessel, which was secured in a healthy portion of its extent at a considerable distance from the tumor. In the one case an important principle, the result of deep study and long-continued reflection, was involved; in the other, none. Hunter's deep concern was that after the ligature of so large an artery the collateral vessels might not be sufficient to carry on the circulation in the distal portion of the limb. He had derived some encouragement from an examination of the velvet of the stag's horn, in which there is an enormous development of vessels, establishing an intimate connection between the antler and the integument of the head; but to put this matter fully to the test, he induced Sir Everard Home to tie the femoral artery of a dog, and the result was precisely what he had anticipated. He concluded, moreover, from a careful study of the functions of the lymphatic vessels, that the blood in the aneurism would be gradually absorbed, and here, again, his reasoning did not disappoint him.

It is a singular fact that Hunter foreshadowed the principles which now guide the surgeon in the treatment of club-foot and analogous distortions. While dancing in 1767 he ruptured his tendo Achillis, a circumstance which led him to institute a series of experiments upon the reunion of divided tendons in the dog, by severing these cords subcutaneously with a couching-needle. The animals were killed at different periods, when it was ascertained that the union had been effected in a manner similar to that of a simple fracture. His own tendo Achillis, as was ascertained after death, had united by ossific matter. It nowhere appears that Hunter made any practical use of the knowledge thus acquired, and he cannot, therefore, as some of his admirers have asserted, be considered as the founder of orthopædic surgery, inasmuch as he made no practical application of the results of his experiments, but viewed them simply in their physiological and pathological relations. It remained for Stromeyer, nearly two thirds of a century later, to place the subject in its true light, without, in all probability, any aid from Hunter's experiments, or any knowledge that his attention had ever been directed to the subject.

Upon no surer foundation, I am inclined to think,

¹ It was natural for Home, his brother-in-law, to speak of his operative skill in terms of unqualified praise; but we have the testimony of Sir Astley Cooper, one of his most illustrious pupils, and himself no common operator, for stating that Hunter possessed little or no dexterity, certainly not the least elegance. His anatomical knowledge, however, was very accurate, and this, added to his coolness and self-possession, generally enabled him to complete, although slowly, any operation he might undertake.

rests the assertion of his distinguished pupil, Professor James Macartney, of Dublin, that he was aware of the fact, so strenuously insisted upon by the Irish surgeon and his followers, that wounds, under favorable circumstances, might heal without inflammation. The only passages in Hunter's works which at all countenance this view are the following: "The healing proceeds, without pain or constitutional disturbance, as if nothing had happened;" and in another place he says: "There is only a feeling of tenderness in the part, and that is entirely from the injury done, and not from the operation of union." "In treating of the same subject," remarks Macartney,¹ "he further says that inflammation comes on as a necessary consequence of parts being too weak to unite by the first intention, or not having the power or disposition to heal." How such expressions could be tortured into the idea that Hunter supposed that wounds ever heal without inflammation it would be difficult to determine. Had he entertained such a belief he certainly would not have withheld a knowledge of it from the profession, or failed to give utterance to it in his lectures and writings. It might as well be assumed that Hippocrates had been the discoverer of auscultation, because the idea had occurred to him that diseases might be detected by the sounds emitted by the affected structures. Robert Hooke, the mathematician, and other philosophers, entertained similar views, — views which were not realized until the early part of the present century, when Laennec first applied them in practice. Hunter hit the truth, but failed to perceive its import; and had it not been for his pupil the fact might still be slumbering in the womb of time.

Hunter's doctrines were not well received by his immediate English contemporaries. They could see in them nothing of any particular value, and concluded that nothing good could come out of Nazareth. Many regarded his teachings with contempt, as the offspring of a conceited man, and as nothing better than what they could find in their own libraries. It is not known whether, like Harvey, he suffered in his practice from this cause. No wonder that he was occasionally disheartened. "The few good things I have been able to do," he was heard to say, "have been accomplished with the greatest difficulty, and encountered the greatest opposition."

It is a remarkable fact that, while Hunter was treated with cold indifference, if not positive contempt, by members of his own profession, he received numerous testimonials of esteem and appreciation from learned societies at home and abroad, as well as of friendly recognition from his own sovereign. In 1767 he was made a Fellow of the Royal Society of London; in 1776 Surgeon Extraordinary to George III.; in 1783 a member of the Royal Society of Medicine and of the Royal Society of Surgery of Paris; in 1786 Deputy Surgeon-General of the army; and in 1789, four years before his death, Surgeon-General and Inspector. The Copley medal of the Royal Society, the highest distinction in its gift, was conferred upon him in 1786, in recognition of the value of his services as an original investigator. The American Philosophical Society, the Royal College of Surgeons of Ireland, the Chirurgical Society of Edinburgh, and the Royal Society of Sciences and Belles Lettres of Göttingen enrolled him among their members.

Hunter, after his election to the Royal Society, at-

tended its meetings with great regularity, and enriched its Transactions with many of his most celebrated papers.

Hunter had been engaged almost ever since his return from the army in teaching anatomy and surgery at his own residence; but in 1773 he determined to become a public lecturer, assigning as a reason for the step that his doctrines were often misunderstood or willfully misrepresented, and that, therefore, it was due to himself to place them in their true light before the profession. The lectures were delivered gratuitously during the first two winters at St. George's Hospital, but after this period he charged the same fee as other teachers, and they were thenceforth given in a room in Leicester Square, hired expressly for the purpose at his own expense. They were repeated annually until 1792, when his arduous labors compelled him to resign them in favor of Sir Everard Home, who had long been his private as well as hospital assistant.

As a lecturer Hunter was not popular or particularly instructive. His manner was dull and prosy, and he seldom raised his eyes from his note-book; his statements were often contradictory, and occasionally he lost the train of his thoughts or wandered from his subject. His language, rarely elegant, was at times coarse and even vulgar. Lecturing was a formidable task for him, and he sometimes felt so uncomfortable as to be compelled to take laudanum to compose his nerves. His classes never exceeded fifty, even in his best days, and not one half that number, says Otley, derived much benefit from his teachings.² Many of his pupils, as, for instance, Abernethy, Macartney, Cooper, Thomson, and Physick, became in time the leading spirits of their profession, propagating and extending his doctrines, and reflecting immortal credit upon him as their preceptor and master.

Hunter was a scrupulous observer of punctuality, and he enjoined this precept with peculiar force upon his pupils. He never, if possible, failed to meet a professional engagement, and occasionally became very angry if the attendant was not on time, or if an appointment was made for him without his having been previously consulted. His biographers tell us, what indeed one might have anticipated, that he carried these regulations into his domestic arrangements. His dinner hour was four o'clock, then the custom in London, and that no time might be lost the meal was always served at that hour, whether he was present or absent. He dined very heartily, but seldom drank more than one glass of wine. His habit was to sleep for an hour after

² According to Abernethy, "the more humorous and lively part of the audience would be tittering, the more sober and unexcitable dozing into a nap, while the studious and penetrating appeared to be seriously impressed with the value of Mr. Hunter's observations and inquiries." Macilwain's *Life of Abernethy*, p. 153. New York, 1833.

As an offset of this statement, I may remark that one of his pupils, Mr. Cline, who afterwards rose to eminence, after having attentively listened to Hunter's lecture one day was heard to say: "Ah! Mr. Cline, we must all go to school again." Could a higher compliment than this be paid to a teacher? Hunter, no doubt, occasionally, perhaps frequently, shot over the heads of his pupils.

In his *Hunterian Oration*, delivered in 1824, Cline thus further expresses himself respecting Hunter's teaching: "I had the happiness of hearing the first course of lectures which John Hunter delivered. I had been at that time for some years in the profession, and was tolerably well acquainted with the opinions held by the surgeons most distinguished for their talents, then residing in the metropolis; but having heard Mr. Hunter's lectures on the subject of disease, I found them so far superior to everything I had conceived or heard before, that there seemed no comparison between the great mind of the man who delivered them and all the individuals, whether ancient or modern, who had gone before him." *Life of Sir Astley Cooper*, by B. B. Cooper, vol. i., p. 94. London: 1843.

¹ *Treatise on Inflammation*, p. 10. Philadelphia, 1840.

dinner, after which he dictated to an amanuensis, prepared his notes for the next day's lecture, and retired for the night about twelve o'clock, a very little sleep, usually about five hours, sufficing to set his machinery in order for the coming work.

In 1781 Hunter appeared in court as a witness in the celebrated trial of Captain Donellan for the supposed murder of his brother-in-law, Sir Theodosius Boughton. He was subpoenaed as an expert, but his testimony was so disjointed and contradictory as to render it impossible to deduce from it any rational conclusions. He had either not made himself acquainted with the nature of the case, or he willfully determined not to commit himself. The judge lost his temper, and in his charge to the jury indulged in sarcastic remarks respecting Hunter's conduct, tending to deprive his testimony of any weight it might otherwise have had. "For the prisoner," he said, "you have had one gentleman called, who is likewise of the faculty, and a very able man. I can hardly say what his opinion is, for he does not seem to have formed any opinion at all of the matter." Surely this may not have been the fault of Hunter; no man in his right senses will commit himself in any case if he has not the proper light to guide him, as would seem to have been the truth here.

Great as Hunter was, and disgusted as he was with the pretensions of some of his contemporaries, who spared no means to undervalue and disparage his labors, he was, really, from all accounts, an humble-minded man. He was generally, if not always, distrustful of the accuracy of his own labors, and he seldom allowed anything to pass muster that had not been subjected again and again to the test of experiment, or to the scrutiny of repeated observation and careful analysis. He was not blind to his own imperfections. His constant saying was: "We are but beginning to learn our profession." He committed errors, but they were errors of reasoning, not of observation, a faculty which few men ever possessed in so high a degree. Of system he knew nothing, or at most very little, and in the arrangement of the diversified objects of his museum he freely availed himself of the suggestions of his friends and of the services of trained assistants.

Hunter, notwithstanding his apparently unrefined nature, and the fact that he was always deeply absorbed in his studies and contemplations, was a man of aesthetic tastes. He was, as previously stated, fond of animals, enjoyed a beautiful landscape, and loved to look at fine pictures, of which he had a choice collection, chiefly by the old masters, which, after his death, were sold at auction for eight hundred pounds. He had also a large number of engravings, including many of Hogarth's. His books, many of which were annotated in the margins, brought only one hundred and sixty pounds.¹

Notwithstanding that Hunter enjoyed for many years a large and lucrative practice, as the most renowned surgeon of the English metropolis, it is not surprising, when we consider the vast sums of money which he lavished upon the purchase of objects of natural history and pathological specimens for enriching his museum, that he should have died poor.² It may safely

be asserted that he was the only man who ever paid five hundred pounds for a human skeleton, and this is only one example of his extravagance. Apart from his museum, to the construction of which he devoted so many of the best years of his useful life, he left little at his death but debts.³ To liquidate these absorbed almost the whole of his estate, real and personal. The result was that Mrs. Hunter and her two surviving children were left in such straitened circumstances as to require for several years aid from the king's bounty, kindly procured by disinterested friends. The executors, in compliance with the provisions in the will, offered the museum, in which lay the only hope of their future support, to the government, which, finally, in 1799, six years after Hunter's death, by a vote of parliament purchased it for the sum of fifteen thousand pounds, hardly one fifth of its original cost. By the government the museum was soon after transferred to the Corporation of Surgeons, who, the following year, under a new charter obtained from the crown, assumed the name and title of the Royal College of Surgeons. The funds of the corporation, when this trust was accepted, were in a very low condition, and they would have been compelled to reject it if their new charter had not given them permission, by placing the whole subject of the surgical education of the country into their hands, to examine students for the diploma for membership, which yields annually a large revenue for the increase and support of the museum and of the college.

One of the difficulties experienced in disposing of the museum arose from the fact that, at the time of Hunter's death, the attention of the British government was completely absorbed by the events of the French Revolution. When Mr. Pitt, the prime minister, was consulted respecting it, he exclaimed: "What! Buy preparations! Why, I have not money enough to purchase gunpowder." Through the influence, however, of Lord Auckland and other prominent friends of the family, parliament was at length induced to take it at the paltry sum above mentioned, a number of distinguished medical and scientific gentlemen having been previously examined in reference to its value and importance in a national point of view.

A grant so important was not, as might be supposed, made without certain stipulations. Among these was one that the collection should be preserved at the expense of the college, that the college should at an early day furnish a catalogue, and that the museum should be thrown open, not only to the medical profession, but on two days of the week to the public. In 1806 the council of the latter instituted two annual courses of fifteen lectures each on anatomy and surgery, which are delivered by Fellows of the college specially selected for the purpose. In 1813, chiefly through the influence of Dr. Matthew Baillie and Sir Everard Home, provision was made for the delivery of an annual oration commemorative of Hunter's birthday, a trust which has been sacredly observed ever since. It was the expressed wish of the founders of this oration that while one of its objects should be to

¹ Sir James Paget's Hunterian Oration for 1877, page 39.

² "In the first eleven years of his practice, from 1763 to 1774, his income never amounted to a thousand pounds a year; in the year 1778 it exceeded that sum; for several years before his death it had increased to five, and at that period was above six thousand pounds." *Late by Home.*

³ Hunter directed in his will that, in the event of refusal by the British government to purchase his museum, it should be offered to any foreign government, and this effort also failing, it should be sold entire. In 1806 a grant was voted to the college for fifteen thousand pounds for the erection of a building for the care of the museum, and for a theatre for the delivery of public lectures on anatomy and surgery. A further sum of twelve thousand five hundred pounds was voted for the same object in 1810.

honor the memory of Hunter by reciting his merits as a man of genius, a discoverer, and an original investigator, it should be rendered especially contributory to the advancement and glory of surgery by showing what surgery really is, what underlies its study, and how it may be best cultivated to subserve the interests of humanity and of science. In glancing at the long list of Fellows of the college who have been intrusted with this honorable office from its establishment in 1814 to the present time, not a solitary name appears that is not creditably associated with the progress of surgery, while not a few of them occupied the highest position attainable in our profession. In 1877 and in 1879 this duty was discharged, respectively, by Sir James Paget and Professor George Murray Humphry, than whom Hunter has had no more worthy successors, or English surgery more able thinkers or more active workers.

With only three exceptions there has been no break in the delivery of the oration since it went into operation; but in 1850 the council of the college passed a resolution that the oration thenceforth should be delivered only every second year, it being regarded as "a hopeless task to seek for something new every year on so limited a subject."

By constant additions the Hunterian Museum now forms the most enormous collection of anatomical, surgical, and zoological preparations in the world. The only approach to it is the Dupuytren Museum at Paris, which, however, is chiefly a collection of pathological specimens. The collection of Hunter at the time of his decease embraced nearly fourteen thousand preparations, wet and dry, besides numerous shells and fossils. Every specimen was accompanied, when practicable, by a brief account of the case from which it was obtained, if it was a morbid one; or by an opinion of the animal, bird, reptile, or insect, if it was new to him.¹ The museum as at present constituted is especially rich in specimens of ethnology and comparative anatomy. One is also struck in passing through this vast Golgotha with the immense number of human urinary and biliary calculi, as well as intestinal concretions, and calculi from the inferior animals. Only recently the museum was enriched by a series of the most beautiful and valuable dissections, in the form of wet preparations, arranged in bottles, of the muscles, blood-vessels, and nerves of the human body, the work of a trained museum hand, not a medical man, begun by Dr. James Bell Pettigrew, and carried on under the supervision of Professor Flower, the present very intelligent, popular, and distinguished curator. Large as is the edifice in which the museum is contained, it will soon be too small for the purpose for which it was erected. It is highly creditable to the surgical profession of England that every member of it takes a deep personal interest in the subject, and closely identifies himself with its prosperity. No labor or expense is spared to extend its growth and to promote its usefulness. Annexed to this enormous collection of objects of anatomy, surgery, and natural history, is the library of the Royal College of Surgeons, now numbering nearly thirty-eight thousand volumes, or nearly fifteen thousand separate works, embracing copies of all the works of the fathers of the profession, and thirty-nine thousand tracts, pamphlets, essays, reports, and theses. Hunter himself had no library in the true sense of the term. He read little, and had no great respect for other men's writ-

ings or opinions. Nevertheless, he was always scrupulously honest in awarding in his writings and published papers to every man his dues; in other words, he never claimed or appropriated what was not his own. His pupils had often to tell him that such and such a discovery had been made before.

The executors of Hunter were Dr. Matthew Baillie² and Sir Everard Home, the one his nephew on his sister's side, and the other his brother-in-law. To the latter alone, however, was confided the care of his MSS., covering now fewer than twenty folio volumes, with the express injunction that he should prepare a catalogue of the museum, without which it would be comparatively valueless. These precious papers were sent to Home in 1800 by Mr. Clift, the conservator of the museum, and for a short time one of Mr. Hunter's most valued assistants. Instead of carrying out the wishes of the testator, Home, it is asserted, appropriated his MSS. to his own use, and, in 1823, threw them into the chimney of his study, the flame thus kindled being, according to his own confession, so great and alarming as to call out the fire-engines! The papers embraced not only what Hunter had written on comparative and pathological anatomy, but also his lectures on surgery; everything, in fact, but the museum itself.³ During the twenty-three years that Home retained these MSS. he contributed a greater number of papers to the Royal Society than any other Fellow of that distinguished body, besides publishing an elaborate work on comparative anatomy, most of which had, it is alleged, been purloined, at least substantially, from Hunter's portly volumes. It is hard to believe that such a theft could have been perpetrated by any rational being, and yet such would seem to have been the fact. Possibly, however, its atrocity may, after all, not have been so great as it is generally believed to have been. Sir James Paget, in his admirable Hunterian oration for 1877, expresses the belief that, through the care and fidelity of Mr. Clift, the MSS. had been, in great degree, utilized to Hunter's advantage before they were committed to the flames.⁴

RECENT PROGRESS IN FORENSIC MEDICINE.

BY F. W. DRAPER, M. D.

THE MEDICO-LEGAL VALUE OF SUBPLEURAL ECCHYMOSES.

SINCE Tardieu, in 1855, declared that "sanguineous extravasations scattered under the pleura, under the pericardium, and under the scalp, in whatever degree, and however few in number," were the specific lesions

² Dr. Baillie was the most popular and distinguished physician of his day in England. He was a pupil of his uncle, Dr. William Hunter, a brother of Joanna Baillie, the authoress, and the last medical man in London who carried the celebrated gold-headed cane, now in the possession of the Royal College of Physicians. In 1793 he published his celebrated work on Morbid Anatomy, for a long time the only treatise on the subject in the English language.

³ In burning these MSS. Home asserted that he had simply acted in accordance with his brother-in-law's injunctions. I cannot, however, find any reference to this subject in Hunter's will, and as he died very suddenly and unexpectedly it is not very probable that any such instruction was ever delivered.

⁴ Mr. Clift was the first curator of the museum, and served in that capacity upwards of forty years. In speaking of Hunter's papers Paget remarks: "All that was most important in the manuscripts is now published, the greater part by Mr. Owen in the *Essays and Observations*, and in his *Physiological Catalogue of the College Museum*. Whatever related in any way to the Hunterian specimens of morbid anatomy is printed in my *Pathological Catalogue*. The notes of the lectures are lost, and so also are some observations on surgery; but, on the whole," adds Paget, "I think that nearly all that was of great value was saved through Clift's fidelity."

¹ Henry Clive, Hunterian Oration for 1816. Adams's Life, p. 262.

of death by suffocation, subpleural ecchymoses have been studied attentively by medical jurists. For a long time, in France and elsewhere, Tardieu's statement was accepted; but it has not escaped criticism and denial. One of the most recent expressions of a feeling of doubt concerning the significance of the appearance alluded to is found in the record of the International Congress of Legal Medicine, in Paris, in 1878, wherein the following conclusion was reached and formally adopted: "Subpleural ecchymoses, which have been given as an indubitable sign of death by suffocation, cannot have, by themselves considered, any value in legal medicine, the causes which can produce them being very varied."

In an elaborate review of the subject, undertaken in consequence of these later criticisms, A. Henocque has given a valuable contribution to our knowledge of these minute extravasations.¹ Granting that it is in death by suffocation that we find these lesions most constantly, the author remarks that instances have been recorded of death by this cause wherein the ecchymoses were not found; and, on the other hand, many cases have been observed in which, after death from causes other than suffocation, the appearances in question were fully developed. In this latter class are included various forms of violent death, as, for example, death by poison (phosphorus, arsenic, mercury, strychnia, etc.), by drowning, hanging, and strangulation, by chloroform and charcoal vapor. But it is not alone in death by violence that the ecchymoses are manifested: they have been observed in cerebral and spinal affections, in eclampsia and epilepsy, tetanus, cerebral hemorrhage, meningitis, and sunstroke; in croup and diphtheria, whooping-cough, pneumonia, and suffocative catarrh; in diseases of the heart; and, in infancy especially, in bronchitis, lobular pneumonia, and the pleuro-pulmonary complications of measles and diphtheria.

Henocque insists that the older authors were not sufficiently exact in their description of the lesions referred to. He says: "One ought to consider as subpleural ecchymoses those extravasations of blood recalling the spots of purpura, punctate, rounded, or scalloped, which, situated under the pleura, are easily distinguished from lesions of the pulmonary parenchyma." Histologically, they consist of a mass of red globules, crowded together, forming a small disk, with its edges ill defined, developed under the pleura, and not penetrating into the pulmonary lobules; they seem to disappear when the lung is decomposed or dried, but insufflation restores their original appearance, if care is taken not to do the operation too vigorously; they are anatomical lesions due to the rupture of the capillaries situated at the periphery of the lobules under the pleura, and are to be distinguished from the larger hemorrhages which accompany apoplectic nodules, emphysema, and pulmonary edema.

General physiology has lately shown us the subpleural ecchymoses under a new aspect. Brown-Séquard has demonstrated the production of ecchymoses and of effusions of blood into the lungs in consequence of a lesion of certain parts of the brain; wounds of the pons Varolii in the vicinity of the insertion of the peduncles of the cerebellum quickly produce them.

In the presence of all these facts it is necessary to give to this sign a limited value in legal medicine; the more so since it is invoked precisely in cases where one

wishes to distinguish by means of it the various causes of death supposed to be violent, such as suffocation of the new-born, hanging, and drowning; and it is in these circumstances especially that the subpleural ecchymoses are, by themselves, an insufficient proof, because it is always open to question. The practical point is that it will always be necessary, at the same time that one notes their presence, to take account of all the conditions which can produce them, and to indicate with care the presence or the absence of cerebral or pulmonary lesions.

As to the mechanism of the production of the ecchymoses under the pleura, Henocque adopts the respiratory theory in preference to the "circulatory" theory of Tardieu, founded on the arrest or decrease of cardiac activity, or the vaso-motor theory of Brown-Séquard. The respiratory efforts, he believes, exercise on the pulmonary capillaries a force which is favored by the peculiar anatomical structure of the pulmonary arterioles, their numerous flexuosities, their larger calibre, their more direct anastomoses, their more open net-work as compared with the capillaries; while the minute pulmonary veins are characterized, on the other hand, by a predominance of circular fibres in their walls, rendering their contractions more active and quicker than is possible in other parts of the venous system.

THE RATE OF COOLING OF THE HUMAN BODY AFTER DEATH.

Dr. J. Wilkie Burman has recorded the results of an interesting series of observations which he has conducted with evident care.² The following are his conclusions: "The mean average rate of cooling of seven dead bodies, all under fairly similar conditions as to external circumstances, was $1\frac{1}{3}^{\circ}$ F. per hour, the minimum rate being $1\frac{1}{5}^{\circ}$ F., and the maximum being $2\frac{1}{5}^{\circ}$ F. In two of the cases, where the temperature at the time of death was unusually high, there was a considerably greater amount of cooling during the first hour after death than in the other cases, the average rate of cooling during that time in the two cases being $4\frac{1}{2}^{\circ}$ F."

Upon the assumption that, as a rule (according to Goodhart), we should be pretty accurate in estimating the temperature at the time of death in a body found dead to have been $98\frac{3}{4}^{\circ}$ F., the practical conclusion of Burman's observations is, as he remarks, that, "given a body found dead in bed, in a room with a temperature ranging from 50° to 70° F., with ordinary bedding, we may fairly estimate the time of death by taking the temperature of the axilla, the difference between which and the average normal temperature (98.4° F.) divided by $1\frac{1}{3}$ would give us, approximately, the number of hours since the death."

Dr. Burman gives full details of his observations in various tables and in a chart. The dead bodies, upon which the temperature was studied, were those of adult male patients dying in a lunatic asylum. The thermometer was kept in position in the axilla through an average period of thirteen hours, and its record was noted at intervals of an hour each.

IMPOTENCE AND STERILITY IN THE MALE.

Dr. S. W. Gross³ considers these forms of sexual disability as a not uncommon result of a reflex neuro-

¹ *Gazette hebdomadaire*, xvii. Nos. 1, 2, and 3. 1880.

² *Edinburgh Medical Journal*, May, 1880, page 993.

³ *Medical News and Abstract*, September, 1880.

sis arising from inflammatory affections of the reproductive apparatus. He has found that the nervous aberration here alluded to is usually traceable to inflammatory disorders of the prostate, "which bear the same relation to nervous affections in the male that lesions of the uterus do to allied disorders in the opposite sex. The prostate, with its intercalated acinous glands and the structures that are contained within it and that traverse it, as the urethra, the veru montanum, the sinus pocularis, or prostatic ducts, or utricle (which is the homologue of the uterus), and the ejaculatory ducts, are supplied by large nerves derived from the hypogastric plexus of the sympathetic, the sacral plexus of the spinal nerves, and, through the lumbosacral trunk, from the lumbar plexus. In consequence of the free interchange of fibres between the sympathetic and the cerebro-spinal systems of nerves, it is obvious that the component parts of the genitalia are not only in intimate connection with one another, but, also, through the agency of the cord, with remote parts."

The result of this close nervous alliance and of the consequent ready reflex influence of prostatic disease is that in some cases (and this is the most common form of sexual debility) intercourse is possible, though unsatisfactory on account of imperfect or feeble erection and premature ejaculation. In these subjects the exciting cause of the disability will frequently be found to be a chronic hyperesthesia and inflammation of the prostatic urethra. In another class of cases the same morbid sensibility of the prostatic urethra results in entire loss of the power of erection, without, however, loss of sexual desire, so that men so affected are not only impotent, but sterile as well. In still other cases there is actual aspermatism.

The aetiological factor in the cases observed by Dr. Gross was gonorrhoea in more than two thirds of the patients, while in all but one of the remaining instances masturbation was the exciting cause. The undue sensibility of the prostatic urethra here described is readily determined by means of a bulbous exploratory bougie.

CASES OF MEDICO-LEGAL INTEREST.

M. Jalaguier reported the following case before the Anatomical Society of Paris.¹ On the 10th of December, a man received a blow in the right side from the blade of a sword-cane. He lost but little blood, and, believing himself but slightly wounded, he went home rather than to a hospital. Two days later he was admitted to Hôtel Dieu. The appearances at this time were so insignificant that M. Riehet concluded, after careful examination, that the wound had not penetrated the abdominal wall. On the third day after the assault the patient was nervous and restless, and delirium was observed at night. On the fourth day true delirium tremens developed, and this continued till the patient's death, on the eighth day after the injury.

The autopsy was made by Brouardel. The external wound was marked by a small, blackish triangular crust in the right flank. On the inner surface of the abdominal wall the peritonæum presented a red point marking the passage of the weapon. The sword penetrated the liver, entering at the transverse fissure, and emerging on the upper surface two cm. behind the anterior border. There was a wound of the diaphragm, four cm. in front of the opening for the in-

ferior vena cava. In the posterior mediastinum was a large ecchymosis. The weapon entered the heart through the posterior wall of the left ventricle, traversed the cavity of this ventricle, and entered the anterior pillar of the mitral valve (columnæ carnea), which it penetrated to the depth of eight mm., the cavity of the wound being filled with a fibrinous clot, pyramidal in shape, with its base measuring three mm. at the endocardial surface. The total length of the wound, from the point of entrance to its termination in the anterior wall of the left ventricle, was twenty-three cm. (nine inches). The cavity of the peritonæum and that of the pericardium were filled with fluid blood. There was no sign of inflammation in any part, and all the organs were healthy.

M. Jalaguier remarks that without doubt data are not wanting to prove that persons have survived for eight or ten days after a wound of the heart when the weapon was small and sharp. Statistics show that a wound of the left ventricle is oftener immediately fatal than a wound of the right ventricle. As to the immediate cause of the hæmorrhage into the pericardium, Jalaguier suggests that a clot had originally plugged the wound, but this clot in the course of its reabsorption had been expelled.

The investigation of this case raised a delicate medico-legal question: Was death caused by the wound or by delirium tremens? Or, in other words, if the patient had not been under the influence of alcohol, would he have recovered? "One might answer that cicatrization has been observed in wounds of the heart by sharp-pointed instruments. But here a new difficulty arises: it is very plain that the wound, all question of its gravity aside, by the single fact that it was a wound, sufficed to initiate the delirium tremens, so that the death was the result of the reciprocal and consecutive action of the traumatism on the alcoholic temperament, and finally of this on the wound." Professor Brouardel, in his medico-legal report, stated among his conclusions as follows:—

"The death of G. was in consequence of the wound of the heart.

"The access of the delirium tremens determined a pulmonary congestion, which had as a result an increase of pressure in the circulatory apparatus. At the same time and by the same cause the blood became more fluid. These conditions rendered unavailing the resistance to hæmorrhage by temporary clots and blood escaped into the pericardial and peritoneal cavities.

"The death, then, was the result of hæmorrhage supervening in the last hours of life, and having as its cause the wound of the heart and that of the liver. These wounds might have cicatrized if G. had not had alcoholic habits, which promoted an outbreak of delirium tremens."

With the foregoing case, mention may properly be made of an instance reported by Dr. M. M. Robbins, of Aurora, Ill.² In this case there was a perforating pistol-shot wound of the anterior wall of the left ventricle of the heart, the patient surviving till the eleventh day, when he succumbed suddenly. This man had been hit by a pistol-ball (thirty-two calibre), which had passed through the left arm and had penetrated the cavity of the chest through the fourth intercostal space, a little inside the nipple-line. Immediately after the shot the man ran about fifty feet; he

¹ Le Progrès médical, No. 32, 1880, page 649

² The Medical Record, November 22, 1880, page 599.

fell presently into a condition of shock, but reaction occurred satisfactorily, and on the ninth day the patient was out-of-doors. He had no pain or other symptom to indicate that any vital organ had been injured. On the eleventh day he walked about a while in the morning; later he took a short ride in an easy carriage, and, on his return, said that he felt better than at any time since the shot was received. During the rest of the day he was quiet. Immediately after eating a light supper he complained of a severe pain and pressure in the cardiac region, and in a few minutes was dead.

At the autopsy the pericardium was found filled with blood, and there was a "considerable quantity" of blood in the left pleural cavity. The ball had struck the upper border of the fifth rib, perforated the pericardium, struck the left ventricle on its anterior wall, passed into and through the ventricular cavity, and lodged in the posterior wall, penetrating nearly to the external surface. At this point in the posterior wall there was a stellate rupture at the apex of a slight elevation whose wall was very thin. It is possible that this wall was rendered thinner by the action of the roughened surface of the bullet after its lodgment. One of the pillars of the columnæ carneæ was directly over the point where the ball entered the left ventricle, and may have prevented or helped to prevent the flow of blood through the anterior wound.

Hospital Practice and Clinical Memoranda.

CASES OF PNEUMONIA.¹

BY WILLIAM F. BOLLES, M. D.

CASE I. I was called, July 13th, to see a delicate little girl of about five years, who had been as well as usual since having scarlatina the year before, excepting a cough lingering after pertussis in the winter. The day before my visit she seemed as well as usual, and had been playing out in the hot sun, as she also had on previous days. When attacked she vomited, and lay still and listless upon the lounge, complaining of headache. She was flushed and hot, but gave no indication of any local trouble. The attack being regarded as one of mild heat fever, ordinary refrigerants and quiet were directed. She rapidly recovered, and was not seen by her attendant again for a week, when a prominence of the right clavicle attracted the mother's attention. She had been nearly but not quite well in the mean time, and had become a little emaciated. There was a considerable swelling of the upper part of the right chest, chiefly due to the sternal end of the clavicle, which was pushed forward. There was no redness or edema over it, and it was but slightly tender. The veins around and over it were large and blue. A flaxseed poultice was applied, and in a few days more a suppurating gland (?) rose from behind the inner end of the right clavicle, and was opened. In eight or ten days more — August 2d — she went with her parents to Swampscott, but while about house and even out-of-doors for a few days before, on the day of starting she was not quite so well, and wanted her father to carry her the short distance they had to walk to the cars. She had had some cough, which had been worse for a

few days. During the first day at Swampscott she became worse, and on the second and third days still more sick, when I went down to see her. She had scarcely been up since her arrival, and for the last two days had lain abed all the time, hot, dry, and dull, with a hard, frequent cough, and little or no expectoration. Temperature 103° F., pulse 120 to 140. The appetite was gone, and she looked somewhat more emaciated. The granulations in the neck, about half an inch deep, were a little oedematous; the blue veins on the body and limbs seemed to show plainer.

There were dullness and bronchial respiration, with bronchophony and fine râles in the upper five centimeters of the right lung; other parts of both lungs clear.

On being brought home from the shore she immediately began to improve, and in about three weeks was entirely well. An examination made three months later shows that the recovery is perfect. There is a little harshness of respiration, probably of a cicatricial character, at the right apex.

This was a case likely to awaken the gravest apprehension in regard to its result. The delicate habit of the child, the dullness and râles at the apex, the cough, wasting, and fever, the blue veins and abscess, with phthisis hereditary, certainly excused her attendant at Swampscott, especially if the fingers were clubbed and the two sides of the chest different, as they seemed to him to be, in considering it a case of that disease. I relied upon the sudden indisposition of July 13th, which was undoubtedly the beginning of the abscess, upon her fair health up to that time, in spite of the cough, and upon the very rapid course of her sickness during the three or four days of her stay at the beach, to consider it an acute inflammation set up by the abscess and secondary to it, passing across the pleura by contiguity, and the result has confirmed my diagnosis.

CASE II. Of the following case I have lost my notes, but as it was deeply impressed upon my memory, and I had already reported it before another society, I think by the aid of dates of visits, etc., I can give a reasonably accurate account of it in a narrative form. The patient was a store-house keeper, twenty-nine years old, and married. There was no consumptive taint in his family that I could discover, and up to a certain date he was perfectly well. That date was the 17th of June, 1875. Either on this day or evening, after watching the procession, he became very chilly, and had what he described as a terrible cold, with hard cough, pain in the left side, and a good deal of fever. He had no physician then, however; was, I think, laid up for a few days, but did not go to bed, and afterwards resumed his work. As the cough did not abate, he got some transient medical advice of an unknown physician, but had no examination of the chest. When he came to me, nine or ten weeks later, he had lost flesh, was sweating at night, had a loud and hard cough, and felt weak, but still had had no thought of giving up business. His appetite and courage were good, and he protested that there was nothing the matter with him but a cold.

I was surprised to find his temperature 102° F. (his pulse was about 100, but that was to be expected), and still more so to find, upon examining his chest the signs of pneumonia in the lower lobe of the left lung, — in the stage of resolution, — dullness and coarse râles; no trouble elsewhere. His night-sweats disap-

¹ Read before the Boston Society for Medical Improvement, January 24, 1881.

peared under the use of ergot. He improved for a year, worked at his business most of the winter, went to the mountains in the summer, was better the next fall, failed the next spring, and died about two years from the time when I first saw him, after breaking down in both lungs and frightful hæmorrhages.

This would have been far more conclusive as an instance of lobar pneumonia eventuating in a chronic form, had I or some one seen him at the start and properly examined his lungs; but the history of previous health and sudden invasion after exposure, without predisposition to tuberculosis, was so positive that I am inclined to regard it as such. On the other hand, the extreme rarity of an inflammation of one entire lobe existing as an acute attack and allowing the patient to continue out of bed bears strongly against it, and it is not impossible that a catarrhal form existed from the first. Its origin in the lower lobe would be remarkable even in this case.

CASE III. A young married grocer first sent for me June 20th, having a day or two before had chills followed by very quick pulse and moderately elevated temperature. He had some cough, the cheeks were flushed as in pneumonia, the urine was diminished and dark, but his respirations were not more than 20 per minute, full and deep; the chest expanded and contracted perfectly, gave an exaggerated and tympanitic resonance everywhere, and the respiratory murmurs were everywhere full, — a little puerile, — perhaps, but if he had appeared well I should have declared the lungs to be sound. He was far from well, though, and when I was first called had fallen into a state of collapse, which had alarmed his family and previous attendant into the belief that he was dying. From this gentleman I learned that he had had a cough, regarded by him as bronchitis, for six or eight weeks, but he had been always to his business, and never had any elevation of temperature. He had examined the lungs on the day before with the same negative result as myself and also examined them with me. It seemed to us both that the patient would die in a day or two, and that he probably had miliary tubercles.

On the fifth day, the third of my attendance, I wrote that "the patient was restless, groaning and tossing on account of flatulence and distress in the stomach" (he was always dyspeptic, and had more or less trouble of this kind, and it followed him through his sickness, requiring frequent medical interference). "There is a spot of bronchial respiration and bronchophony, not very well marked, at the inner border of the left scapula." In the afternoon he was less troubled with flatulence, slept comfortably, and seemed better.

Next day there was slight dullness at the affected spot, and the signs above noted were more marked. And again, on the day following, râles could be heard over most of this side, behind, with slight dullness and some degree of bronchial respiration and bronchophony; not enough to hide, however, the spot first attacked, which presented evidence of complete solidification in the most typical manner. Occasional râles were heard upon the right.

On the third day after his chills (my first day) his temperature was about 103° F., and rose on the fifth to 103.5° F.; then it began to drop, and on the twelfth day reached 99° F. The pulse, starting at the same time at 136, reached 80 on the ninth day, and then began to rise again. The respirations were remarkable. When the pulse was 136 and the temperature 103° F.

they were only 29; gradually rose in five days to an average of 30, and reached 20 again on the nineteenth day. He improved, as if getting over a lung fever, and had the appearance of convalescence at about this time.

On the twelfth day the following record was made: "There is slight dullness of the left front, with exaggerated respiratory murmur; no râles in front. Respiration and resonance of right side normal;" the tympanitic resonance noticed at first has disappeared. Râles and dullness in the middle left scapular region, as before; dullness doubtful below.

Fourteenth day. Back clearing; a little spot of solidification, with a few râles around left nipple (corresponding to the one in the back).

Then a little more trouble invaded the left base and left it again. On the whole, the lung seemed to be clearing, but the spot which first appeared never disappeared, now becoming larger, and again smaller, but always solid. On the thirty-sixth day, for instance, "a spot as large as the palm of the hand around the left nipple and a corresponding space behind were solidified; the apex was clear, and but few râles, with moderate dullness, were left below; nothing upon the right." The temperature and pulse were each about 100; the respirations not above 25, generally below. He got better, and out in the fall. The temperature kept most of the time below 100° F. The cough and greenish and thick expectoration continued. He gained some flesh, at one time, but the lungs never cleared any more, nor changed much, while I saw him. The winter was spent in Georgia, from whence he returned the next June to die.

This case I do not regard as one of ordinary pneumonia, resulting in the chronic form, but rather as chronic pneumonia from the first, beginning long before he was taken to bed; quiet at first, but developed by an intercurrent acute attack. I had neglected to say that there was a moderate phthisical tendency in the family. The previous history of cough, however, was not prominent, nor was the cough the warning lacking of tuberculosis. A well-developed cold, resulting from exposure in the spring, was regarded as its origin. The irregular manner in which the pneumonia advanced, the disproportion between the amount of lung involved and the symptoms, together with its peculiar position at all times, prevented a favorable prognosis; yet at the end of ten days the only suspicious sign was the slowness of the respirations, and their rise in frequency as the pulse and temperature fell.

CASE IV. Mr. M., a young man of twenty years, of excellent general health, by occupation a clerk, took cold a week before sending for me, but continued up and about, and went to church, even, two days before; in the afternoon, after returning from church, he walked out without an overcoat. On the next day he had chilly feelings, but no decided chill, followed by pain in the left side, for which he took a "rum sweat" in the evening, in vain.

When I first saw him he was up and dressed, but feverish, with flushed face and steady cough. He complained moderately of the pain in his side, which was a dull ache; the expectoration was rusty and not abundant; the pulse was high, but not recorded; the temperature 104° F. Dullness and bronchial respiration were to be heard over the lower lobe of the left lung. (Quinine.) The patient was an only son of indulgent parents, unaccustomed to self-restraint, nervous, excit-

able, and willful, — on the whole, the most uncomfortable and unreconciled person of adult years that I have ever seen; but the disease seemed perfectly simple. I wrote that evening in my memorandum book, "I have seen to-day a case of pneumonia remarkable for being exactly typical [having previously had a number of irregular and very serious cases, this seemed to me worth noting]: every symptom is present in about its proper intensity; there is nothing absent which would be expected in a model case, and nothing present which would not be."

For the next two or three days he seemed moderately sick, very restless and uneasy, with bronchia-respiration, dullness, and bronchophony, rusty expectoration and pain, much as at first; râles few and not prominent. — at first, none. Temperature 104° F., pulse 120, respiration 30.

On the sixth day from the chill, when all seemed to be going on well, he had a sharp attack of pleuritic pain, lasting all the following night and into the next day, accompanied with a slight rise in the temperature and pulse, which had gone down several numbers, and a great rise in respiration to 40 per minute. So far during his sickness he had been so cross and impatient, so restless and obstinate in throwing off the clothes and stripping himself generally, that, although three persons were in constant attendance upon him, we all thought that he had taken cold from exposure. He was not still a minute, but panted, coughed, tossed, and scolded the entire time.

Next day, the eighth, he became quieter, and slept considerable; could lie upon the right side previously only upon the back.

On the ninth day there was pain in the lower part of the right side. Examination showed roughened respiratory sounds throughout the right lung, with occasional coarse râles; broncho-vesicular respiration, friction sound, and slight dullness at the base, back, and side. Râles abundant everywhere in the left side, back, and front, excepting at the apex. They were coarse and clearing below; finer, with bronchophony in the middle portion of the back, where the dullness was most marked. Below there was more resonance than at time of previous examinations; moderately dull in front. Thus, as was to be expected, the lobe first attacked was already in process of resolution; but the trouble had advanced into the upper lobe on the left, which was partly solidified, and made a slight attack upon the lower part of the right. There had been local inflammations of both pleurae, but no evidence of effusion into either.

On the tenth and eleventh days defervescence took place, and, in spite of the active condition of the disease in the middle of the left lung, the temperature dropped on the eleventh day to 98.4° F., the pulse to 92. The respiration kept up above 40. Although uncomfortable and nervous, he appeared to be convalescent.

On the twelfth day he was examined, the result confirming entirely that of the ninth; but as this state of the lung lasted a considerable time and was a source of great anxiety before the end of the case, I will read it once more: There is dullness of the entire left back; clearing below, with broncho-vesicular respiration; in the lower scapular region intensely dull; bronchial respiration with fine râles marked; above less dull; respiration partly vesicular; the abnormal sounds of the right side have partly disappeared.

For several days there was very little change; he

had a little pain all the time in the left side, sweat considerably at times, and was, as usual, restless and irritable. The cough was not, after the first five or six days, excessive; after the first week it diminished notably, and by the end of the second there was very little; the expectoration, too, was scant, or none.

Twentieth day. Short, dry, irritating cough.

Twenty-first. Comfortable; vomited.

On the twenty-second day there was no change in the sounds of the left back from those of the twelfth. The front was becoming more dull; there were a few râles again at the extreme base of the right. He appeared somewhat better, and the tongue, which at first had been heavily coated, was quite clean; his appetite (for milk and liquids) had so far been very good. The urine, which had been high colored and scanty at first, but later quite normal, suddenly became very bloody, with disseminated corpuscles and albumen; it was so red as to be opaque in a four-ounce phial. There is and has been at times pain in the lower part of the right side; expectoration streaked with blood, not abundant; sputa mucous, very tenacious, clear, white.

Twenty-fifth day. Almost no change in the left lung; slight friction at base of right. (Dr. Edes in consultation.) The left front is becoming duller; tubular respiration and râles have advanced almost to the very top; scarcely any sounds can be heard in the middle of this lung, either in front or behind, in consequence of the almost complete absence of respiratory movement on this side. The scapular region is almost flat, and the voice sound approaches egophony; right base still dull, with diminished respiration. The appetite has completely disappeared; he feels full and bloated; vomits. Urine still red. Dyspeptic, dull, and depressed.

Twenty-seventh day. Vomited. (Dr. Edes again.) The most intense dullness and bronchial respiration now are from the apex down along the sternal half of the chest; in front and the middle of the back coarse and gurgling sounds; elsewhere in front lower, and median regions behind clearer. The patient, who had begun to sit up ten days ago in a chair, has not been up for a week, is pale and cachectic, takes no solid food, and strenuously objects to liquids.

Twenty-eighth day. Urine becoming clearer. Ate a little breakfast.

Upon the thirtieth day pain appeared near the right saphenous opening, increasing by the next day to a high degree of severity, extending down to the calf, which is about as tender as the groin, and up along the right side. The leg was drawn up, and the slightest motion caused excruciating agony; when perfectly quiet it was sometimes comparatively comfortable. The tongue became dry on account of his panting and groaning, and the respiration rose to 48 per minute from the same cause. The leg was becoming oedematous. Vomited. There was still no sign of clearing in the middle part of the lung, which had been solidified nearly a month. The breath was offensive. The urine, which had cleared itself nearly of blood, then (thirty-fifth day) suddenly became red again, with increase of vomiting and complete absence of appetite. (Gallic acid given and discontinued). Patient very nervous, restless, and thirsty.

The fortieth day arrived, with no improvement, and all medicines and food by the stomach were given up, and he was to have nothing but egg and milk

injections, varied at times by brandy and beef tea; and this mode of feeding was continued for several days.

For nearly a month there had been very little expectoration. His cough, after the first week, with a few exceptions, was never excessive, and much of the time he would raise only half a dozen mucous sputa in the course of the day; but suddenly, on the night of the forty-first day, he began to cough violently, and continued for several hours, raising during this time fully four ounces of pure pus, creamy yellow and not tenacious. During the day following half as much more came up, and on successive days a still further quantity. The leg continued swollen and unmanageable, but less painful.

He was as savage as ever, and at one time refused to take anything in any way for a day, quarreled with his mother, and was so sullen that I doubted his entire sanity for a moment. Still, he appeared better, and on the forty-fifth day began to eat a little; on the next raised more pus, ate a fair supper, and went without injections; was bright and talkative.

I recorded an examination of his chest on the forty-eighth day. The right side was nearly normal. Left front, bronchial respiration at apex four fingers' breadth; broncho-vesicular with râles in the middle of the chest; very little sound below the nipple; resonance dull above and below, good in the middle, a little tympanic if anything under the third rib; behind the respiration was vesicular, with râles below, bronchial, and very much diminished beneath the scapula, with oërophony fairly marked above the middle; bronchial above. He coughed a good deal, and raised much pus during the night; urine but little bloody; appetite very good.

From this time forth it is hardly necessary to follow his improvement by daily records. He gained slowly and doubtfully for a while. There was another attack of bloody urine, with diminution of appetite, and a coughing spell upon the sixty-first day, during which he raised half a pint of pus; but in general he ate and slept well, gained every day a little, became cheerful and tractable, began to sit up about the fifty-fifth day, walked a little a week later, in which he was much hindered by his greatly swollen leg, and got out-of-doors in about three months. The left side is almost passive in respiration, has shrunk considerably, and the sounds therein are very much diminished. I made a number of careful examinations of the exact position and character of the abnormal sounds, which, if the case had proved fatal, would have made an autopsy exceedingly interesting, but as it is have no prospect of being tested. I visited him this morning, however, to make one further observation upon him. He is rapidly improving; walked a mile and back yesterday without fatigue; "could have walked five miles, only that his leg pained him a little." The whole leg is still slightly swollen; can run without getting much out of breath. Has had but very little cough for a fortnight. Feels well enough to return to business.

EXAMINATION: MEASUREMENTS.

Under the arm	78 to 82½	cc.
Each side right	42	"
" " left	39	"
Expansion, right	3	"
" left	0.5	"
At ensiform level	75.5 to 79.5	"
Expansion, right	2	"
" left	1	"
Each side right	42	"
" left	37	"

There are no râles to be heard anywhere. The respiratory sounds are not loud, and are rather sluggish, but not otherwise abnormal in the right side; in the left they are still more faint, and in the scapular region are scarcely to be heard above the general muffled roaring everywhere in the chest. The voice sound and resonance are good everywhere except in this space; the front has cleared remarkably.

This case, if I am not mistaken, began as a simple pneumonia, involving the lower lobe of the right lung, and following, so far as that lobe was concerned, at first the ordinary course, resolution beginning and the fever abating on the ninth or tenth day. Before this took place, however, an invasion of a slower and more destructive type of the disease had attacked the middle of the lung and ruined it; the left pleurisy was coincident with this advance, and probably a part of it, as the pain was referred to this location; from this point as a centre and source of irritation inflammation extended in all directions, gradually working up until the apex was reached, down in front to the base again, outward and inward as far as it could go, but not quite reaching the bottom of the back, then gradually receding a little as the active stage of the abscess passed by. The rupture of the abscess, its evacuation, and the collapse of the side were evident enough to need no comment. The repeated attacks of hæmaturia were undoubtedly due to successive infarctions in the kidney, resulting from thrombosis in the lung, and the thrombus in the femoral or iliac vein was a part of the same trouble. It is well worth considering whether the inflammation of the middle of the lung (or rather the lower part of the upper lobe), with all its consequences, was not due to the uncontrollable restlessness of the patient; if he had had a cellulitis of the leg, and had kept it constantly turning from side to side, or kicking in the air, he could not have treated it worse than he did his inflamed lung by the panting, grunting, scolding, and tossing of the first weeks of his illness.

There is, on the other hand, good reason for believing that there may have been a local empyæma, which broke into the lung; yet it must have been strictly confined, since before it broke there were resonance and respiratory sounds to be heard both above and below it. He spit up frequently streaks of blood during the few weeks previous to the discharges, and his breath was at times offensive, but the pus when it came was pretty pure at first, afterwards tenacious and mixed with sputa.

A chief point of interest in these last three cases to the writer, but one which can hardly be presented on paper, was the fact that at an early stage there was a very strong resemblance in the condition and appearance of the patients and the physical signs, although there were certainly two and perhaps three quite distinct diseases.

— (Scene: office in Dublin Life Insurance.) Surgeon of the company: Heart and liver sound as a bell. Be Garge, ye've the finest life I ever saw, sor! What's your business or profession now?" Applicant: "I have n't got any." Surgeon: Fwhat! ye don't mean to say ye've got land?" Applicant: "A few acres." Surgeon: "Faith, thin, I'm sorry for ye, but ye won't do for us!" (Certificate refused.) — *Punch*.

A CASE OF GUMMOUS INFILTRATION OF THE INGUINAL GLANDS, FOLLOWED BY A PUSTULO-CRUSTACEOUS SYPHILIDE.

BY F. R. STURGIS, M. D.,

Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc., etc.

THE case I am about to relate is of special interest in several ways, and in none more than in showing how easily the glandular and peri-glandular enlargements in the late stages of syphilis may be mistaken for ordinary buboes and attributed to other than to their true cause. Nor is this of importance solely from a diagnostic point, for the treatment of the two varieties of bubo is entirely different, and what would answer for one would not for the other.

On December 13, 1879, I was consulted by a gentleman for a swelling in the right groin, which had lasted for a few days, and which had, so far as he could give me any history of his case, come on without injury. Upon examination, I found in the right groin a swelling 2" in length and about 3/4" in breadth, tense and brawny to the touch, without any appreciable redness, and presenting no fluctuation; no pain was complained of. This swelling seemed to be composed of an infiltration of some sort into the glandular and peri-glandular tissues of the part, which matted them firmly together and prevented the component parts from being distinguished from each other. Some limping of the gait was apparent, due less to pain than to mechanical impediment from size. A few days later a similar but smaller swelling came on in the left groin.

This condition of affairs puzzled me exceedingly; I was disposed to suspect something more than an idiopathic adenitis, and yet the patient strongly denied any syphilitic antecedents. The only thing to do was to await developments. Tincture of iodine was applied to the bubo once every day, which diminished the pain, but did not reduce the swelling.

He then left town for a short time, returning again on the first day of January, 1880, as badly off as, if not worse than, when he went away. During his absence the swelling had again become painful, and, worse than all, in the centre of each bubo was a spot of softened, broken-down tissue. Again a careful examination failed to reveal any vestige of present venereal disease, such as a simple venereal ulcer, or an urethritis, and the history gave me no account of an injury. What was to be done? Open the buboes? I could not divest my mind of the idea that these buboes did not contain pus, and I therefore determined to await further developments. The patient meantime was losing flesh and strength, and his mental excitement was but too plainly shown in his face. Iodine was still applied locally and a ferruginous tonic was given internally.

Matters remained stationary until January 6, 1880, when he appeared one day with a pustular eruption on his legs. This eruption began, he told me, as round hard lumps under the skin, which rapidly pushed forward and became crowned with a pustule. These speedily broke down and were covered with crusts, in which condition I saw them three days later, that is, on January 9, 1880. There was now no longer room for doubt in my mind. A case of syphilis of the pustulo-crustaceous kind stared me in the face, and the buboes were fine examples of gummosus infiltrations of glands. I then modified my previous treatment. The ferruginous tonic was discontinued, the iodide of potas-
ium

was substituted in ten-grain doses thrice daily, to begin with, and the iodine locally was continued. For the next ten days the pustules appeared rapidly from his ankles up to his waist; these pustules ulcerated and became crusted, so that on January 16th there were on the lower portion of his body a dozen scabs, and that in spite of the gradual increase of the iodide up to twenty grains thrice daily. The iodine was discontinued after a few days' use, and one half drachm of a twenty per cent. ointment of the oleate of mercury was then substituted, to be rubbed into the groins. The iodide was steadily pushed to a point where the patient was taking fifty grains three times daily, with the intunction of half a drachm of the oleate of mercury at night. In the mean time, before this amount had been reached, the inguinal enlargements were reduced in size, and the softened central spot had not opened. The pustulo-crustaceous eruption was quite slow at first in coming under the influence of treatment, but when once this was established they also disappeared favorably. After the oleate had been used for some time it was discontinued, and on February 10th the following changes in the treatment instituted: the iodide of potassium was given twice daily in fifty-grain doses well diluted with water, after eating; and at midday, also after eating, one half grain of the protiodide of mercury in pill form was given. As soon as the pill was substituted for the third dose of the iodide the improvement in the eruption was very marked. This eruption, on disappearing after the dropping off of the crust, left a deep purple stain behind it which gradually faded away, to give place to a white, depressed cicatrix.

It must not be supposed that this eruption, detailed above, was the only one which appeared. On the contrary, from time to time, fresh pustules have sprung up, but these have shown little tendency to ulcerate, and have speedily dried up. They were for the most part confined to the legs and buttocks; a few of them, however, have come upon the face, especially upon the forehead.

The generally condition of the patient was at first very poor and very feeble; as the specific treatment began to get the upper hand of the disease, he rallied, and finally it was pleasing to note that as his system came more and more under the influence of the medicines the gain in health and strength was rapid and marked.

In questioning him again with regard to any previous history of syphilis I failed to elicit anything definite or of value about the past. He was an intelligent and an educated man, without the slightest desire for concealment or evasion; indeed, he was most solicitous about his condition, and very anxious to give me any aid he could to arrive at a correct diagnosis. Yet he was able to give me nothing in the slightest degree trustworthy, and the diagnosis had therefore to be made from present indications, and without any regard to previous histories.

In this case there are several points of interest, — namely, many of importance, — upon which the correctness of the diagnosis may depend, and to which I desire particularly to call attention. The first is the appearance of the adenitis, unattended by any symptoms which would serve to assist in forming the diagnosis. There is no definite history of previous syphilis; there is no present urethritis, nor ulceration, either declared or concealed, to assist in forming an opinion; the sur-

geon is brought face to face with a bunch of glands which are brawny and matted together, resembling more than anything else the glandular inflammation concomitant with the chaneroid, and yet with no chaneroid discoverable to give it a plea for existence. And then, as if to add still further to the uncertainty, this swelling begins to show a soft spot, apparently threatening suppuration. Nor does the character of the pain give a clew. In this case, although present, it was not acute, but of a dull, heavy character, and the bubo itself was not accompanied by redness nor any inflammatory symptom; in fact, it did not differ from that variety of abscess known as the cold abscess, the *abcès à froid* of the French, and which sometimes occurs in glandular as well as cellular tissue. Yet with all these circumstances pointing to the bubo as being one of spontaneous and idiopathic origin, and perhaps requiring incision, I could not make up my mind to do so, nor could I divest myself of the idea that it was due to syphilis. Fortunately my patient was a sensible man; I told him my suspicions, and strongly advised an expectant treatment for a short time. The wisdom of the advice was apparent as soon as the pustulo-crustaceous eruption appeared, for had the buboes been opened the result would have been a long tedious necrosis of the gland and an ugly cicatrix.

As soon as the pu-tules broke out the absence of any syphilitic history was of comparatively little importance, inasmuch as I believe that a pustular eruption occurring in an ordinary healthy adult, say, between the ages of twenty and forty-five, is ninety-nine times in a hundred due to syphilis, and will yield to anti-syphilitic treatment; hence the moment these pustules appeared my mind was made up as to their nature, and my plan of action decided upon. Perhaps it may sound like too sweeping a remark to say that in adult life, when the patient is in otherwise tolerably good health, a pustular eruption is very nearly always due to syphilis; nevertheless a quite extended experience with venereal and skin patients leads me to state it as broadly as I here do, and I will relate a case which first attracted my attention to this point, and which made a lasting impression on my mind:—

Several years ago, shortly after the commencement of my professional connection with the late Dr. Bumstead, a young man of fine physique, an athlete, twenty-eight years of age, came to consult us about a large pustule seated upon his back, which was of one week's duration. On asking him about any recent venereal affection, he denied having had intercourse with women for a year past, as he had been in training for boat and foot races during that period. As to it being an ordinary ecthyma, his healthy appearance negated that idea, and yet one single pustule did not seem sufficient to base a diagnosis of syphilis upon. While we were debating what to call it he said he had something else to show; not that he considered it of any importance, but he was curious to know what it meant. He then unbuckled his trousers and showed us a magnificent syphilitic orchitis of one of his testicles. This, he said, had lasted about two or three weeks, did not pain him at all, and its size was the only cause of calling his attention to its condition. He was placed upon the mixed treatment, and in course of time the pustule and the orchitis disappeared.

Oddly enough in the course of this year, 1880, I have seen another case of gummous infiltration of the glands of the groins, which, however, had a previous history of

syphilis. I have ventured to report the case here presented, because it lacked a history, and because I wish to emphasize certain symptoms which occurred in its course and which I believe will be of use in forming a diagnosis in similar obscure and puzzling cases.

16 WEST THIRTY-SECOND STREET, NEW YORK.

GANGRENE OF BOTH FEET; PIROGOFF'S OPERATION.

BY DR. R. MENGEL, SAN ANTONIO, TEXAS.

In November, 1880, a Mexican pauper, aged fifty-one years, was admitted to the charity hospital with spontaneous gangrene of both feet. The gangrene reached from the toes to Chopart's joint with a sharp line of demarcation. The third day, with antiseptics and Esmarch's bandage, I performed Pirogoff's osteoplastic operation on both feet, Drs. B. E. Hadra and Adolf Hertf assisting. The vessels were tied with fine carbolized silk, and but little bleeding and no after hæmorrhage occurred. As the right calcaneus was sawed through, a small place infiltrated with pus presented itself, which was removed. After careful dissection and disinfection of the stumps they were provided with drainage tubes and bandaged with absorbent cotton, reaching up to the knee-joint. On removal of the bandages the second day the wounds looked fresh and seemed united by first intention; they were again disinfected with a weak solution of carbolic acid through the drainage tubes and then bandaged with plaster of Paris; which had to be removed the next day, being soaked with serum. The temperature was always normal.

Strange to say, until the second week the wounds made a most satisfactory progress, discharging little but laudable pus. At this time I was greatly alarmed from the fact that the patient twice soiled his bed, having taken a purge, and as he failed to report his condition he was left for two days in his helpless and unclean state; whereupon an enormous decubitus of the sacrum developed itself. The whole anterior ligaments of the os sacrum and tubera ischii were laid bare and the gluteal muscles and soft parts around the anus sloughed. With good care afterwards and stimulating diet and medication his general condition improved. The decubitus was disinfected with salicylic powder and solutions of permanganate of potassa. Later it was dressed with zinc ointment. From the beginning of the decubitus also the stumps began to appear worse; the discharged pus was very foul; the drainage tubes had to be removed, and the wounds were disinfected with a strong solution of carbolic acid. A phlegmonous inflammation of the left leg and erysipelas set in, which reached to the thigh. A deep incision was made above the condyle along the tibia, when a pint of pus and necrotic tissue was evacuated. After this, the inflammatory symptoms of the leg disappeared, but the other (right) leg showed a very severe erysipelas, especially of the upper portion, reaching upward over the whole body. During this period the patient was well nourished with egg nog, quinine, and whiskey, and different preparations of iron were given, the muriated tincture of iron proving the most beneficial. Under this regimen the general condition again improved, so that the stump wounds which were disinfected every second day with carbolic water, granulated freely.

Up to date, after six weeks, the patient has remarkably improved. The bed-sores are granulating well, the stumps are also uniting, especially the right one.

The above case is surely an interesting one and worthy of publication, inasmuch as it shows what antiseptic treatment with good care can accomplish even in a debilitated old man. Of two other Mexicans, one of whom I exarticulated the hand for total spontaneous gangrene, and on the other the toes, the first died after nine days from tetanus, being in the highest degree emaciated and neglected before the operation, the other died at the end of the fourth week from general marasmus. All of these cases were operated at the joint nearest to the line of demarcation, and in none secondary gangrene of the stumps developed. It is well known that most patients affected with gangrene die from marasmus and if, therefore, the general nutrition can be restored by proper treatment, amputation is surely the most rational means of treating a decayed member—which gradually destroys the vital powers through septic self-infection.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROICH, M. D., SECRETARY.

JANUARY 24, 1881. DR. JAMES C. WHITE, permanent chairman, presided.

DR. BOLLES reported some interesting cases of pneumonia. Vide page 104 of this journal.

DR. MIXOT thought the cases in which lobar pneumonia was followed by chronic lung disease (phthisis) were rare, though they sometimes occurred. As a rule, the lung was left uninjured by pneumonia, an evidence of the non-inflammatory character of the latter disease. In a few cases he had seen a severe catarrhal condition of the lung, which eventually recovered, resulting from pneumonia. Where there existed a strong proclivity to phthisis it was reasonable to suppose that the disease would be developed by pneumonia, but he thought this seldom happened.

DR. KNIGHT said that he had been struck with the insidious development of croupous pneumonia in several cases recently. In one, a lady of about thirty years, there had been bronchitis two weeks, then a gradual consolidation of one lower lobe and gradual resolution, the whole process being of about six weeks' duration. In another, a child of ten, walking about, a persistent hacking cough attracted attention to the chest, and commencing consolidation was found, which went through the usual signs, and the patient made a good recovery. There was no pain, but little fever, and nothing which suggested such a serious condition. Dr. Knight said that he should be inclined to think that in the last case reported by Dr. Bolles a circumscribed empyema had broken into the air-passages, rather than that there had been a true abscess of the lung. Pulmonary abscess in acute pneumonia was a very rare occurrence. It was attended usually with exceedingly grave symptoms,—rise in temperature and pulse, and perhaps delirium. The sputa was bloody or chocolate colored. Microscopic examination might show elastic tissue of the lung.

DR. BOLLES said that no microscopic examination of the sputa was made in his case.

DR. KNIGHT remarked that the remaining contraction of the chest pointed to the previous occurrence of pleuritic effusion.

DR. BOWDITCH spoke of the importance of not sending patients with troublesome coughs to the seaside, as much harm is done by their going even so short a distance as to Swampscott, and in reply to a question he stated that although the South Shore might be less harmful than the North, yet he would not advise either, and that he would not even send these patients to the shores of Buzzard's Bay.

DR. KNIGHT mentioned the excellence of Eastman's Hotel, which is situated in Southern Georgia, the best dry region of the South.

DR. A. T. CABOT showed a jagged fragment of mutton bone measuring three by three and a half cm., which he had removed with the bristle probang from the œsophagus.

The patient, a middle-aged man, had swallowed it a week before he was seen, and for the greater part of that time it had lain just above the cardiac orifice, from which position it was dislodged and removed.

DR. BOWDITCH asked permission to refer to the following case, in order that he might ask a question in reference to the treatment of similar abdominal diseases. A healthy girl came from skating; she thought herself well and appeared so. At tea time she felt that her stomach was somewhat out of order, and she ate but little food, because she thought it best not to take the usual amount. The next day she vomited food that had been taken three or four days before. But she still had no serious symptom. The abdomen, until death, which took place in a few days, was never distended. The sole thing noticed was a little tenderness about the caecal region, but no tumor was felt there. Two days before death she suddenly vomited about half a pint of grumous blood. The next day the same symptom occurred, and she became worse. She died in a few days only from the time of the first attack, having never shown any marks of positive local disease, save the slight pain in the caecal region, above mentioned. The diagnosis was not made before death. At the autopsy there were found splæchus of a part of the appendix cæci and a small quantity of pus about it. No general peritonitis. The question Dr. Bowditch would ask was this: Shall we not in cases like this, where the patient has evidently some local acute or chronic trouble in the abdomen threatening death, make an incision through the abdominal walls and seek for the difficulty? Under the spray as used of late by ovariologists such an operation is comparatively innocuous. Dr. Bowditch believed that such an operation will be considered wholly proper in a few years, if it be not now. Among the profession thoracotomy, when it was first performed by Dr. Wyman, was as much opposed as an abdominal section, for such a case as had been alluded to, would be now. But, as in the case of aspiration of the chest, Dr. Bowditch was confident of the ultimate reception of the operation by all, so he had the fullest persuasion that abdominal explorations under carbolic-acid spray will be the rule in very many cases, certainly in all where death is evidently threatened. Dr. Bowditch would like to hear the opinion of members upon the question. Dr. Bowditch said that in these suggestions he did not mean to include cases of evidently malignant disease.

DR. E. G. CUTLER showed specimens from three

cases of phthisis occurring at the Carney Hospital. In the first there was little left of the right lung, an enormous cavity taking up all but a small portion of the lower lobe behind. There was a round ulcer of the stomach situated on the lesser curvature near the pylorus, and about as large as a quarter of a dollar. Tuberculous ulcers were also found in the intestine. The case was of long standing, and nothing in the symptoms pointed towards the ulcers. In the second case, in addition to the lung appearances, relatively old infarctions were found in the spleen and kidneys. The source of the emboli was afterwards found to be from a thrombus situated on the wall of the aorta. The patient died within a very short time after entrance to the hospital, and no history was obtained. In the third case there was amyloid degeneration of the spleen, liver, and kidneys, and the patient died of diarrhoea.

DR. ELLIS spoke of the possibility of ulcer of the stomach existing and even going on to perforation without presenting any marked clinical symptoms.

Recent Literature.

Ringworm: Its Diagnosis and Treatment. By ALDER SMITH, M. B. Lond., F. R. C. S., etc. Philadelphia: Presley Blakiston, 1012 Walnut St. 1881.

Dr. Smith, as resident medical officer of Christ's Hospital, London, has had exceptionally good opportunities to study cases of tinea, and has embodied the results of his investigations, during the last ten years, in reference to the diagnosis and treatment of cases of tinea trichophytina, in an excellent little monograph of eighty-one pages, with five illustrations, containing useful and practical hints upon these subjects, especially as to the artificial production of "*kerion*," the inflammatory form of the affection, and nature's method of effecting a cure. Many of his observations have been recently published by him in the columns of *The Lancet*, and have been noticed in the reports of the JOURNAL upon Recent Progress in Dermatology. The favorable opinions therein expressed need not be repeated, nor need they be modified as to the additional matter contained in the nine chapters of this little work, which is calculated to be of service to every medical practitioner in his endeavors to recognize and eradicate this insidious and very troublesome complaint. We call especial attention to the chapter upon Ringworm in Schools, including, as it does, the consideration of the important questions of "certificates" and "isolation."

A Pictorial Manikin, or Movable Atlas of the Human Body, showing the position of the Internal Organs by means of superposed Colored Plates. By PROFESSOR G. J. WITKOWSKI, M. D., member of the Faculté de Médecine de Paris. English Translation of Text, by ROBERT HUNTER SEMPLE, M. D., F. R. C. P., London. With Introductory Essay and Explanatory Anatomical Index, by PROF. D. A. LOOMIS, M. D., late Assistant Surgeon, U. S. A., and formerly Professor of Anatomy in the Pennsylvania Medical College. New York: Published by Joseph Cristadere. 1880.

It may be that the title-page is enough; but still we will inflict on our readers one paragraph of the Introductory. "During the history of man there has been

a universal want, a demand for something that would simplify the study of the science of anatomy; something that would attract and at the same time instruct; something that would call forth admiration and convey to the mind the wonderful mechanism, the economy, the perfect action of the various systems;—in other words, a something that should present to the eye an approximate equivalent for the dissected subject, and thus have in hand, shorn of every objectionable feature, all that was necessary to intelligently obtain accurate instruction. This want is at last supplied."

As "pictorial manikins" are certainly not new, perhaps we are to find the supply of this long-felt want in the essay. We might make several rather amusing extracts; but will content ourselves with one which may be new to sanitarians. "At each expiration the lung does not get rid of all the air it contains; the latter is renewed only gradually. Hence comes the establishment of *quarantines*, applied to vessels returning from countries where contagious maladies are prevailing." It is, perhaps, fair to say that this work does not seem to be meant chiefly for professional men; but this does not make us more favorable to it.

How to Use the Forceps. By HENRY G. LANDIS. New York: E. B. Treat. Pp. 168.

In this little book the author gives a very detailed account of the proper way in which forceps should be used, and discusses at some length the value of the instrument and the indications for its use, as well as the dangers to be avoided by beginners. About half the volume is occupied by an account of the female pelvis and of the mechanism of the delivery. The book is evidently intended for students, and as such is well fitted to teach the value of an instrument which is every year being more and more used by obstetricians. The advice given as to the use of forceps for the purpose of flexing the head seems to us dangerous unless the instrument be in the hands of an experienced and skillful operator.

— We extract a few stanzas from a poem on The Primæ Viæ in the *Canada Lancet*:—

Here the villi dip their noses;
Gifted with a wondrous power,
Not of smell, but of selection,
Of acceptance or rejection
Of the products of the hour.

Noble villi! Who instructs ye
Thus to choose our boon or bane?
How do ye secure your treasure,
How transmit it at your leisure?
Questions, yet to ask, in vain.

See that particle of butter,
Now an oil globe on its way;
The saliva lightly kiss'd it,
But the gastric juice has miss'd it,
And the purling stream has whisk'd it
In a duodenal bay.

There coquetting with a portion
Of the undigested rice,
The hepatic fluid meets them,
Pancreatic juices greet them,
And they're married in a trice.

Happy he whose daily promptings
Urge to defecation due:
Needing neither pills nor potions,
Regular, as his devotions,
Setting out on life anew.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 3, 1881.

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NO. 4 PARK STREET, BOSTON, MASS.

COLOR-BLINDNESS AMONG CONNECTICUT RAILROAD EMPLOYEES.

UNDER the head of Color-Blindness an Issue in Politics, editorial comment was made in the JOURNAL for August 19th last, on the attempts of party managers to make a dead letter of a law, then recently passed by the Connecticut legislature, for the examination of railroad employees. Through an esteemed correspondent, Dr. Chamberlain, Secretary of the Connecticut State Board of Health, we are enabled to give our readers the following interesting details of the subsequent working of that law.

The legislature of Connecticut, last year, passed a law requiring all railroad employees engaged in moving trains to be examined for color-blindness and visual power. The law interpreted in its letter and spirit was rather rigorous, decidedly in advance of general knowledge upon the subject, and somewhat in advance of public sentiment. Indeed, upon the attempt to execute the law, it was found that public opinion was almost universally opposed to it, as inflicting individual hardship and injustice that were, to say the least, uncalled for. The public press generally condemned it most vigorously, and it was even made an issue in partisan politics, each party vying with the other in the endeavor to gain the sympathy of the workmen by their promises of repeal. The law, as before stated, was severe, requiring each employee to possess a certificate of normal visual power and freedom from color-blindness. The execution of the law was placed in the hands of the State Board of Health, which nominated experts and had the power to make rules and regulations under the act. The general method adopted was the now pretty well-known Hohlmgren's worsted test, with other corroborative ones, and those by reflected and transmitted light for quantitative tests. Engineers and firemen were placed in one class, and the tests very much reduced in severity for all others; reservation was also made by a special rule in favor of all old employees, so that any apparent injustice could easily have been looked into and corrected. It so happened, however, that at the outset of the examinations several engineers, closely connected with the principal officers of one of the most influential roads, were found more or less defective, and others, of greater or less influence politically, were involved. A special appeal, signed by six thousand or more, including nearly, if not all, railroad presidents and prominent officials, as well as by leading politicians, was presented to the Board of Health,

asking that the methods of examination be entirely changed, and practical tests only employed, such as the flags and lanterns used in signaling. The great cry was that the men be tested by the tools with which they worked, by practical tests, — as if those were not practical which ascertained the facts surely and with the greatest ease and rapidity. In deference to these representations, however, those condemned by the worsted system were allowed a further trial by flags and lanterns, at eighty rods. The results of this were somewhat surprising to the men. Out of twenty-four men examined by Dr. Bacon, and found color-blind by the worsteds, twenty-one failed by flags and lanterns, and the others answered more or less unsatisfactorily. Similar results were obtained by Professor Carmalt, the other examiner.

One very important fact was elicited by Professor Carmalt, as follows: "Among those in the first class (engineers and firemen) found deficient in color perception, but *one* was over thirty-two years of age, the average age of those thus affected being just thirty-one years. With this exception the defect was only found in this class among men considerably below the average age of their class, which is thirty-six and one half years. The youth of the men with this defect goes to show that, though the tests applied on the roads are too crude, too uncertain, ever to detect the defect as such, these men are actually eliminated from the service before they reach the average age of their class by a further experimentation with the lives of the passengers and the property of the corporations." At how much sacrifice of life and property we are unable to say.

There were 1,950 employees examined, divided as follows: —

		Defective Vision.	Defective Color Sense.
Engineers,	291	33	9
Firemen,	285	18	8
Total first class,	576	51	17
Conductors,	202	17	7
Brakemen,	635	68	32
Station agents,	212	35	6
Flagmen, etc.,	325	25	6
Total second class,	1,374	145	51
Total,	1,950	196	68

The defects in these varied very much in degree. The average ages of engineers has already been given. The average age of firemen with defective color perception, examined by Professor Carmalt, was twenty-seven years; of conductors, forty-seven; brakemen, twenty-seven; switchmen, forty; station agents, forty. Average age of all classes, thirty years and six months. Some very singular facts were discovered by these examinations: for example, a brakeman serving on a night freight train was found to be so near sighted that he could see only a few inches from his face, and yet he had met with no accident for eleven years. Men in responsible positions, serving on fast trains, were found with very defective vision and progressive disease, as double cataract. Congenital defects in one eye, or the results of injury in one eye, which

long training had compensated for, reduced the number to be rejected, to some extent, the defect being non-progressive in its character. Many occupations were changed: in regard to brakemen, for instance, it was learned that the place in the middle of the train is much less responsible, as they there act only upon signals from the whistle, never relying on sight; so this position was given in many instances where the defects were considered too great for any other place. This reduced the number to be finally rejected very materially. There were also many whose experience and training amply compensated for the degree of defect found. In other cases limited certificates were given to those who, in course of time, would become entirely unfitted for their responsibilities, but reexaminations will readily weed out these.

The experience with flags and lanterns proved entirely untrustworthy and unsatisfactory. It gives the color-blind fully an even chance to guess right, and renders collusion with some interested friend more difficult to prevent. Both of the experts condemn these tests as of no value whatever, and thus appears to be the universal testimony of all who have used them in any way. No tests would be satisfactory to those rejected by them. There was as much fault found with the so-called practical tests by those who failed under them as with Holmgren's test by those who failed to pass it. The results of the examination showed the necessity of some such law as that passed by the legislature, and that the public are not sufficiently protected by the methods employed by the railroad officials themselves.

BOGUS DEGREES IN THE UNITED KINGDOM.

A CORRESPONDENT of the *Lancet* puts the following questions in a communication to that journal:—

(1.) Is it true, as has been alleged, that the fellowship of the Royal College of Surgeons of Edinburgh can be obtained *without examination*, upon the payment of the necessary fee?

(2.) Is it a fact that the F. R. C. S. of Edinburgh is a sufficient qualification for the office of surgeon to any (or some) of the metropolitan hospitals?

(3.) Can a candidate who has failed to obtain the double Edinburgh qualification (L. R. C. S., L. R. C. P.) obtain the L. R. C. P., or some similar license, and then be straight away elected to the F. R. C. S.?

In reply, the editor says there is no doubt or mystery about the fact that the Edinburgh College does virtually sell its fellowship; that is to say, if any person already possessed of a license in surgery from any licensing body in the United Kingdom applies to the Edinburgh College for a fellowship, and can accompany his petition with testimonials showing that he has not broken any of the lesser commandments, the constitution and custom of the college are such that he will receive its fellowship on payment of a certain sum. Moreover, the fellowship of the Royal College of Physicians of Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow are to be had on the same easy and pecunious terms, without examina-

tion and *in absentia*, as in the case of the Edinburgh College.

To illustrate the working of what the *Lancet* calls this "monstrous system," it quotes the following from the report of the sub-committee on medical education appointed by the committee of council of the British Medical Association:—

"We may mention the case of a student who presented himself at the Royal College of Surgeons, London, and was rejected. He immediately started for Edinburgh, where he was again rejected. Upon this he went to Glasgow, and passed. He registered as a qualified practitioner, forwarded certain sums of money to Edinburgh, and, as qualified practitioner, was made a Fellow, without further tests, by the very college which had, not long before, rejected him as unfit, by examination, for the license!"

In regard to this state of things in Scotland, the editor expresses his feelings thus:—

"In the medical world a fellowship of a college of surgeons implies merit. It implies in the English college an extended education and the passing of a very severe examination. It implies probably a pecuniary outlay of nearly four hundred pounds over and above the cost of an ordinary medical education. The possession of a fellowship is a condition of obtaining office in metropolitan hospitals, if not in provincial ones. Can there be anything out of the region of sacred things more serious than to preserve the point of such a distinction? But here is a royal college of great respectability and renown actually selling it! So that two men may be competing for an appointment of great responsibility, for fitness for which a fellowship of a college of surgeons is thought the best security, and yet in the one case the fellowship is a real thing, in the other it is entirely unreal; in the one case it has been worked for and won, and in the other it has been—bought! Can there be a greater unfairness than for a royal college to send a man into a community, to work among other men, with such a piece of tinsel to his name?"

One of the British medical corporations was reported, some years since, according to the same authority, to have made ten thousand pounds in one year by the virtual sale of its lowest qualification.

We do not refer to these transactions as putting the traffic of our own diploma mills in any better light, but it must be confessed it is soothing to observe that the human nature is not all on this side of the Atlantic, and that there is even some of it in soulless corporations, and British ones at that.

MEDICAL NOTES.

—Dr. C. F. Folsom has reconsidered his acceptance of the position of superintendent at the Danvers Insane Asylum. He has been nominated, and will doubtless be confirmed, to the vacancy on the National Board of Health, caused by the resignation of Dr. H. I. Bowditch.

—We are pleased to learn that there is a good prospect that the present Congress will make an ap-

propriation for the publication of two more volumes of the Index Catalogue of the Library of the Surgeon-General's office.

— We call our readers' attention to the obituaries of two eminent country practitioners of Massachusetts, lately deceased. They were the oldest members of the Massachusetts Medical Society at the time of their death, and had labored honorably in professional harness for more than sixty years. Both Dr. Spofford and Dr. Alden were admirable models in many ways of what the physician outside of large cities was expected to be, and it would be a misfortune for the State should this class of practitioners become extinct. They were not only skillful, kind, and laborious as physicians, but helpful and interested in all things pertaining to the welfare of their fellow-men.

— The Alumni Association of Jefferson College proposes to entertain Dr. Hamilton Osgood, who delivers the annual oration before it, by a supper at Augustin's.

— Mr. Bergh has before the New York legislature the following bill:—

An Act to prohibit the Vivisection of Animals. The people of the State of New York represented in senate and assembly do enact as follows:—

SEC. 1. Every person who shall perform, or cause to be performed, or assist in performing, in or upon any living animal an act of vivisection shall be guilty of a misdemeanor.

SEC. 2. The term "vivisection" used in this act shall include every investigation, experiment, or demonstration producing, or of a nature to produce, pain or disease in any living animal, including the cutting, wounding, or poisoning thereof, except when the same is for the purpose of curing or alleviating some physical suffering or disease in such living animal, or in order to deprive it of life when incurable.

SEC. 3. This act is to take effect immediately.

— The annual meeting of the Salem (Mass.) Hospital was held lately. The report states that 165 patients were admitted during the year, and 21 deaths occurred. There were out-patients—medical, 187; surgical, 65; dental, 245; eye and ear, 349. Total number of visits to hospital by patients, 3438. The contributions "to the nameless" were \$1270.93; bequest of the late Mrs. Weston, \$1000. The total receipts were \$10,716.64. The expenses were \$9712.98.

— We feel sure the writer of the following note will bear us no malice for extending the fame of his invention:—

SIR.—I would like to draw attention to a suit for dressing at one movement. I got one two months ago, and I find that, when my night-bell rings, I can be dressed—with entire suit, white collar and cuffs complete—and by the side of my client in the street under one minute and a half. The suit is registered and made by James Maltby, 8 Hanover Place, Regent's Park, N. W., and costs three guineas. There is no waistcoat; but the coat and trousers are attached by elastic, so that the trousers are put on, then the coat, and all is complete. Of course, socks, boots, and hat are to be put on; and it is these which take up the

most time. This "united suit," as it is called, robs the sound of one's night-bell of half of its horrors. I am yours truly,

LONDON, December 7, 1880.

ANGLO-SCOTT.

— Jonathan Hutchinson writes the *British Medical Journal* in strong advocacy of ether in preference to chloroform. "I should consider myself," he says, "very culpable if I ever permitted the use of chloroform except in certain cases. The exceptions are the old and the very young: under six months and over sixty years, chloroform, I think, is preferable. . . . I can testify in the strongest possible terms to my own feeling of security with ether and of risk with chloroform." Hutchinson's reasons for using the latter in the aged and infants are, "With aged persons ether often disagrees, leaving headache and tendency to stupor for many hours afterward. Chloroform, on the contrary, agrees with the old, and appears in them almost free from risk. The same freedom from danger seems to exist in early infancy."

NEW YORK.

— At the last meeting of the Board of Health the following ordinance was passed:—

"There shall not be a public or church funeral of any person who has died of small-pox, diphtheria, scarlet fever, yellow fever, typhus fever, or Asiatic cholera, but the funeral of such persons shall be private; and it shall not be lawful to invite or permit at the funeral of any person who has died of any of the above diseases, or of any contagious or pestilential disease, or at any of the services connected therewith, any person whose attendance is not necessary, or to whom there is danger of contagion thereby." Violation of the ordinance will be a misdemeanor, punishable by a fine of \$250.

— There are now about 175 cases of scarlet fever reported each week. By the latest reports, diphtheria and small-pox were shown to be appreciably diminishing.

— In the court of special sessions Julius Meyer, a butcher, has been found guilty of a violation of the sanitary code in selling diseased meat, and sentenced to three months' imprisonment in the penitentiary and the payment of a fine of \$250. At the trial it was found that the man had been engaged in the disreputable business very extensively, and for a considerable time. Acting under the instructions of Sanitary Superintendent Day, one of the officers of the sanitary squad of the police force had represented himself as a sausage-maker, and Meyer had agreed to supply him with one hundred pounds of decomposing meat a day, at the rate of five cents per pound.

— Mrs. O'Connor, who has been on trial in Jersey City for the murder of her three children, has been acquitted on the ground of insanity. After the verdict had been rendered, Judge Knap, before whom the case was tried, appointed Drs. Varick, Converse, and Culver, of Jersey City, a commission to inquire into the present mental condition of the woman; and they reported that the woman's insanity is inherited, and that the paroxysm in which she killed her children

was developed in consequence of want of proper nourishment and her debilitated physical condition. At present, she appears to be perfectly sane; but they believe that if her system should be allowed to run down again, the paroxysm would be liable to return, and she might, if the opportunity offered, kill the rest of her family. Under the circumstances, she has been sent to the insane asylum at Morristown until, in the judgment of the physician in charge, it may be deemed safe to allow her to go at large.

— At one of his clinics at the College of Physicians and Surgeons, Dr. Fox, lecturer on dermatology, recently introduced an interesting case of leucodermis in the person of the "African leopard boy," now on exhibition at a museum on Broadway. The boy was eleven years old, he said, and of pure negro parentage. At birth he was entirely black; but when he was about three years of age white patches began to appear on his body, and these have increased in size and number until now a considerable part of his arms, chest, abdomen, and legs is white in irregular blotches, while around these the skin is of a *café-au-lait* color. There is also a white spot on his forehead, which extends backward for several inches upon the head; the hair likewise being white over it. The face (with the exception of the patch upon the forehead), neck, hands, feet, and back are entirely black. Except as to color, the skin is everywhere normal in character. Dr. Fox has had the lad under observation for some time now, and says that the white area is increasing every year. He predicts that some day that he will become an entirely white negro.

— At the last meeting of the Board of Health the following table was presented by the registrar of vital statistics: "The following deaths from zymotic diseases, which were influenced or aggravated by defective plumbing, allowing sewer-gas to enter the apartments of the victims, occurred in the year 1880:—

Diseases.	Total Deaths Reported.	In Houses containing less than four Families.	In Houses containing more than four Families.	Institutions.
Measles.....	484	100	320	64
Scarlatina.....	610	165	418	25
Diphtheria.....	1,381	399	950	31
Membranous Croup..	903	226	664	14
Whooping Cough....	276	48	190	28
Typhus Feve.....	3		2	1
Typhoid Feve.....	237	52	165	75
Total.....	3,894	990	2,655	239

Diarrhœal diseases, all ages, 3960; diarrhœal diseases, under five years, 3489.

At the same meeting Sanitary Inspector Morris reported the result of the inspection of twenty-one houses in which diphtheria had occurred within two weeks. In twenty out of the twenty-one houses, there were bad plumbing and defective house-drainage. Nearly all the cases were in tenement-houses, and offensive odors had been complained of by the tenant.

In this connection an instructive case has just come to light in Brooklyn. Some time ago a gentle-

man bought a fine residence on Columbia Heights. He was careful in his selection on the score of health, and in order to avoid every possible danger, he had the old plumbing work entirely removed, and put in the most approved system in place of it under a competent plumber connected with the Brooklyn Board of Health. Every precaution that science and experience could suggest was taken against the prevailing danger of sewer gas and other noxious influences. One point only was overlooked. When the gentleman purchased the house his plumber recommended that it should be thoroughly fumigated in order to destroy any possible germs of disease which might be lurking in it; but as the agent who sold the house assured him that there had not been a case of sickness in the house for many years, he concluded that this would be unnecessary, and it was not done. Last week the gentleman's only son, aged four years, died of diphtheritic croup which ensued upon an attack of scarlet fever; and now it is discovered by an examination of the records of the Brooklyn health office that there has been a series of diphtheria and scarlet fever in the house, running back for several years. Such an experience suggests that the sanitary history of a house is as important as its situation and surroundings.

— The Alumni of the Medical Department of the University of the City of New York gathered for the twelfth annual dinner the evening of January 26th at Delmonico's. Speeches were made by Dr. D. B. St. John Roosa, the retiring president, the Rev. Dr. Crosby, William Allen Butler, and others. William Winter read a poem. Previous to the dinner, officers were elected for the ensuing year.

— Dr. Hammond's daughter, the Marquise de Lanza, has just completed a novel, to be published by the Putnams, the plot of which turns upon the idea of double consciousness. The heroine, while in the "second state," engages herself to be married, and when she recovers her normal condition has forgotten all about it. Dr. Hammond will write a preface to the book on the subject of double consciousness.

— Hospital Saturday and Sunday in New York yielded, clear of all expenses, forty-one thousand dollars.

CHICAGO.

— The Illinois training school for nurses, to be established in Cook County Hospital, Chicago, seems now in a fair way to be inaugurated at an early day. A meeting of citizens was recently held in its interest, at which subscriptions to start it were solicited and several thousand dollars were subscribed. Two wards of the hospital have been put at the service of the school. Should the scheme be a success it is not unlikely the whole institution will be placed under the system. The school is to be conducted on a plan similar to the school in connection with Bellevue Hospital in New York city.

ST. LOUIS.

— At the annual meeting of the St. Louis Medical Society, held January 8, 1881, the following officers

were elected: president, Dr. H. H. Mudd; vice-president, Dr. R. S. Anderson; treasurer, Dr. Wash E. Fischel; recording secretary, Dr. A. H. Ohmann Dumesnil; corresponding secretary, Dr. M. H. Post. The following Saturday evening, January 15th, Dr. Mudd, as an inaugural address, made some remarks upon cerebral localization, which will be reported in full in the JOURNAL. It was illustrated by charts and by several brains hardened in nitric acid by the process of Giacomini.

— There are from one to three clinics a day, excepting Sundays, at the St. Louis City Hospital.

— By a city ordinance it is so arranged that any medical school in the city may conduct clinics at the City Hospital, provided every member of the faculty of said school is a registered physician of the city, the school selecting their own clinical instructors. At present Dr. John T. Hodgen, of the St. Louis Medical College, holds two surgical clinics at this institution each week. Dr. E. F. Smith, of the same school, holds two medical clinics each week, and Dr. John Green conducts one or two eye clinics a week for the benefit of the students of this school. Dr. A. P. Lankford, of the Missouri Medical College, and Dr. P. G. Robinson, of the same school, hold, respectively, two surgical and two medical clinics a week. Dr. Louis Bauer, of the St. Louis College of Physicians and Surgeons, holds one surgical clinic a week, and Dr. Hazard, of the same school, a medical clinic. The homœopathic and eclectic schools each have a clinic a week.

— There have recently been organized in the city two new medical schools.—one “regular” and one “eclectic.” They have demanded the privilege to hold clinics at the City Hospital, and this has so increased the number of clinics, already too large, that the health commissioner has been instructed to appoint a certain number of clinical lecturers. These are to deliver lectures on fixed days to which the matriculants of any or all of the schools in the city will be admitted as they see fit to attend.

Miscellany.

THE LATE DR. SPOFFORD.

MR. EDITOR.—The semi-annual meeting of the Essex North District Medical Society was held at the Essex House, in Lawrence, on Wednesday, January 19th, at one o'clock P. M.

The following memorial was presented on the death of Dr. Jeremiah Spofford, of Groveland, the senior member of our society, and it was voted that a copy be sent to the JOURNAL for publication. Yours respectfully,

GEORGE W. SNOW, M. D.,

Secretary Essex North District Medical Society.

NEWBURYPORT, January 27, 1880.

The committee appointed by this society to prepare some suitable testimonial to our deceased Fellow, Dr. Spofford, respectfully present the following

MEMORIAL.

Dr. Jeremiah Spofford was born in New Rowley, now Georgetown, Mass., December 8, 1787. His ancestors were of that sturdy Puritan stock that gave character and vitality to the

early history of New England, his father and grandfather having both engaged in the great struggle which resulted in our national independence. Dr. Spofford's early education was limited to the scanty tuition of the district school, with private instruction in Latin and kindred studies under the direction of Rev. Isaac Bramon, the minister of the town. He made the most of his spare hours, and commenced the study of medicine in 1810, with Drs. Whiton and Parkhurst, of Winchendon, eking out his scanty income by teaching the district school in his native town.

In June, 1813, he was licensed as a practitioner of medicine by the censors of the Massachusetts Medical Society at Worcester. After practicing for a short time in Hampstead, N. H., he removed to East Bradford, now Groveland, Mass., in 1817, where he was the sole practitioner for more than forty-seven years, continuing in active service for nearly sixty years. His whole professional career extended over the exceptional period of sixty-seven years.

His domestic relations were of the most delightful character. In 1813 he married Mary Ayer Spofford, of Jaffrey, N. H., with whom he lived for over sixty years. Of the nine children of this typical New England family, seven survive to bless the memory of their honored parents.

As a member of this society, Dr. Spofford showed his lifelong interest and devotion by his regular attendance upon all its meetings, and by his valuable contributions to its scientific, literary, and social life. To him are we largely indebted for the preservation of the historical incidents of the society, and his biographical sketches of its early membership are among our most valuable archives.

His vigorous brain, his indomitable will, his tireless energy, and stern integrity furnished the elements of his success. His mind was controversial, and hence he probed every subject with which he came in contact with the sharpness of his analysis and the force of his terse logic. He was not an easy antagonist in the discussion of professional and social ethics or political economy. He was cautious as to new methods, and only accepted or adopted them after the most careful scrutiny.

These sturdy traits had a controlling influence upon his professional career. As a physician, Dr. Spofford was cheerful, faithful, and persistent in the care of his patients, gentle and benevolent to the unfortunate and the poor, and true and loyal to the standard ethics that govern professional intercourse. As a citizen, he was foremost in the promotion of the highest interests of the community in which he dwelt. This was manifest in his exertions for the educational and material prosperity of his fellow townsmen, while in the broader range of business and official life his influence was widely known and felt. And now this life, so crowded with activity, is brought to its close, and he has gone to his rest, soothed and comforted by the tender ministrations of his children, and strengthened by the hope of a blessed immortality.

RESOLUTIONS.

In more formal recognition of our respect for our venerable deceased Fellow we offer the following resolutions:—

First. That in the death of Dr. Jeremiah Spofford, the senior member of the Essex North District Medical Society, we recognize the loss of one who for more than half a century has stood firm as a pillar between the true and the false, the right and the wrong, in education, religion, and medicine.

Second. That we record with pleasure our appreciation of his valuable services to this society by his contributions to its literature, by the wisdom of his counsels, and the influence of his example.

Third. That we extend to the family of the deceased our sincere sympathy in their bereavement.

Fourth. That this memorial, with the resolutions, be entered upon the records of this society, and that a copy be sent to the family of our deceased Fellow.

JOHN CROWELL, }
G. W. COWSWELL, } Committee.
G. W. GARLAND, }

HAVERHILL, January 19, 1881.

EBENEZER ALDEN, M. D.

DR. EBENEZER ALDEN, the oldest resident of Randolph, Mass., and, we believe, at the time of his death the oldest member of the Massachusetts Medical Society, was born at Randolph, March 17, 1788, was graduated at Harvard College in 1808, pursued his profes-

sional studies with Nathan Smith, M. D., at Dartmouth College, where he received the degree of M. B. in 1811, attended the lectures of Drs. Rush, Barton, and others in Philadelphia, and received the degree of M. D. from the University of Pennsylvania in 1812. He settled as physician in his native town, where he has resided during his entire life. He was elected trustee of Phillips Academy and Andover Theological Seminary in 1837, remaining in office till compelled to resign, a few years since, by growing infirmities. He was one of the earliest trustees of Amherst College, and long remained the oldest member of the board, and was one of the original trustees of the Thayer Academy of Braintree. With the American Board of Commissioners for Foreign Missions, the American Education Society, and other kindred organizations he was officially associated. He was also a veteran member of the board of directors of the Randolph National Bank. Dr. Alden married a daughter of Captain Edmund Kimball, of Newburyport, by whom he had six children, three of whom survive him. He was descended through both father and mother directly from John Alden of the Mayflower. For many years he was an active member of the Massachusetts Historical Society, always greatly interested in all genealogical and antiquarian researches, and frequently contributed to its records sketches of prominent physicians. He bore the same name as his father, who was a distinguished physician of the last century. For the last five or six years of his life he was entirely blind.

OBITUARY.

MR. EDITOR, — "Dr. Walter W. Larrabee, of Saco, Maine, twenty-five years old, was found dead in his office Saturday morning, January 15th, with a bottle of chloroform beside him," as briefly reported in the daily press.

Dr. Larrabee had been settled in Saco since his graduation from Harvard Medical School in 1879. He had many acquaintances among the physicians of New England, who will learn with deep regret of his sudden death, knowing him as an honorable man, an earnest student, an able and conscientious practitioner. Some among them feel not only sorrow at the loss of a brother physician, but the keener pain of separation from a loved and trusted friend, warm-hearted and unselfish.

Dr. Larrabee had been for some years a sufferer from neuralgia. Refusing to use morphia through fear of becoming a slave to the drug, he had relied chiefly, of late, upon subcutaneous injections of chloroform, resorting, when the pain seemed past endurance, to the inhalation of ether. During the last three days of his life he was deprived of rest by the tortures of facial neuralgia, and at last attempted to procure a few moments' freedom from pain by the inhalation of the treacherous drug which ushered him from the sleep of anæsthesia into the sleep of death. As it has been suggested that cardiac disease may have contributed to a fatal result, it may be proper to state here that a careful physical examination, made about a year ago by an eminent specialist of Boston, detected no evidence of disease, cardiac or pulmonary, and no symptoms have since arisen to indicate its existence.

G. H. GARDNER, M. D.

GREAT FALLS, N. H., January 20, 1881.

PHILADELPHIA LETTER.

MR. EDITOR, — The annual meeting of the Academy of Surgery was held on the 7th inst., the occasion being honored by the delivery of an able and interesting address by the president, Professor Gross, on John Hunter and his pupils,¹ which was delivered in the Hall of the College of Physicians. The subject had proved so engrossing² to the author that he found in collating his material that he had far exceeded his original design, and had written a monograph before he was aware; he therefore only read selected portions on the evening named. The book will shortly be issued by Presley Blakiston, and will contain about one hundred and fifty pages (small octavo), with a portrait of Hunter as frontispiece. The venerable professor retains his vigor, and shames many of the younger men by his industry and application. He still lectures in the same clear, impressive style that his old students are so familiar with, and does not seem to have grown a day older, for the last decade, at least. At the first of the year he completed a three months' term of service in the surgical clinic, during which he performed a number of major operations, including ovariectomy, lithotomy, and the removal of tumors, involving careful dissection and much labor. The lectures and clinics of the Nestor of surgery are always well attended, as the old master is a great favorite with the students.

To turn to affairs at the University, the most welcome intelligence is that Prof. Wm. Pepper has been elected by the board of trustees as provost, and has accepted the position. Dr. Pepper has distinguished himself by his efforts to advance medical education in this country, and especially by his devotion to the interests of the university, whose claims he has ably and successfully advocated. As a result of this presentation of the subject, and the able appeals made by Professor Pepper, several large donations have been made to the university. One of the latest of these is one by Mr. Henry C. Gibson, who has offered to build a new wing to the hospital, for the especial use of incurable patients, at a cost of about fifty thousand dollars. The conditions attached to the gift are that it shall be ready for the reception of patients on October 1, 1881. It is intended that this new wing shall have the latest and most approved appliances, and the plans are, therefore, to be submitted to a committee of experts before adoption. The addition to the hospital will be about one hundred beds. To aid the endowment fund a grand charity ball will be held at the Academy of Music some time during this coming month, which will be one of the social events, and doubtless a grand success.

The two large medical schools are so prosperous that the subject is agitated of starting a third; the site has been selected by common rumor, and several of the faculty have been named by the same authentic dictum. It is said, moreover, that this new school may be developed during the coming summer. Of this more anon. I refrain from mentioning names at present.

Professor Da Costa has had an interesting case, a full account of which will soon be published, under treatment for the last month or two at the Pennsylvania Hospital, of trichiniasis in a German of about twenty-one years of age. The case was brought into the ward as one of muscular rheumatism with fever,

¹ See pages 73 and 97.

² N. B. No punishment.

headache, and some vomiting on the day of admission. The man's face was pale, and had a bloated look, the feet were also somewhat swelled, but were not decidedly oedematous. The principal symptoms were vomiting, which was not persistent, however, constipation, rather obstinate, pulse accelerated, but above all were observed great muscular soreness, tenderness, and stiffness, so that he was constantly changing his position in the bed on account of the pains, which kept him from sleeping at night. With this, then, was headache of a dull character, some vertigo, and a temperature of 103.5° F. to 101° F. A diagnosis of trichiniasis being made provisionally, it was confirmed by cutting down upon the deltoid muscle and removing a small fragment for examination, in which were seen several small trichinae. Four weeks later, when the patient appeared to be convalescent, and his temperature had been normal for three weeks, another specimen was obtained with a trocar and harpoon by which some encysted trichinae were extracted, one, after being disturbed, exhibiting very lively movements, which were kept up for more than an hour while under the microscope.

The latter specimen was obtained by a new style of muscle-harpoon, invented by Dr. Hart, of the resident surgical staff of the hospital; it accomplished the purpose very well, after trial of Duchenne's harpoon without success. As this instrument will be made the subject of a communication, it will not be described here.

An interesting case, apparently of syphiloma of the larynx with progressive dyspnoea, also occurred lately in Dr. Da Costa's wards, where impending death from asphyxia was prevented by tracheotomy, performed by Dr. S. Jiminez, resident physician. The operation was performed a week ago, and afforded immediate relief; the patient is now doing well, although he was apparently moribund at the time of operating. The ordinary tube and cannula were employed.

The number of deaths from small-pox in the city continues comparatively high, although the epidemic, which was a light one, is now losing its force. In connection with the subject of revaccination, the following case will prove instructive: a gentleman past middle age, of rather full habit, and a sufferer from chronic Bright's disease, was vaccinated last week by his physician. In three or four days he perished from erysipelas. This possible danger is frequently overlooked, but nearly every practicing physician can recall cases in which the resulting inflammation and angiolentitis was very much more than was agreeable to the patient, if not actually threatening life. The vaccine physicians appointed by the Board of Health since our last epidemic, ten years ago, have so generally vaccinated our poorer population that there is at present but little material for an epidemic, otherwise we would doubtless have had to chronicle a veritable plague instead of a mild epidemic.

The County Medical Society held its annual meeting on the 19th instant, and elected the following officers:

President, Dr. Albert H. Smith; Vice-Presidents, Drs. H. Y. Evans and Charles K. Mills; Censor, Dr. F. P. Henry; Secretaries, Recording, Dr. H. Lefmann, Assistant, Dr. Jas. D. Nash, Corresponding, Dr. John B. Roberts, Reporting, Dr. Frank Woodbury; Treasurer, Dr. William Welch; Librarian, Dr. M. O'Hara.

The society is in a prosperous condition, with over three hundred members, a growing library, and pub-

lishes a very creditable annual volume of Proceedings. Its conversational meetings are held on the second and fourth Wednesday evenings of each month at the College of Physicians, and one or two papers upon practical topics are presented at each meeting. During the winter two receptions were given to the members of the society by the president, Dr. Albert H. Smith, which were well attended and generally appreciated as a means of extending mutual acquaintance and sociability. It is hoped that this good example will find imitators. By the advice of prominent members of the society, the refreshments were confined to coffee and sandwiches, in order that the expense might not prove onerous to those who may wish to continue these highly enjoyable gatherings. They are all the more necessary in this city, because men may live within a few rods of each other and never become acquainted, except through such a medium as the above, or the annual meetings of the State Society.

At the annual meeting of the College of Physicians the old officers were reelected for the ensuing year. The librarian, Dr. Bridges, resigned on account of failing health, and a resolution of sympathy and recognition of his services to the college was entered upon the minutes. The library now contains 23,800 volumes.

A bill has been brought before the legislature protecting the physicians in the matter of privileged communications. As the law now stands the confidential statements of a patient to his medical attendant are not respected as such in our courts of law, and a physician may be made to suffer for contempt of court if he refuse answer to questions of counsel regarding such communications.

The subject of the inter-professional relations of the physician and pharmacist has been under discussion for several months in this city, owing to the constant encroachment of druggists upon the practice of the physician by unauthorized refilling of prescriptions, by counter-prescribing, but more particularly and most grievously by pushing the sale of the various patent medicines. A communication upon this question from the Philadelphia Medico-Legal Society to the County Medical Society was referred, together with the entire subject, to the standing committee on hygiene and the relations of the public to the profession. After full consideration and several conferences with leading pharmacutists, a report was presented at the last meeting of the County Medical Society, reciting the complaints mentioned, containing the following resolutions, which were adopted as expressing the sentiments of the society:—

Resolved, In order as far as possible to prevent the repetition of abuses that have arisen from the unauthorized renewals of prescriptions, that physicians be requested to write the words "not to be renewed," or words or symbols to the same effect, on prescriptions which they do not wish to be renewed, without especial orders; at the same time instructing patients in regard to the evils likely to arise from such renewals, and informing them of their wishes.

Resolved, As the diagnosis and treatment of disease belongs to the province of a distinct profession, and as a pharmaceutical education does not qualify the graduate for those responsible offices, druggists should, where it is practicable, refer applicants for medical aid to a regular physician.

Resolved, That the Philadelphia County Medical Society approves of the sentiments expressed in the

following paragraph of the Code of Ethics of the Philadelphia College of Pharmacy: "Whilst the college does not at present feel authorized to require its members to abandon the sale of secret or quack medicines, they earnestly recommend the propriety of discouraging their employment when called upon for an opinion as to their merits."

Resolutions offered by the committee on hygiene, and likewise adopted:—

Resolved, That, in the opinion of the Philadelphia County Medical Society, a druggist acts simply as the agent of a physician in compounding his prescriptions, and that it is a breach of his proper obligations to the physician to renew without his direction or furnish copies of any formula prescribed.

Resolved, That members of this society will note which druggists commit such breaches of obligations, and dissuade their patients from taking prescriptions to them to be compounded.

Resolved, That the members of this society will endeavor to have their prescriptions compounded by apothecaries who do not exhibit signs or circulars, or otherwise encourage the use by the public of patented or proprietary medicines.

Inasmuch as it was claimed that many physicians themselves prescribed patented and proprietary articles, it was further

Resolved, That it be recommended to the society to reaffirm the sentiments expressed (in Section III. Art. 1 of the By-laws), namely, "that any physician who shall enter into an agreement with an apothecary to receive pecuniary compensation or patronage for sending prescriptions to said apothecary, or who prescribes a remedy without knowing its composition, or who shall, hereafter, give a certificate in favor of a patent remedy or instrument, shall be disqualified from becoming or remaining a member of this society."

Inasmuch as many druggists claimed to be unaware of the existence of a code of ethics of the College of Pharmacy, it was

Resolved, That the trustees of the College of Pharmacy be requested to furnish each of their graduates a copy of the code of ethics of the Philadelphia College of Pharmacy.

Resolved, That the report of the committee be printed in full in the Transactions of the Philadelphia County Medical Society, with the action of the society, and that publication be asked for also in the *Journal of Pharmacy* and the *Druggists' Circular*.

All of which were unanimously adopted, and the committee discharged.

It was further resolved "as the sense of the society, that there is nothing in ethics to forbid a physician's dispensing his own medicines." F. W.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 22, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	667	253	21.20	18.89	9.00	6.00	1.35
Philadelphia.....	846,980	368	103	24.73	7.07	5.43	1.36	12.77
Brooklyn.....	566,689	289	118	27.34	17.65	17.65	5.88	—
Chicago.....	503,298	—	—	—	—	—	—	—
St. Louis.....	—	134	49	12.69	19.40	4.48	1.49	—
Baltimore.....	393,796	147	65	18.37	13.61	7.48	6.12	—
Boston.....	363,938	182	77	28.57	15.38	17.58	.55	—
Cincinnati.....	280,000	108	44	16.67	18.52	1.85	4.63	—
New Orleans.....	210,000	98	18	11.22	6.12	5.10	2.04	—
District of Columbia.....	180,000	69	18	13.04	13.04	5.80	1.45	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	54	29	24.07	12.96	1.85	16.67	—
Buffalo.....	155,159	57	24	31.58	12.11	14.04	8.77	—
Milwaukee.....	127,000	53	29	33.96	13.21	15.09	15.09	—
Providence.....	104,862	42	12	19.05	21.43	14.29	2.38	—
New Haven.....	63,000	30	13	6.67	20.00	3.33	—	—
Charleston.....	57,000	24	5	—	16.67	—	—	—
Nashville.....	43,543	17	5	11.76	11.76	—	5.88	—
Lowell.....	59,485	16	—	6.25	—	6.25	—	—
Worcester.....	58,295	16	6	12.50	25.00	—	—	—
Cambridge.....	52,740	20	9	20.00	25.00	15.00	—	—
Fall River.....	49,006	23	7	21.74	—	13.04	—	—
Lawrence.....	39,178	9	1	11.11	44.44	—	—	—
Lynn.....	38,284	6	2	—	16.67	—	—	—
Springfield.....	33,340	10	1	—	10.00	—	—	—
Salem.....	27,598	9	1	—	10.00	—	—	—
New Bedford.....	26,875	10	2	20.00	10.00	10.00	—	—
Somerville.....	24,985	7	—	—	42.86	—	—	—
Holyoke.....	21,851	6	4	16.67	—	—	—	—
Chelsea.....	21,785	13	6	38.46	7.69	30.77	—	—
Taunton.....	21,213	9	1	11.11	22.22	—	11.11	—
Gloucester.....	19,329	7	1	—	—	—	—	—
Haverhill.....	18,475	6	3	50.00	—	33.33	—	—
Newton.....	16,995	6	1	33.33	—	33.33	—	—
Newburyport.....	13,537	5	0	—	20.00	—	—	—
Fitchburg.....	12,405	5	1	20.00	20.00	—	—	—
Eighteen Massachusetts towns.....	143,055	47	16	22.77	8.51	12.77	6.39	—

Deaths reported 2569 (no report from Chicago); 924 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 545, consumption 411, lung diseases 382, diphtheria and croup 237, scarlet fever 110, small-pox 56, typhoid fever 34, diarrheal diseases 26, erysipelas 23, measles 19, whooping-cough 17, cerebro-spinal meningitis 14, malarial fevers nine. From *typhoid fever*, Philadelphia 12, New York four, Boston, Cincinnati, and New Orleans three, St. Louis two, Brooklyn, Baltimore, Pittsburgh, Buffalo, Worcester, Fall River, and Holyoke one. From *diarrheal diseases*, New York seven, Brooklyn and Baltimore three, St. Louis, Boston, Cincinnati, and Pittsburgh two, Philadelphia, New Orleans, District of Columbia, Buffalo, and New Bedford one. From *erysipelas*, New York seven, Cincinnati four, Philadelphia, St. Louis, and Baltimore two, Brooklyn, Buffalo, Boston, Providence, Worcester, and Fall River one. From *measles*, Boston 11, New York three, Brooklyn, District of Columbia, Milwaukee, Nashville, and Malden one. From *whooping-cough*, New York six, Brooklyn five, Boston and District of Columbia two, Philadelphia and Cambridge one. From *cerebro-spinal meningitis*, New York and Philadelphia three, Baltimore two, Milwaukee, New Haven, Lawrence, Chelsea, Haverhill, and Fitchburg one. From *malarial fevers*, New York and St. Louis three, Cincinnati two, Buffalo one.

Of small-pox — cases were reported in Brooklyn; diphtheria 39, scarlet fever 13, in Boston; scarlet fever 37, diphtheria 21, in Milwaukee; diphtheria one, in Somerville.

In 37 cities and towns of Massachusetts, with a population of 1,060,966 (population of the State 1,783,086), the total death-rate

for the week was 20.25, against 21.62 and 21.31 for the previous two weeks.

For the week ending January 1st, in — German cities and towns, with an estimated population of 7,533,655, the death-rate was 23.6. Deaths reported 3423; 1609 under five: pulmonary consumption 504, acute diseases of the respiratory organs 273, diphtheria and croup 158, scarlet fever 73, measles and röteln 73, whooping-cough 64, typhoid fever 49, puerperal fever 22, small-pox (Königsberg, Berlin, Krefeld, Wesel) four. The death-rates ranged from 12.2 in Erfurt to 37.9 in Kiel; Königsberg 26.5; Breslau 25.6; Munich 27.3; Dresden 22.9; Berlin 21.6; Leipzig 19.4; Hamburg 27.8; Hanover 14.8; Bremen 20; Cologne 24.7; Frankfurt 17.6; Strassburg 25.7.

For the week ending January 8th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 21.3. Deaths reported 3109: acute diseases of the respiratory organs 363, scarlet fever 105, measles 87, whooping-cough 86, fever 39, small-pox (London 33, Birmingham two) 35, diarrhoea 32, diphtheria 17. The death-rates ranged from 13.7 in Portsmouth to 25.4 in Sunderland; Birmingham 18.1; Sheffield 18.5; London 21.3; Liverpool, Manchester, Bristol 24.3; Leeds 24.8. In Edinburgh 25; Glasgow 26.4; Dublin 31.8.

In the 20 chief towns in Switzerland, for the week ending January 8th, estimated population 523,856, there were 24 deaths from acute diseases of the respiratory organs, diphtheria and croup 16, diarrheal diseases seven, typhoid fever five, puerperal fever four, small-pox four.

The meteorological record for the week in Boston was as follows: —

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																				
Jan. 16	30.215	26	35	12	65	50	77	64	W		SE	SE	6	7	2	O	C	F	—	—
" 17	30.326	29	39	12	86	61	66	71	W		W	W	8	10	10	O	F	C	1.00	— ²
" 18	30.548	23	32	16	67	36	47	50	W	NW	W	W	12	12	8	C	C	C	—	—
" 19	30.185	28	38	18	72	79	77	76	O	O	W	W	0	0	8	O	Snow.	C	6.30	.12
" 20	30.047	28	40	17	69	38	54	54	W	W	W	W	8	8	7	C	C	C	—	—
" 21	29.678	29	36	20	72	100	89	87	NW	NE	NE	NE	4	30	26	O	Snow	Snow.	11.50	1.25
" 22	29.658	25	34	18	100	76	77	84	N	NW	W	W	28	8	8	Snow.	F	O	7.30	2.00
Week.	30.094	27	40	12					W	W	W								26.50	3.37

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

² Not measurable.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 22, 1881, TO JANUARY 28, 1881.

GREENLEAF, C. R., major and surgeon. His leave of absence, granted him in S. O. 158, series 1880, from A. G. O., extended to May 1, 1881. S. O. 20, A. G. O., January 26, 1881.

WILLIAMS, J. W., major and surgeon. Paragraph 9, S. O. 2, C. S., A. G. O., relating to him, is revoked. S. O. 20, C. S., A. G. O.

BENTLEY, E., major and surgeon. Announced as acting medical director of the department until the arrival of a medical officer his senior. G. O. 2, Department of Arkansas, January 17, 1881.

GURARD, J. B., captain and assistant surgeon. To be relieved from duty in Department of Texas by commanding general thereof on receipt of this order, and then to report in person to the commanding general Department of Arizona for assignment to duty. S. O. 14, A. G. O., January 19, 1881.

TAYLOR, B. D., captain and assistant surgeon. To be relieved from duty in Department of the East by commanding general thereof on receipt of this order, and then to report in person to the commanding general Department of Texas for assignment to duty. S. O. 14, C. S., A. G. O.

TAYLOR, B. D., captain and assistant surgeon. The operation of paragraph 4, S. O. 14, C. S., A. G. O., as far as it relates to him, suspended until March 1, 1881. S. O. 20, C. S., A. G. O.

GARDINER, J. DEB. W., captain and assistant surgeon. Relieved from duty at Camp Huachuca and assigned to duty at Fort Mojave, Arizona Territory. S. O. 7, Department of Arizona, January 15, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday next, February 7th, at eight o'clock, in the hall, 19 Boylston Place. Reader, Dr. Forster. A. T. CANOT, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — A Practical Treatise on the Medical and Surgical Uses of Electricity. By George M. Beard, M. D., and A. D. Rockwell, M. D. Third Edition. Revised by A. D. Rockwell, M. D. With nearly two hundred illustrations. New York: William Wood & Co. 1881.

Laparotomy and Colotomy, with Formation of Artificial Anus for Obstruction of Intestines. By William A. Byrd, M. D. (Reprint.)

Extripation of Rectum without destroying the Sphincter Ani Muscles. By William A. Byrd, M. D. (Reprint.)

Original Articles.

JOHN HUNTER AND HIS PUPILS.¹

ABSTRACT OF AN ADDRESS DELIVERED BEFORE THE
ACADEMY OF SURGERY, PHILADELPHIA, JANUARY
12, 1881.

BY PROFESSOR S. D. CROSS.

Of Hunter's vast labors as an original investigator I shall not attempt to speak in detail; for to do this would carry me far beyond the limits to which I am compelled to restrict myself. A brief allusion to a few must suffice. We find that the first few years of his professional life were devoted to the study of human anatomy, of which, as might readily be supposed, he made himself a thorough master, and added certain facts to the stock of knowledge previously unknown. Subsequently he devoted a large share of the time which he was able to snatch from his practice to researches in comparative anatomy, physiology, and surgery, and to the extension, classification, and arrangement of his museum. The composition of his various treatises and the papers which he contributed to the *Philosophical Transactions* also consumed not a little portion of his time. He was the first to make known the existence of lymphatic vessels in birds, and of the communication of the air-cells of the wing-bones of birds with the air-cells of the lungs; to describe the organ of hearing in fishes; to trace the connection of the arteries in the gravid uterus with the placenta; to explain the nature of inflammation of the veins; to point out, on anatomical and physiological principles, the vast chains of sympathy existing between the different organs and structures of the body, and to perform an elaborate series of experiments upon the temperature of different animals, birds, reptiles, insects, trees, and vegetables, upon the blood, and upon man in health and disease. He was the first to interpret correctly the erosion of the stomach by the action of the gastric juice after death, an effect previously erroneously attributed to pathological conditions.

He was the author of the once famous doctrine, long current among medical men, that two diseases or two morbid processes of dissimilar nature in the same organ or in the same part cannot go on at the same time. That this theory is true to a very considerable extent is unquestionable, although it is of much more limited application than Hunter had imagined. Thus, for instance, to go no further, scarlatina and typhoid fever, phthisis and cancer of the lungs, gout and dysentery are seldom found in association, and then generally only as accidental occurrences, and not as the result of any special laws. This doctrine has a much wider range and a more practical significance in surgery than in medicine, inasmuch as it lies at the root of the treatment by counter-irritation, often so useful in chronic diseases of the joints and of other parts of the body.

Hunter's ideas of the formation of monsters, a subject which at one time engaged much of his attention, were far in advance of those of his age, and strikingly in harmony with the peculiarities of his reasoning powers and his methods of study. Prior to his investigations no attempts had been made to explain the formation of this class of beings upon physiological, philosophical, or scientific principles. Most writers regarded them as the off-spring of chance, as freaks of

nature, as proofs of the divine wrath or as effects of disease of fetal life. Even the theories of Huber and Malacarne, propounded so late as the middle of the last century, were more or less tinged with the superstition of the times. Hunter, from a careful survey of the subject, founded upon the dissection of different classes of animals, concluded that these beings are simply so many deviations from the established order of nature, dependent upon an arrest of development in one case, and upon an excess of development in another, and that the cause in all exists in the primordial cell, in perverted nutrition, or in a disturbance of the ordinary laws of formative action, a fact now universally admitted by teratologists. In framing this theory he did not confine himself to the investigation of animal matter, but derived important illustrations from the study of vegetable life, and even of crystals. Indeed, he seldom, in the investigation of any subject that concerned the phenomena of life, whether in health or in disease, limited himself to the animal kingdom. His capacious mind took a higher view of things, and embraced every variety and form of organic structure. In his principles of surgery he attempts, in several places, to establish a connection between animal and vegetable pathology. He refers more especially to the changes induced in the oak leaf, and endeavors to deduce from these changes illustrations in support of his theory of inflammation. Again, in his experiments on heat, he requests Jenner to ascertain the temperature of trees and plants; and in speaking of sympathy, he remarks that "the most simple sympathy is perhaps to be found in vegetables, these being much more simple than the most simple animal."

Vegetable pathology had made too little progress, if indeed it had any existence at all, in Hunter's day to enable him to grapple with a subject of such vast proportions. It is, in fact, only recently that the subject began to attract the attention of scientists, and it was, therefore, not without the deepest interest that I listened, along with many other medical men, for upwards of an hour, to the admirable and masterly address of Sir James Paget, on *Elemental Pathology*, delivered in the pathological section of the British Medical Association, at the annual meeting in Cambridge, August, 1880. In this address are adduced numerous examples of changes induced in trees and plants by injury and disease, and of the close resemblance which these changes bear to many of those that are witnessed under similar circumstances in man and other animals.

Color-blindness attracted his attention, and he induced Jenner to investigate the matter experimentally. He was the first to describe accurately the gubernaculum of the testis. In a word, it is difficult to say what he did not do or discover. His treatise on the blood and on the vascular system is a masterly production, composed solely from the stand-point of personal observation and experiment; and what is true of this production is equally true of his surgical writings. Every page bears the impress of original work, of patient research, of carefully conducted experiment, and of inductive reasoning. His aims as an author were of the loftiest character; he took nothing for granted, nothing on credit, but subjected everything before he made it his own to the closest scrutiny and to the most searching analysis. He was too proud to borrow knowledge from others; too independent to rely upon

¹ Concluded from page 101.

their labors. Second-hand knowledge he despised, hence we seldom find any reference in his published works to the writings of his contemporaries or predecessors. Everything that emanated from his pen was stamped with the seal of originality.

He had studied the habits of hibernating animals, and from these and other considerations was led to believe that animals might be frozen and then again brought to life, and he thought the operation might be extended to the human subject; that a person might be frozen, lie in an unconscious condition for an indefinite time, even for a hundred years, and then be resuscitated. He even dreamed that the scheme, if successful, might enable him to make his fortune! How this Rip Van Winkle affair terminated never transpired.

It is not a little surprising, when one reflects upon Hunter's philosophical mind and his keen perceptive and reasoning powers, that he should have entertained such very crude notions respecting the origin of life, insisting that life is not the result simply of organization, but of something superadded to animal and vegetable matter, not unlike electricity. Every scientist of the present day knows that life is inherent in organic matter, that all growth, animal and vegetable, is inseparable from cell development, — *omnis cellula e cellula*, — and that life, as such, has no independent existence. That such very odd ideas should have floated through the brain of the founder of scientific surgery is, I repeat it, strange enough, and yet they may perhaps be pardoned when we reflect that he lived in an age when science, properly so-called, had as yet made no satisfactory advances, when, in fact, it was still slumbering in its cradle; but that John Abernethy, one of his most brilliant and intelligent pupils, and one of the most able interpreters of his doctrines, should, a quarter of a century after the death of Hunter, have indorsed and publicly defended those views, is one of those curious anomalies which are beyond our comprehension, and yet such as every one acquainted with the history of his career knows to have been the fact.¹

It was the indorsement of this peculiar notion of life, and of its existence apart from organization, that led to the sad controversy between Abernethy and Lawrence, who strenuously supported the opposite view, now universally admitted by all scientists and philosophers.

Although Hunter was an incessant worker, he derived a vast deal of aid in the construction of his museum from his assistants; indeed, without their help, it would have been a comparatively meagre affair. His pupils and intimate friends also made important contributions.

In order to show the high estimate which is placed upon the Hunterian Museum by the British Government, in a national point of view, as a nursery for the

study of biology in its widest sense, it is only necessary to state that its Board of Trustees consists of the highest officers of the Crown, including the Prime Minister, and of the President of the Royal Society, the President of the Royal College of Surgeons, and the President of the Royal College of Physicians, together with many distinguished citizens representing the more exalted walks of life. The Royal College of Surgeons, which is the custodian of the Museum, was incorporated by royal charter in 1800, and is governed by a council consisting of twenty-four Fellows, whose president in 1880 was Mr. John Eric Erichsen, the distinguished surgeon. What is called the Court of Examiners consists of twenty Fellows, whose duty it is to investigate the claims of all such candidates as may from time to time present themselves for admission into the College. Until recently no provision had been made for examinations in medicine, which now, very properly, hold a prominent place. The College, as will thus be perceived, is an immense corporation, of vast influence, binding all the surgeons in England in one great brotherhood, and virtually having charge of the educational interests of the surgical profession, as the Royal College of Physicians has of the medical.

To form anything like a correct idea of the extent of the Hunterian Museum, and of the work that is done by the College of Surgeons for its increase and preservation, it is absolutely necessary to visit it, and to spend not days but weeks, and even months, in the examination of its vast riches. The collection, in its present form, is a vast storehouse of specimens of anatomy, human and comparative, histology, physiology, morbid structure, plants, and fossils, of which nearly fourteen thousand were originally supplied from the Hunterian collection at the time of its purchase by the Government. The specimens are all classified and arranged in the order of their affinities, and are in the most perfect state of preservation, many of them being upwards of one hundred years old.

Catalogues of the museum were prepared many years ago by Professor Richard Owen and Mr., now Sir James, Paget, the latter having charge of the pathological specimens. The first curator, or, as he is styled in England, conservator, of the museum was Mr. William Clift, Hunter's last assistant, who held the office from 1800 to 1842, when he was succeeded by Professor Owen, who, in 1856, gave way to Mr. Quekett. The present incumbent is Professor William H. Flower.

Not the least interesting feature of the college is the long list of portraits of distinguished Fellows and of English surgeons of prominence a short time anterior to the establishment of the college, as John Banister, William Cowper, William Cheselden, Percivall Pott, and John Hunter himself. Among the more recent ones are those of William Blizard, Anthony Carlisle, Caesar Hawkins, George Guthrie, Samuel Cooper, William Lawrence, and William Ferguson. Among the busts which grace the halls of the college may be enumerated those of Abernethy, Everard Home, Cline, Dalrymple, Arnott, Travers, Charles Bell, Liston, Lawrence, Green, and Brodie.

When John Hunter retired upon the active duties of his profession very little accuracy had been attained in the study of medicine, or in that of natural history, in any of their branches. Linnæus had published his *Systema Nature* and his classification of plants; Mor-

¹ "Mr. Hunter," says Mr. Abernethy, "was convinced that life was not the result of organization, and, though many have conjectured life to be something not dependent on structure, Mr. Hunter was the first to deduce the opinion, as a legitimate consequence of legitimate facts, that life actually constructed the very means by which it carried on its various processes, and that it could operate in solid and even fluid substances. His intelligent mind further perceived that no system of physiology could be perfect that did not equally explain the morbid as well as the healthy actions of life. I may say that he discovered a vital principle in physiology active in producing a correct pathology. Therefore he appears to me as a new character in our profession, and, briefly to express his peculiar merit I may call him the first and great physiological gist, or expositor of the nature of disease." (Hunterian Oration for 1819, page 28.)

gagni had issued at Venice his masterly treatise on morbid anatomy, entitled *De Sedibus et Causis Morborum*; Albert von Haller was busily engaged upon his immortal work on physiology, and Buffon had given to the world the first five or six volumes of his equally immortal work on natural history. Comparative anatomy was in an embryonic condition, and pathology was rocking to and fro in the brains of Gaubius, De Haen, and Van Swieten. Science, properly so termed, that is science in its largest and widest sense, was without a master. Joseph Priestley, in 1774, discovered oxygen, or dephlogisticated air, as he called it, and along with Black, of Edinburgh, and Lavoisier, one of the victims of the French Revolution, laid the foundation of scientific chemistry. Borden and Carmichael Smith foreshadowed the advent of general anatomy, which, under the plastic genius of Xavier Bichat, at the close of the century, became a new branch of study, and a powerful element of scientific progress, under the name of histology, by which it is now universally known. The microscope had as yet no scientific significance, or any definite use as an instrument capable of elucidating healthy and morbid structure. Surgery in England at the commencement of Hunter's career, as well as for a long time after, was at the lowest possible ebb, sterile, and, as intimated in a former sentence, strongly scented with the odor of the barbershop. Of works on medicine there were none worthy of the name, and medicine itself was, if possible, in a more degraded condition than surgery. England had not one solitary medical college, and in the few private schools which then existed in the metropolis, the teaching was of the poorest and most limited kind. Bromfield, at St. George's Hospital, embraced anatomy and surgery in a course of thirty-six lectures; Nicholls, a man of note in his day, contented himself with a nearly equal number of lectures on anatomy, physiology, pathology, and midwifery; and Nourse, in 1748, at St. Bartholomew's Hospital, taught "*totam rem anatomicam*," in twenty-three lectures, hardly as many as the modern teacher devotes to the description of the skeleton. The surgical lectures of William Hunter, at his school in Great Windmill Street, could not have been conducted on a large scale. He was a great anatomist but no surgeon. It is difficult for any one at the present day to believe that no distinct or separate professorship of surgery existed in the University of Edinburgh, so renowned as a seat of medical education, until 1831, when the chair that has since existed was created for Mr. Turner. Up to that time surgery was taught by Monro, the third, merely as an appendage to anatomy, in a few hurried lectures, towards the close of the session. The labors and investigations of John Hunter formed the dawn of a new era in surgical science; he touched the corpse with his magic wand, and it sprang, like a young Hercules, to its feet; and what he accomplished for his specialty, William Hunter accomplished for midwifery, and William Cullen for medicine. These three men, all Scotchmen by birth, became the medical luminaries of their day, and the founders, respectively, of scientific surgery, scientific midwifery, and scientific medicine; in a word, the creators of a new epoch in the branches of medicine to which they respectively devoted their time, their talents, and their genius. Each labored zealously to advance our knowledge and to place his specialty upon a sure, solid, scientific foundation. They fertilized and vitalized everything they touched.

Of the 13,682 specimens which adorned his collection at the time of his death, it is safe to say that at least one fourth were prepared with his own hands. He dissected more than five hundred species of animals, and of more than three hundred of these he left more or less elaborate descriptions. During the first ten years of his professional life he was incessantly engaged in the study of practical anatomy, spending nights and days in the foul air of the dissecting-room; and in his maturer years, during which he was encumbered with a large private practice and a daily hospital attendance, he never, unless compelled by sickness, relaxed for one hour in his pursuits as an experimenter and an original investigator.

It is a remarkable feature in the life of Hunter that he should have possessed such wonderful powers of abstraction and analysis, and yet have been totally unacquainted with mathematics and geometry, a knowledge of which Plato and his school considered so essential to the full growth of the reasoning faculties. Of logic, as an elementary study, he was equally ignorant. It must not, however, be forgotten that Hunter's massive mind was cast in the Scotch mold, and that the Scotch mind is an eminently thinking mind, capable, in its higher developments, not only of the loftiest flights of fancy, but of the most patient research, of great powers of endurance, and of the most profound ratiocination.

The lesson of the life of such a man, in every respect so grand and colossal, so powerful and majestic in intellect, and so indissolubly associated with the scientific history of his age and country, is full of instruction, not only to the members of our own profession, but to men in every avenue and pursuit of life. His example of industry and of steady, persistent effort in the cause of human progress reflects the highest credit upon his character, and is worthy of the imitation of every student ambitious of distinction and usefulness. Nowhere, either in ancient or modern times, can there be found a nobler pattern for the formation of a truly scientific career. Commencing life as an erratic, hesitating youth, undecided what to do, or whither to turn, without any promise or definite aim, a source of constant annoyance to his family and of disappointment to his friends, he became eventually one of the most illustrious men in all Europe, leaving behind him imperishable monuments of patient research, of vast genius, and of wonderful philosophical acumen, destined to grow brighter and more stately as the ages roll on, and as men become more and more appreciative of man's work and of man's intellectual powers.

Nearly one hundred years have elapsed since the death of this remarkable man, this apostle of surgery, this high priest of nature. When the century shall be completed it will be a fitting act on the part of the medical world to place upon his tomb a wreath of immortelles, commemorative of the event and of the high sense of their gratitude for the services which he rendered to our profession and to mankind. Although Hunter is dead the spirit which animated him will live in all future ages to encourage and stimulate the student of surgery, of science, and of human progress. His career affords an illustrious example of a man of great intellectual powers triumphing over early defective training, and marching onward, step by step, despite vast obstacles, to the highest pinnacle of human greatness.

DIABETIC COMA; ITS RELATION TO ACETO-NÆMIA AND FAT EMBOLISM.¹

BY R. H. FITZ, M. D.

On the 13th of November, 1880, I was called to meet Dr. J. C. French, of Dedham, in consultation with regard to a patient whom he had seen for the first time on that day.

We found Mr. —, fifty years of age, lying in bed, semi-conscious, and roused with difficulty, though occasionally moving somewhat restlessly. The skin of the face and hands was of a livid hue, and warm to the touch; abundant perspiration was present on the forehead. The pupils were small, though not firmly contracted. The pulse was 140, very feeble; the respiration 40, deep and regular. Tongue and fauces dry. On auscultation the sounds of the heart were found to be normal though feeble. No abnormal sounds were heard on examination of the lungs, and air entered readily to the base of the chest. The abdomen was soft, moderately distended, neither painful nor sensitive to the touch. There was no obvious paralysis of any of the facial muscles or of those of the extremities.

The patient was evidently in a condition of coma, and there was nothing to be learned from the physical examination which could explain the severity of the symptoms.

It was learned from the relatives that Mr. —'s health had always been good, with the exception of rare attacks of indigestion and occasional difficulty of breathing, till three weeks ago. Busily occupied during the greater part of the year, he had been in the habit for many summers of spending three to four weeks in the woods, camping-out. At such times he had been troubled with boils, and comparatively slight wounds would heal with difficulty. Last summer, during his life in the woods, his health had been excellent, and he had been free from the yearly annoyance of boils. He had gained in flesh, his weight at the end of the vacation being one hundred and seventy-eight pounds.

There was no manifest cause for his present illness, which began with a loss of flesh, amounting to one pound daily. This loss was not associated at first with any notable diminution of strength, nor did it cause any immediate anxiety. It was observed that he passed more urine than usual during this time, rising two or three times at night for this purpose. He had called attention to a peculiarly agreeable odor which this secretion presented.

As the emaciation continued a loss of strength became noticeable, and on the 6th of November, from the increasing weakness, he ceased to attend to his business. At this time the attention of his nephew was called to his condition, and dryness of the skin and mouth was complained of. This gentleman suggested that the affection might prove to be diabetes, and the advice of a relative, a physician living at some distance, was sought.

During the three days immediately following the withdrawal from business there was a rapid loss of strength, compelling the patient to take to his bed. He then began a restricted diet. On the night preceding the day of my visit he suffered from frequent vomiting, which kept him awake during the greater part

of the night, and in the morning his exhaustion was extreme. Although he then recognized those about him when spoken to, he would immediately after fall into a doze. At this time his breathing was noticeably increased in rapidity, and a dusky hue of the skin became apparent. The vomiting continued during the forenoon, though the quantity raised was small, and presented a coffee-grounds appearance. He passed no urine during the day, and his bowels had not been moved for a week.

Death took place quietly in the evening, an hour after he was seen by Dr. French and myself.

Our opinion at the time was that the case was most probably one of diabetic coma, there being no evidence of the presence of any of the usual causes of coma, and the history of the case rendering the diagnosis of diabetes not improbable.

An autopsy took place on the 15th of November, forty-three hours after death. The skin was pale except at the dependent portions where there was moderate lividity. Rigor mortis was present. The head was not opened. The pericardium had a normal appearance. The heart was distended and the cavities, especially of the right side, contained dark liquid blood, which was preserved for chemical examination. The blood presented a peculiar sour odor, which was compared to that of stale lager beer. The valves of the heart were not abnormal, and the muscular substance showed no unusual appearances. The larger pulmonary arteries contained liquid blood.

The pleural cavities held no abnormal material; the pleural surfaces were besmeared with a viscid substance, readily adhering to the hands in removing the lungs. The latter organs were free from evidence of disease, were posteriorly injected and ardematous. A recent gray and slightly adherent thrombus, in which were large quantities of bacteria, was found in one of the smaller branches of the pulmonary artery. A microscopic examination of the pulmonary tissue was made with great care and at an expense of much time. A few specimens were obtained, in which a small number of fat emboli were found. Osmic acid was used to confirm the inference derived from the examination of unstained preparations.

The peritoneal cavity showed no abnormal appearances, and the peritoneum was free from any evidences of disease.

The spleen was of normal size and density, and on section was of a dark-purple color, without manifest alteration of structure.

The kidneys were of normal size, flaccid, the capsules readily detached. On section the blood-vessels were moderately injected, and the region of the convoluted tubules was somewhat opaque. On microscopic examination a slight degree of fatty degeneration and an unusually granular condition of the epithelium of the convoluted and straight tubules was observed. No distention of the renal blood-vessels with fat drops was apparent. The bladder was contracted, and contained an ounce of opaque yellow urine, which was preserved for further examination.

The liver contained a considerable quantity of dark blood, and on section emitted an odor resembling that found in the blood from the heart, though less intense.

The microscopic examination of this organ showed no abnormal appearances either in its cells or blood-vessels. It may be mentioned that numerous prepa-

¹ Read before the Boston Society for Medical Observation, December 20, 1880.

rations from the liver and kidneys were examined with and without the use of osmic acid.

The stomach and intestines showed nothing abnormal.

The negative results of the examination of the organs of the body as explanatory of the cause and severity of the symptoms is sufficiently obvious.

The chemical examination of the urine showed that the probable diagnosis made during life was correct, and that the case was one of saccharine diabetes.

The urine was acid, having a specific gravity of 1026, and was without any peculiar odor. It contained about one per cent. of albumen, and on the application of Heller's test showed the presence of sugar.

The blood was kept in a covered glass vessel for twelve hours, and was then found to have become separated into two portions; the upper fourth was of an opaque, dirty, reddish-gray color, with a yellowish layer, a line in thickness, separating it from the lower portion, which was of a dark red color. The blood was fluid throughout.

On microscopic examination the upper stratum was found to contain minute fat drops, and occasional large granular corpuscles. In the yellow border line were found numerous white blood corpuscles containing granules and fat drops. Free fat was also found in the lower three-fourths, likewise fatty and granular white blood corpuscles, with occasional large, irregular, and somewhat polygonal fatty granular corpuscles. The highly refractive granules and drops contained in the blood, and which were assumed to be composed of fat, were dissolved by means of ether. The blood was then given to Professor Wood, of the Medical School, with the request that the presence of acetone might be sought for. The following is his report:—

"The blood received from you some time since was analyzed for acetone by distilling it after the addition of tartaric acid, rectifying the distillate, and distilling the product over calcic chloride and potassic carbonate successively. In several of the distillates an odor resembling that of acetone could be distinctly perceived, although mixed with the odor of organic matter. The final product treated with bisulphite of sodium gave crystals similar to those of bisulphite of acetone."

The termination of cases of saccharine diabetes in the manner suggested by the description of the case here recorded has long since been noticed. It is also well known that diabetic patients readily succumb to intercurrent attacks of acute disease, especially of pneumonia. Under such circumstances the symptoms are not unfrequently so startling in their features and severity as to be regarded as independent of the special form of secondary disease, and out of all proportion to the extent of the lesions subsequently discovered. Such symptoms at one time were considered as the manifestations of uræmia, from their resemblance in certain respects to the closing stages in many acute and chronic diseases of the kidney. This view seemed to be favored by the frequent occurrence of albuminuria in diabetes, and the not uncommon discovery of various degrees of fatty degeneration of the renal epithelium.

Kussmaul¹ calls attention to the lack of identity of the symptoms of uræmia and those attributable to the conditions present in diabetes. He lays special stress upon the dyspnoea which is more severe in the latter affection, and is associated from the outset with open-

air passages. In uræmia, on the contrary, there is accompanying evidence of fluid in the lungs. Attention is also called to the frequency of stertor in uræmia, while this symptom is rare in diabetes, even just before death take place. The frequent and extreme uneasiness which precedes the comatose condition in diabetes is not so evident in the uræmic condition, and the pulse in the latter tends rather to become slow than rapid, as is the case in diabetes.

Other features might be mentioned which are met with in uræmia rather than in diabetes, as headache, dilated pupils, and œdema of the arachnoid.

Kussmaul first made use of the term diabetic coma as calling attention to an essential symptom, which was thus characterized as distinct from uræmic coma. He has also endeavored to learn from experiments what may be the exciting cause of the peculiar symptoms observed.

It was suggested by Dusch, in 1851, that a decomposition of the sugar in diabetes might give rise to the immediately fatal symptoms, which he recognized as distinct from those occurring in uræmia. Three years later Petters, having previously noticed a peculiar odor of the urine and other excretions of diabetic patients, compared by him to that of chloroform, found acetone in the blood and urine of a diabetic patient who had died comatose. He attributed the odor and the final symptoms to a poisoning with this ingredient. Kaulich, in 1860, further investigated this subject, and considered it essential that in diabetes a ferment should be produced in the stomach, which should cause a fermentation of the sugar, and by absorption of the products of this fermentation the symptoms of acetonæmia were considered to arise. These symptoms, as recorded by Kaulich, differ somewhat from those met with in the diabetic coma of Kussmaul, and are stated to occur in other diseases than diabetes. In typhoid fever, malarial poisoning, variola, measles, and cancer of the stomach, the odor of acetone was found in the excretions, and in consequence, certain of the symptoms occurring in those affections were grouped with those observed in diabetes, where the odor of acetone was present, under the term acetonæmia. Since then there have been contributions to the literature of this subject by Betz, in 1861; Cantani, in 1867, and others whose names will appear later.

Kussmaul made a series of experiments to determine the effect of the introduction of acetone into the blood. His results were not opposed to the theory of acetonæmia as a possible condition, although its symptomatology needed to be discovered. He considered that for its acute spontaneous occurrence in man, very large doses of acetone were necessary, and that no great accumulation was possible, owing to the rapid elimination of this substance by the lungs. It was regarded as more plausible that the continued reception of acetone in the blood, where the nervous system was enfeebled, might produce a chronic poisoning, and that the latter might assume a sudden acute course like the termination of chronic alcoholism in delirium tremens. The cause of diabetic coma, however, was to be sought for in some other agent than acetone, and in one whose nature is uncertain, although its production is to be regarded as dependent on the disturbances taking place in diabetes.

The theory of acetonæmia thus being regarded as insufficient by so eminent an authority as Kussmaul, renewed attention has been called, of late years, to the

¹ Deutsches Archiv für Klinische Medizin, 1874, xiv. 1.

possibility of discovering an efficient cause for diabetic coma. Numerous chemical examinations of the secretions, especially of the urine, have been made, with the hope of isolating some ingredient whose introduction into the body might produce the symptoms in question.

Gerhardt, in 1865, first called attention to the fact that the urine of diabetic patients which contained acetone became of a reddish-brown color when a solution of ferric chloride was added. It had already been discovered by Genther that a substance called by him athyldiacetic acid acted similarly with ferric chloride. He also found that this substance, now called aceto-acetic ether, became readily decomposed into acetone, alcohol, and carbonic acid. Gerhardt therefore suggested that the acetone present in the urine of diabetes arose from the decomposition of this aceto-acetic ether.

Soon after the publication of Kussmaul's article, with the suggestion that the poisonous agent in diabetic coma was not acetone, but some unknown agent. Rupstein,¹ who had been examining the urine of a diabetic patient with the ferric chloride test, endeavored to discover the presence of aceto-acetic ether in this secretion. He found that the color-reaction was destroyed by the addition of muriatic acid, and the application of heat; that it did not take place if the fresh urine was boiled for half an hour, at which time the odor of acetone was developed. It was also noticed by him that when urine had been kept for one or two weeks the color-reaction could not be obtained. Since only aceto-acetic ether when added to urine acts in the same way, it was inferred that this ether was present in such urine of diabetic patients as gave the color-reaction with ferric chloride. This inference seemed to be confirmed by the discovery of acetone and alcohol in the urine of the same patient. He further states that he isolated from the urine, with the aid of acetic acid and ether, a body which gave a brown color when acted upon by an ethereal solution of ferric chloride.

Fleischer² endeavored to learn whether the introduction of aceto-acetic ether into the circulation would give rise to the symptoms in diabetes which had previously been attributed to acetone.

In experimenting on dogs and rabbits with what were considered to be quite large doses no serious disturbance was noticed. The odor of the ether was detected in the breath but was not present in the urine. He took two grams of the ether internally on different days without any resulting disturbance, neither was acetone present in the urine, nor did this secretion give the color-reaction with ferric chloride. It was, therefore, considered that there was no injurious effect from aceto-acetic ether, and that this substance is partly eliminated in the organism and partly decomposed.

Fleischer furthermore opposed the view, hitherto presented, that the change in the color of the urine on the addition of ferric chloride was due to the presence of aceto-acetic ether, and that acetone in the urine arose from the decomposition of this ether. He agreed with Rupstein in the statement that heat destroys the substance in the urine of diabetes which causes the color-reaction with ferric chloride. He found, on the other hand, that the application of heat to aceto-acetic ether caused its distillation as such, with the retention of the property of becoming reddish-brown on the addition of ferric chloride.

Fermentation destroyed the coloring property of

aceto-acetic ether, while the fermented urine of diabetes still became characteristically colored when the iron test was used. When corresponding degrees of color were produced in the urine of diabetes and in normal urine mixed with aceto-acetic ether, the former gave out no odor of the ether, which was evident in the latter mixture.

The results of these experiments were therefore regarded as justifying the conclusion that it is questionable whether aceto-acetic ether is present in the urine of diabetic patients.

Fleischer was able to discover acetone and alcohol in the urine of the cases of diabetes examined by him, even when no color-reaction resulted from the use of ferric chloride. The acetone was the more abundant the longer the urine had been passed. The presence of aceto-acetic ether being in doubt, he offers as a suggestion for the formation of acetone that it represents the product of a fermentation of the sugar in consequence of the presence of a specific acetone ferment. The ferric chloride test is considered to have a certain practical value as it gave no reaction when added to the urine of mild cases of diabetes, and may thus be regarded as indicating the more severe forms.

The latest contribution to the chemistry of this subject comes from Quinke.³ He determined the amount of the material present in the urine which gave the reaction with urine, by comparing the resulting color with that obtained from a standard watery solution of aceto-acetic ether. Four parts in a thousand were found to represent the daily average for a month, which corresponded with six to eight grams of excreted substance. He noticed that there was no odor of the ether in the urine, although an artificial solution of one part of the ether to one thousand parts of water presented a characteristic odor. At the same time he noticed that when aceto-acetic ether was added to the urine of his patient it met with a loss of odor, which was not the case when it was added to normal urine. Quinke is inclined to admit that the substance in the urine reacting with ferric chloride is not simple, soluble, aceto-acetic ether.

From the subcutaneous injection of four cc. in rabbits, a dose twice as large as that used by Fleischer, there resulted restlessness, stupor, and difficult and accelerated respiration, frequently terminating in death. Five to ten cc. were necessary to produce death in dogs, and urine taken from the animals immediately after the injection gave a reddish-brown color with ferric chloride. The effect of the introduction of the ether was by no means uniform; for in certain cases death occurred without dyspnea, and glycosuria was instantaneously observed. It was also obvious that the ether rapidly decomposed, from the fact that the urine only occasionally gave the color reaction with iron, — and then but for a short time, — and that its odor was never perceived in the breath.

Quinke suggests that, as all the reported cases of diabetic coma do not present the same group of symptoms, it may be that several substances are found in varying quantities. Their cumulative, poisonous action may then take place, as in uramic coma, without any single ingredient being alone in question.

Cases of diabetic coma have recently been published in England by Dr. Foster⁴ and Dr. Southey.⁵ The

¹ *Centralblatt für die med. Wissenschaften*, 1871, lxxv., 865.

² *Deutsche med. Wochenschrift*, 1879, volume 218.

³ *Berliner klinische Wochenschrift*, 1880, i. 1.

⁴ *The British Medical Journal*, 1878, 78.

⁵ *The Lancet*, 1879, 192.

acetonæmic theory is adhered to by both these writers, without, however, any new evidence being presented.

Dr. Foster claims that the addition of acetone to blood produced the gross and microscopic appearances found in the examination of the blood from his patient.

During the past year the question of the origin of diabetic coma has been considered from a new point of view. Drs. Sanders and Hamilton,¹ being dissatisfied with the theory of acetonæmia as a cause, thought that the fatty condition of the blood, frequently noticed in diabetes, might give rise to fat-embolism, and thus mechanically produce the dyspnoea.

The examination of the blood of two patients showed the presence of fat, and in one an extensive fat-embolism of the pulmonary blood-vessels was found.

Fat drops were also discovered in the blood-vessels of the kidneys and liver of this patient. The odor from the blood of one patient was like that of acetone, and a trace of acetone was observed in the blood of the second patient.

The discovery of the evidence of fat-embolism associated with lipæmia, and the analogy in the dyspnoea and coma from fat-embolism following the fracture of bones with these symptoms observed in diabetes, led Sanders and Hamilton to advance the theory above mentioned. They were further influenced by the view that the quantity of acetone found in the blood of diabetic patients seems too small to account for the fatal symptoms, and that the effects of poisoning with acetone rather resemble those due to alcohol. They were unable to confirm the statement of Dr. Foster that the addition of acetone to blood produces appearances resembling those found in the blood of diabetic patients.

Dr. Starr² gives the report of a case of diabetes with lipæmia and fat-embolism of the lungs. The patient had pneumonia, and it is stated that there was no perceptible odor of acetone during life or at the post-mortem examination. On the contrary, in a case of diabetic coma reported by R. V. Jacksch³ the blood was examined during life for fat drops, with a negative result. The color-reaction with ferric chloride was obtained, and ether is said to have extracted from the urine acidulated with sulphuric acid the material whose presence occasioned the reddish-brown color. Distillation of the ethereal extract caused a gradual disappearance of this reaction.

It is evident, from what has been stated with regard to the chemical examination of the blood and urine in diabetes, that no ingredient has been found whose presence is sufficiently explanatory of the nature and severity of the symptoms. It also appears not unlikely that modifications in the composition of the blood are present, and that the severe symptoms, if not the fatal result, are often due to a poisoning with one or more agents, which alone, or in combination, represent the efficient cause.

The case here recorded opposes the theory of fat-embolism as the cause of the coma; for neither in the blood nor in the blood-vessels of the viscera was any considerable quantity of fat found. Additional evidence in this direction is furnished by the case reported by Jacksch.

It is also manifest that in fat-embolism resulting from the fracture of bones dyspnoea and coma are by

no means constantly present; although it is probable that in most, if not in all, cases of bone-fracture and crushing of fat-tissue a lipæmic condition results.

It seems quite probable that the fat found in the blood-vessels of Mr. — may represent the result of an absorption of fat as indicated by the rapid emaciation mentioned in the record of symptoms.

In one of the cases reported by Sanders and Hamilton the statement of the progressive emaciation of the patient is recorded, and it is well known that it is the rule for diabetic patients, who are seriously ill, to become progressively emaciated.

It is also not improbable that the lipæmic condition, when present, may in part be the result of a fatty degeneration of the white corpuscles of the blood, or of the endothelium of the vascular wall, — a view suggested by the appearances found in the microscopic examination of the blood. Too little attention has been directed to the possibility of an embolic lipæmia in other emaciating diseases than diabetes, — a subject which certainly demands investigation in consequence of the interesting discovery made by Sanders and Hamilton. My own inability to confirm their observations in degree does not detract from their value, but necessitates the conclusion that a theory of exclusive origin of diabetic coma based upon the discovery of an embolic lipæmia is not probable.

It is further evident that continued experiments are desirable with regard to the action of acetone, acetoacetic ether, and the ethereal extract from acidulated urine of diabetic patients. The differences in statement with reference to the chemical properties of the latter make it manifest that further investigation in this direction is demanded.

It may be stated in conclusion that it is probable that the condition called diabetic coma owes its origin to several causes, chiefly chemical and partly mechanical. All of these are not likely to be constantly present; nor, when present, are they necessarily in the same ratio.

In consequence of such variations in the nature and proportion of the efficient causes, certain differences in results are likely to follow. For the present it is convenient to include these, from the predominant symptom, under the descriptive term of diabetic coma.

GYNECOLOGY IN NEW YORK AND BROOKLYN.

BY W. H. BAKER, M. D.

At the College of Physicians and Surgeons, the work in this department, in charge of Dr. T. G. Thomas, continues from October 1st to May 1st, and consists of a didactic lecture each Monday, at five o'clock, P. M., and a clinical lecture each Tuesday, at three P. M. The material for the latter lectures is supplied from an out-patient department for the treatment of the diseases of women, which is in the college building, open throughout the year, and carried on by assistants of Dr. Thomas. One of the hours of attendance thereat immediately precedes the hour of his clinic, and two, three, or more cases are detained and ushered singly into the lecture room as required. Here the patient is given a chair where she sits with bonnet and shawl on while she is questioned by the lecturer, and the prominent points in the case thus brought out, an outline of it,

¹ Edinburgh Medical Journal. 1879. cclxxxix. 47.

² The Medical Record. 1880. 477.

³ Centralblatt für die med. Wissenschaften. 1880. xlviii. 889. Prager Med. Wochenschrift. 20 and 21. 1880.

together with the diagnosis, having previously been furnished him by the assistant. The professor then gives a short clinical discourse on the particular disease or condition of the patient, which he often illustrates by use of the blackboard, by diagrams, and by a most ingeniously contrived manikin constructed by himself and figured in the last edition of his valuable work.

The most advanced students and the post-graduates are invited in sections of ten each to attend his operations at the Woman's Hospital. No instruction in the education of the touch is given, it being found impracticable in so large a school, numbering something over five hundred and fifty students, to furnish facilities for individual examination of cases. The student here is most fortunate in listening to the unequalled lectures of Dr. Thomas, able, interesting, and instructive; but his clinical advantages are necessarily limited and his opportunities for practical work almost nothing.

Since the death of Dr. Peaslee, the department of gynecology at Bellevue College has been associated with that of obstetrics, under the charge of Dr. Lusk, whom we remember well as a lecturer on physiology, when some of us were students at Harvard. It was a pleasure to see his familiar face again. He has lost none of the earnestness, ability, or zeal which always characterized his teachings.

The course here continues twenty-four weeks, beginning October 1st. Sixteen didactic lectures are given in the college building on Saturday mornings at nine o'clock. Each Wednesday at the same time, in the Bellevue Hospital building, a clinical lecture is given, which is illustrated by an operation or by the exhibition of a patient, when the students have an opportunity of seeing the exact local condition. This exercise is placed at an hour when some other lecture is in progress, and only those students who have passed their examinations in anatomy are admitted. The lectures are still further illustrated by diagrams, charts, and the use of the blackboard.

On Thursdays, at half past one, there is an exercise in the hospital amphitheatre which, after January 1st, partakes quite of the nature of a clinical conference. It is open to the whole school, but only the most advanced students are allowed to take part in it. A student has a case assigned him from the ward, of which he takes the history and makes an examination, writing it out in full. This he reads at the conference and is questioned by the professor. The class being large, no one student is called upon more than once during the term. Or if there are one or more cases in the ward which can be readily diagnosticated, they are brought before the class and one of the most advanced students is called upon to examine and make a ready diagnosis. This Thursday exercise is termed by Dr. Lusk his diagnosis class. Before January 1st, and until the students have become somewhat familiar with the subject, it is more nearly in its character, a clinical lecture.

The advantages which the students of this school have for acquiring familiarity with the appearances of acute cases of uterine disease are very great. With the exception, however, of the times when one or another student is asked to examine a case, he has few opportunities to educate the touch. The clinical advantages are given alone to the most advanced students.

By the kindness of Dr. Skene I was invited to visit Long Island Medical College. This institution is immediately connected with the Long Island Hospital,

and the department of gynecology, entirely distinct from that of obstetrics, is most faithfully and ably cared for by Dr. Skene. The regular course begins February 1st, and continues until the latter part of June. During this time there is given each Monday at eleven a didactic lecture, and each Tuesday at two a clinical lecture. At this latter exercise, if the case be one requiring operative interference upon the external genital organs, so that it is practicable for many students to witness it, the operation is done before the class. Or, on other occasions, the professor reads the history of a case and calls upon a student from the class to examine it in an adjoining room. On his return to the lecture room, he is questioned by Dr. Skene, who subsequently lectures upon the case, in regard to the condition found and the diagnosis made. These clinical exercises are also held throughout the preliminary course, which extends from October 1st to February 1st. We understand it to be the future intention of the college to unite the two courses, preliminary and regular, making one regular course of seven or nine months. The material for the clinical lectures is furnished either from the gynecological ward of the hospital or from the out-patient department of the hospital in charge of two assistants of Dr. Skene. The facilities at this school for the students to practice the touch and to become otherwise familiar with the appearances of uterine disease are undoubtedly superior to those of any other school in this vicinity. The whole number of students being much less than in the colleges of New York, it becomes possible to take the advanced ones by sections of from three to five each into the out-patient department, where the assistants in charge instruct them in the touch, etc.

Through the courtesy of Dr. Pallen, I was shown the workings of the department of gynecology at the University of New York. The season is about twenty-four weeks in length, and during that time Dr. Pallen lectures each Thursday at half past one o'clock, the lecture being clinical in its character and based upon two or more cases furnished from the out-patient department for the purpose of illustration. The patient is rolled in upon a table, covered, and after reading a short history of the case, the sheet is thrown back from the lower part of the body, and the patient is shown to the class, which at this exercise averages about three hundred and seventy-five in number. If it be an operative case, as laceration of the cervix uteri, rupture of the perineum, etc., Dr. Pallen operates before the class, and there being no hospital in which to place the patient subsequently, she is taken to her home in a carriage, and looked after by one of Dr. Pallen's assistants. This whole method seemed to us to savor of severity to the patient. In regard to successful recoveries, we were assured by the professor that the results have been most satisfactory. In so large a class very little can, of course, be seen save by the few students immediately behind the operator. Still there is considerable advantage in becoming familiar with the different positions of the patient on the table for examination, treatment by operation or otherwise, and to a certain extent the broader manipulations of the operator are observable. The clinical material is furnished from the out-patient department kept up in the college building for the purpose, and in charge of Dr. Pallen's assistants. The number of new patients received here annually is about one hundred and fifty, being quite sufficient to supply illustrative cases for the weekly

lecture. The advantages to the student at this school for practical work, the education of the touch, the attempts at diagnosis, etc., are very small. We understand it is the intention to give to post-graduate students a series of didactic lectures which shall be open to them only.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. LYMAN.

REPORTED BY DR. JOHNSON, HOUSE OFFICER.

CASE I. ABORTION; PELVIC ABSCESS; INTRA-UTERINE INJECTIONS.

ANNIE K., aged twenty-five, single, was brought to the hospital October 1, 1880, by the police in a state of stupor and great exhaustion. She had been taken from a house of ill repute under circumstances which indicated that abortion had been committed. Too feeble to give any history of herself or even to be properly examined.

October 4th. On examination, the cervix found to be bilaterally lacerated. Vagina hot and with an offensive purulent discharge. Tongue dry and heavily coated. Fæces and urine discharged involuntarily. Temperature 102° F. Pulse 112. Ordered hot carbolyzed vaginal douches three times daily; also intra-uterine douches of permanganate of potash (three grains to one ounce) thrice daily. Quinine five grains every four hours, and whisky one ounce every three hours, to be increased or diminished as needed.

Eight p. m. Masses of shreddy, offensive tissue followed the injections. Now refuses or is unable to swallow. Brandy and egg given per rectum and retained. Discharges less offensive.

October 5th. Still unable to swallow, and rectal enemata continued. Vaginal discharge more abundant and less offensive. Temperature 102° F. No extreme suprapubic tenderness. Uterus measures four inches. In the evening the patient was still extremely feeble, but somewhat brighter, and swallowing nourishment. Whisky to be given, one ounce every hour, unless excited by it.

October 6th. Some vomiting during the night. Still semi-unconscious. A round, hard, slightly fluctuating tumor is felt in Douglas's pouch. Vaginal discharge still offensive, but diminishing. Tongue clearing. Passes fæces in bed. Temperature normal. Pulse 96, and fair.

October 7th. Much the same. On giving the douche, an opening was found into Douglas's pouch admitting the tip of index finger, from which pus flowed freely.

October 8th. Brighter, and takes nourishment well. Still passes fæces in bed. Says she feels better. For the first time, owing to her extreme exhaustion, a thorough examination was made. Uterus slightly anteverted and movable; os patulous and bilaterally lacerated; depth of uterus, three and a half inches. Behind the cervix, in the posterior cul-de-sac, an opening one fourth of an inch in length, through which a probe passes downward and backward along the left side of the rectum about three inches. Through this issued

thick, creamy, but not very offensive pus. Sac to be injected three times a day with permanganate of potash.

October 10th. Brighter. Answers questions, calls for bed-pan, and asks for increase of diet.

October 13th. Vomits occasionally, but is in every respect better. Complains of some headache and ringing in ears from the large doses of quinine. Says she was confined a year ago at Lying-In Hospital under assumed name. Is unable or unwilling to give any satisfactory account of her recent history before entering hospital.

October 17th. Large amount of pus washed out of uterus and posterior cul-de-sac. Although she vomits occasionally continues to improve. Stimulants diminished.

October 18th. Pus continues free, but odorless, from both uterus and sac. In afternoon had an access of pain in abdomen and rising temperature (103.2° F.). Hot fomentations and carbolic-acid douche in place of permanganate.

October 19th. Temperature 102° F. Pulse quick and feeble.

October 23d. Under the use of fomentations, quinine, opiates, douche, etc., the acute symptoms have disappeared. Has now no pain and but little discharge. Ordered tincture of chloride of iron in place of quinine.

October 24th. Uterus now measures three inches.

November 7th. Has steadily improved, though with many alternations as to pain, vomiting, and amount of pus discharged. After use of douche this morning had several well-marked convulsions, followed by unconsciousness and feeble pulse for an hour or two, during which time she had ether and brandy subcutaneously and stimulating enemata.

November 8th. Is again quite comfortable, yesterday's attack being partly hysterical.

November 10th. Menses appeared.

November 27th. Patient has steadily gained, though there is still some purulent discharge from the cul-de-sac. Dilated the opening and applied tincture of iodine freely to walls.

November 29th. No discharge for twenty-four hours.

December 8th. Left hospital, well, except for a trivial discharge from cul-de-sac.

This patient, when first admitted, seemed almost moribund, and though powerfully stimulated, the reaction was very slow and unsatisfactory. The result may fairly be attributed to the quinine, the constant and persistent use of intra-uterine injections, and the unremitting attention to the case, night and day, of the attendants.

CASE II. ABORTION; PELVIC ABSCESS.

M. E. M., aged twenty, married, and mother of one child, was admitted to City Hospital November 9, 1880. States that her catamenia reappeared ten months after labor, and continued normal until their cessation, three months ago. Four weeks since took "tansy tea," which brought on a profuse flow, accompanied with pain. At the end of a week the pain and dysuria became very severe and the defecation difficult. Had abscess in the right breast, and the left breast was very tender and nodulated.

November 10th. Excessive tenderness and heat, especially in the vaginal cul-de-sac. General febrile

excitement. Ordered poultice to abdomen, hot carbolized douches, and the left breast to be strapped.

November 14th. Pain almost gone. Induration to left of the cervix, from which pus escapes freely by a spontaneous opening. Patient much relieved.

November 27th. Discharge has continued to date. Has had occasional doses, as required, of morphine and belladonna by suppository. To-day has a recurrence of high temperature and other acute symptoms. Ordered quinia in ten-grain doses, morphia subcutaneously, and poultices.

December 7th. To the right of the cervix a large mass of induration is felt. The cervix itself is quite livid, and almost obliterated by bulging of the vaginal wall.

December 8th. Aspiration of the abscess removed, half an ounce of pus and blood only, but enough to relieve the pain and tension, and she steadily improved until the 16th, when, upon examination, a small indurated spot only could be felt, which was painless on pressure.

December 18th. Was discharged, well.

CASE III. ABORTION; RETAINED PLACENTA: INTRA-UTERINE INJECTIONS.

M. C., thirty-two, married, entered hospital October 11th, pale and feeble. Confined with her third child September 12th, after two days' labor. Thinks a part of the afterbirth came away. Since confinement has had several rigors, followed by fever. Suffers from bearing-down pains, and constant hæmorrhage to the number of ten or twelve napkins daily. Vaginal discharge very offensive, and has been so, she says, from the first. No vomiting. Sleeps a great deal. Micturition frequent and difficult. Temperature 99° F. Pulse 100. Upon examination, perinæum found to be ruptured quite to sphincter ani. Vagina roomy, cool, and containing blood clots. Protruding from the os was a very offensive mass three and one half inches long by two and a half broad. Its removal was followed by free hæmorrhage. Ordered quinia, six grains every four hours, hot carbolized vaginal douches at frequent intervals, to be carried morning and evening into the uterus, with absolute rest and liquid diet.

October 12th. The mass from the cervix proving to be only blood clot, the uterus was explored, and upon the upper left side a hard body the size of a hen's egg was found very firmly attached to the walls. With great difficulty a portion was removed by the finger, and the remainder crushed and removed, so far as possible, by Emmet's forceps. Some hæmorrhage ensued, which was promptly checked by a swab of tincture of iodine. Ordered opium, hot fomentations, and fluid extract of ergot. The procedure was followed in a few hours by a severe rigor, the temperature rising to 104° F. Thirty grains of quinine were given at once, the temperature falling two degrees in three hours. Had some headache and tinnitus the following day.

October 14th. An abundant flow of pus from uterus, and night-sweats.

October 16th. Improving. Less flow of pus. To take quinine freely.

October 19th. Pus varies in quantity, but is no longer offensive. No more rigors. Complaints of headache and tinnitus. Tinct. ferri chloridi substituted for quinine.

October 23d. Much improved. Trifling discharge from cervix. No more night-sweats. Intra-uterine douches discontinued.

October 27th. Discharge ceased. Eats and sleeps well, and at her own request allowed to go home.

(To be continued.)

THE CAPACITY OF SPOONS.

BY EDWARD J. FORSTER, M. D., CHARLESTOWN, MASS.

At a society meeting a few weeks since the capacity of a teaspoon was given by one gentleman as about eighty drops, while another said that many people believed that twenty drops and a teaspoonful were equivalents.

The difference being so great I took an early opportunity to make a number of measurements of tea, dessert, and tablespoons, with the results as given below. By the "usual amount" is understood to be as much as would ordinarily be taken up, so that the spoon would be full, but yet could be moved about without spilling its contents; the "greatest amount" is as much as could *possibly* be poured in.

The apparent discrepancy in the tables whereby the ratio of the two amounts is not maintained, is accounted for by the different shape or flare of the spoons. The liquid measured was water drawn directly from the faucet.

Measurements of *teaspoons* of different patterns as found in four different dwellings:—

Usual Amount.		Greatest Amount.	
1	50 minims.	1	90 minims.
2	55	2	70
3	60	3	90
4	60	4	90
5	60	5	140
6	65	6	80
7	75	7	110
8	80	8	100
9	80	9	100
10	80	10	100
11	80	11	110
12	80	12	115
13	80	13	120
14	85	14	110
15	90	15	120
16	90	16	130
17	90	17	140
18	95	18	120
19	110	19	145
20	125	20	140
Average, 79½ minims.			

Measurements of *dessertspoons* of different patterns as found in four different dwellings:—

Usual Amount.		Greatest Amount.	
1	2 drs. 0 min.	1	2 drs. 70 min.
2	2 0	2	3 0
3	2 10	3	2 55
4	2 10	4	2 55
5	2 20	5	2 30
6	2 35	6	3 0

Measurements of *tablespoons* of different patterns as found in four different dwellings:—

Usual Amount.		Greatest Amount.	
1	2 drs. 35 min.	1	4 drs. 30 min.
2	2 35	2	4 45
3	2 50	3	4 40
4	3 20	4	5 50
5	3 35	5	5
6	3 50	6	4 45
7	4	7	4 45
8	4	8	4 50
9	4	9	4 55
10	4	10	4 55
11	4	11	5 20
12	4 10	12	4 50
13	4 15	13	4 70
14	4 25	14	4 60
15	4 50	15	6

PROLONGED GESTATION.

BY C. A. WILCOX, M. D., UXBRIDGE.

Mrs. C., whose last menstrual flow commenced March 12, 1880, and continued as usual six days, gave birth January 11th to her fifth child, two hundred and ninety-nine days after disappearance of the menses, is positive she felt motions some days previous to July 26th. The labor was natural, and recovery good. The child, a girl, weighed nine and one half pounds, the largest of the five, and at two weeks looked as old as other children of a month. Mrs. C., while perfectly regular, has previously observed a full period of five weeks.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. T. CABOT, SECRETARY.

NOVEMBER 15, 1880. DR. EDGERLY read a paper upon

A CASE OF SARCOMA OF THE KIDNEY.

The patient was a girl of seven. For several months she had fugitive pains in the left side, which attracted no attention. She then had quite a sudden onset of severe paroxysmal pain, referred to the region of the spleen and lower chest. Dr. Edgerly now saw her, and upon examination detected a slight fullness of the left side. Upon percussion a dull area was found, reaching from a point one inch below the level of the nipple in the axillary line to a little below the free border of the ribs. This dullness extended anteriorly and posteriorly about half-way to the median line. An indistinct sense of fluctuation was perceptible beneath the ribs. This region was tender to pressure or percussion. The pain abated, and for a week left the child quite comfortable. It then returned suddenly, and, a more lax condition of the abdomen allowing a thorough examination, a lobulated mass was felt reaching from beneath the costal cartilages down nearly to the level of the umbilicus and midway to the median line. This was hard below, soft, seemingly fluctuating above.

In consultation with Dr. Morrill Wyman, a brisk catbarris having failed to remove the mass, a hypodermic needle was introduced into the fluctuating portion, but only a few drops of dark blood drawn. From this time the tumor steadily increased in size and the child as steadily lost weight. The urine was carefully watched during the progress of the case, but at no time presented an unusual appearance. Death occurred in sixteen and a half weeks after the first discovery of the tumor.

The autopsy showed the mass to consist of the greatly enlarged left kidney. It extended from the nipple nearly to the pubes, filling the left side and extending somewhat into the right. Some of the lobes of the tumor resembled in color and consistence the white substance of the brain; the other portions were dark purple, much like the normal spleen in appearance.

DR. EDGERLY called attention to the difficulty in the way of diagnosis, owing to the absence of any alteration of the urine.

DR. FITZ spoke of the extreme rarity of renal sar-

coma. Monti mentions nine recorded cases, but several of these have doubtful features about them. In nearly all of the reported cases the absence of hæmaturia is especially noted, and albuminuria was present in but one case. Many of the well-authenticated cases were congenital or appeared soon after birth. This and the fact that Cohnheim has found involuntary muscular fibres in one of these growths would suggest the supposition that an inclusion of embryonic tissues had occurred during fetal development, and that these included portions had later taken on renewed growth. Without a careful microscopic examination to decide the nature of the tumor in Dr. Edgerly's case there would be grave doubts as to its character, since hæmaturia is sometimes absent in carcinoma.

DR. CURTIS mentioned the fact that Cornil and Ranvier had met with but two cases of renal sarcoma, as evidence of its extreme rarity.

DR. SABINE mentioned a case which he had seen in Strasburg in a child six or eight years old. The tumor was extremely soft, and was made up of round and spindle cells. He asked whether the youth of Dr. Edgerly's patient was not favorable to the idea of sarcoma rather than of cancer.

DR. FITZ said that the age could not be relied upon for the diagnosis, as cancer does sometimes occur in children. He asked whether the blood had been examined in the case reported.

DR. EDGERLY said that he had examined it roughly, and had found the white blood cells unusually abundant, though the exact proportion was not ascertained.

DR. CUSHING reported briefly several cases of an affection which he thought in many points similar to the epizootic prevailing among horses. In all of these patients the lymphatic glands about the angle of the jaw were enlarged and the parotids were considerably swollen. The tonsils were slightly reddened. These appearances were accompanied by considerable fever, the patients being confined to the bed often for a fortnight.

Similar cases had been seen and were reported by other members of the Society.

In answer to a question as to the amount of the glandular swelling in the horses, DR. McCOLLOM said that it was a marked feature, even in many mild cases of the epizootic.

DECEMBER 6, 1880. DR. FISHER read the regular paper on

HABITUAL DRUNKENNESS.

DR. CHANNING said that the treatment of habitual drunkards in insane asylums was inconvenient, as they were soon comparatively well, and then required careful watching.

In England from seventeen to twenty per cent. of insane cases are thought to depend on drink. Drunkenness seems to be a less common cause of insanity in America.

DR. WEBBER urged that the opinion often given by physicians that drunkenness is a disease does great harm in affording drunkards an excuse both to themselves and others for their habits.

DR. H. R. STEDMAN said that he had yet to see the case of a drunkard really benefited by confinement in an insane asylum. Their treatment involves a totally different principle from that of the really insane. In-

¹ See Boston Medical and Surgical Journal, vol. ciii. p. 632, and vol. c v. p. 3.

sane patients are better without restraint, while drunkards need it.

DECEMBER 20, 1880. Dr. FITZ read the regular paper upon

DIABETIC COMA, ITS RELATION TO ACETONÆMIA AND FAT-EMBOLISM.¹

The various chemical reactions spoken of in the paper were shown in specimens of diabetic urine.

Dr. WOOD said that he should confirm the statement of Dr. Fitz, that it is impossible to say with certainty that aceto-acetic ether preëxists in the blood and urine in these cases of diabetes, either on account of the reaction with ferric chloride or from the possibility of isolating acetone from these fluids, since other substances, such as acetates of potassium and sodium, may give the reaction with ferric chloride, and also since we are not sure that other substances than aceto-acetic ether, capable of giving acetone as a product of decomposition, may not also exist in such urine.

Thus if normal urine be so diluted with water that the normal constituents are present in about the same proportions as in diabetic urine, and a little acetate of sodium be added, the same color will be produced upon the addition of ferric chloride, as in the case of diabetic urine.

It is not probable that this reaction in the urine of diabetes is really due to the presence of an alkaline acetate, but some other substances besides aceto-acetic ether may give it.

Dr. T. B. CURTIS inquired of the reader what bodily temperatures had been observed in diabetic coma. This condition had been recognized to be very analogous to uramic coma, in which, according to Boivinville and others, the temperature is almost invariably below the normal, as in a case recorded by Bartels, where it fell before death to 83° F. It would be interesting to know whether in this respect, as in others, the two forms of coma, the diabetic and uramic, are similar.

Dr. FITZ did not recall the observations upon this point. In the case recorded no observation of temperature was made.

Dr. WEBBER mentioned a case of diabetes now at the City Hospital, in which there is at intervals a drowsy condition accompanied by nausea and vomiting. The general condition of the patient is remarkably good, considering the severity of these occasional symptoms. The urine, which at one time amounted to 7000 cc. in twenty-four hours, has diminished to 3500 cc. in the same time. Dr. WOOD said that the reaction with ferric chloride shown by Dr. Fitz was produced with the urine from Dr. Webber's case.

Dr. CUTLER asked whether the aceto-acetic ether was found in other excretions.

Dr. FITZ said that in the experiments made upon animals the odor of this substance was noticed in the breath.

Dr. S. CABOT reported the following case of partial coma, believed to be due to fat-embolism:—

A young man of twenty-four sustained a compound comminuted fracture of the left leg. There was no evidence of any injury of the head, and he was perfectly rational till the morning of the day after the accident, when he was found in a drowsy condition, taking no notice of questions. He often carried his hand to his head as if he suffered pain there, though

in partially lucid intervals he said that he felt pretty well. At night he began to pass his urine in bed. On the following morning his breathing was accelerated, and there was some lividity, but an examination of the lungs detected nothing. He remained in this condition for eight days, and then began to improve. On the tenth day (from the injury) he retained his urine, and was able to answer questions. He now complained of pain in the right side of the head. This right hemiparesis continued intermittently for two weeks, after which time he seemed perfectly well. He had no recollection of the time during which the drowsiness lasted. The process of healing in the injured leg was uninterruptedly good.

Dr. FITZ said that Dr. Cabot's case illustrated the difference between the diabetic coma, believed to be due to acetonæmia, and that caused by fat-embolism. The diabetic coma was very profound compared to that of fat-embolism, and the respiration was deep and slow, while in the case reported by Dr. Cabot it was rapid.

Dr. BAKER showed a calculus passed through the female urethra with so little pain that the patient was unaware of its presence till she heard it drop in the vessel. It was curiously twisted on itself, and measured perhaps one half by three quarters of an inch in two of its diameters, with a thickness of rather less than a quarter of an inch.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

INDUCTION OF PREMATURE LABOR ON ACCOUNT OF NARROWING OF THE ANTERO-POSTERIOR DIAMETER IN A DWARF. MANUAL DILATATION.

MAY 8, 1880. Dr. SINCLAIR read the case.

Dr. RICHARDSON stated that the operation was performed by Dr. Sinclair, and illustrates the advantage of manual dilatation. He said that he had never before seen a case in which the value of this method was so marked. The dilatation was complete in twenty-five minutes, the os had entirely disappeared, and the membranes were at the vulva, filling the entire vagina. The operation had been easily, slowly, quietly, and surely performed. With Barnes's dilatation the operation could not have been so well accomplished, even in many hours. Manual dilatation constitutes one of the most successful changes in obstetric practice, in cases in which one is called upon to deliver a woman where labor is to be brought on, no sign of labor as yet being present.

Dr. SINCLAIR stated that in primiparæ the vagina was to be first dilated just as the cervix was to be later in the process, and that it was necessary to be sure that the cervix was thoroughly tired out before beginning to turn. There was no reason, he said, why the cervix should be torn if one only took time.

Dr. RICHARDSON remarked that when one has once made up his mind he will substitute manual dilatation for all other operations whatever for bringing on labor.

Dr. Richardson stated that four out of six cases, in which he had done the operation, were primiparæ; that the time in a multipara was shorter than in a primipara; and that the general rigidity of the parts

¹ See page 124.

made a difference in the time of the operation. When the os was once fully dilated there came the question between version and forceps. Sometimes labor pains had occurred for the first time during the process, so that towards the latter part the uterus would be in a state of constantly recurring contraction, in such case threatening to become almost tonic. With this condition one should choose the forceps, version being almost impossible. In the majority of cases, however, dilatation has been completed without a sign of labor; but the uterus has immediately followed after the fetus, and there has been no tendency to hemorrhage.

DR. SINCLAIR observed that it was a great satisfaction to feel that one can at will empty the uterus, and stated that he had done it as early as the fifth month, on account of constant hemorrhage, in a case in which an abortionist had been passing up an instrument from time to time. In this instance the placenta was entirely adherent, and was removed with great difficulty. His first reported operation was performed January 18, 1870, on a primipara who had been in convulsions for twenty-four hours, in whose bladder was found only a drachm of urine, which became solid when heated.

HYDRATE OF CHLORAL IN CASES OF RIGID OS UTERI.

DR. RICHARDSON read the following paper:—

At the meeting of the American Gynecological Society held in New York in 1876, I called the attention of the members to the value of the hydrate of chloral for the relief of labor pains. Incidentally I alluded to its effect in one case in a patient whose labor was rendered tedious and her suffering greatly aggravated by a rigid condition of the os uteri.

Since that time I have had frequent occasion to observe the beneficial use of this drug in similar cases, in which the chief difficulty seems to consist in a rigid condition of the os uteri. The following record will illustrate its use in such cases:—

A. D., aged twenty-three, primipara. Labor began about three o'clock in the morning of January 22, 1880. I first saw the patient two hours later. The presentation was normal, the head being in the anterior variety of the first position. The os barely admitted the tip of the finger. The membranes were unruptured. The pains were severe, occurring every ten or fifteen minutes. Six hours later the os was the size of a silver quarter of a dollar, and felt thin, and as though a small wire surrounded it. The pains were present about every five or six minutes, and were very severe. Two hours later no progress had been made, and the patient was becoming restless and fretful. Fifteen grains of chloral were given and repeated in twenty minutes, and a third dose twenty minutes later. Within ten minutes after the third dose the patient began to doze between the pains, and even during the presence of a pain she would not fully arouse, but talk somewhat incoherently. An hour later, the pains seeming to distress her more, two doses of chloral (gr. xv. each) were given at twenty minutes' interval, and the patient again fell into a sound sleep, the recurrence of the pains being marked only by restlessness or moaning. The pains recurred at frequent intervals, and three and a half hours from the time the first dose of chloral was administered the os uteri was fully dilated. The membranes were then ruptured with a catheter, and the labor ter-

minated two hours later with the birth of a boy weighing seven and one half pounds. During the second stage of labor the mother became more conscious, and at its termination was fairly awake, although she soon fell into a natural sleep after the removal of the placenta and the application of the binder.

This case illustrates, what I have frequently seen, the advantageous use of chloral as an anæsthetic in cases of tedious labor owing to a rigid condition of the os uteri.

ALBUMINURIA IN REPEATED PREGNANCIES.

JUNE 12, 1880. DR. DOE stated that he had attended a lady in her fourth confinement who had suffered from albuminuria in each preceding pregnancy.

The first child was still-born at the sixth month; the second and third, born at the seventh month, lived respectively five and twenty-four days; the fourth at seven and a half months, lived seven weeks. In the second and third pregnancies, delivery was followed by a single convulsion. There had been with each pregnancy marked œdema and general anasarca, attended with impaired vision and scanty urine.

In the last one she was confined to bed for a week before delivery on account of excessive swelling of the feet and extreme dyspœa on exertion. She was unable to recognize a person across the room. The urine measured about one pint daily, under the use of diuretics, and was heavily loaded with albumen, but contained very few granular and hyaline casts. Just previous to the commencement of labor she passed a gallon of urine, and the delivery was rapid and unattended by any abnormal symptoms. The albumen quickly disappeared; but the impairment of vision had not wholly subsided seven weeks later, when she left the city.

Between her pregnancies she had no symptoms pointing to renal trouble, and considered herself perfectly well.

DR. HOSMER inquired as to the condition of the eye which determined the blindness.

DR. FORSTER stated that some years ago he attended a patient in her eleventh pregnancy. She had loss of sight, convulsions, milk leg. In the twelfth pregnancy there was no albuminuria whatever. In the former instance Dr. Wadsworth examined the eyes the day after the labor, with negative result.

A MEMBER reported Dr. Wadsworth as saying that it was possible for marked loss of sight to occur without ophthalmoscopic evidence of the cause.

DR. LYMAN said that he had supposed changes in the retina were always found in impaired vision due to Bright's disease. If that were the case the ophthalmoscope should show something twenty-four hours after the symptom.

DR. MIXOT remarked that he doubted very much whether any change noticeable by the ophthalmoscope would be found in those instances of transient blindness due to the acute disease.

A CASE OF LABOR WITH ABNORMAL PRESENTATION; DECAPITATION.

DR. FIFIELD reported the case, stating that about a month ago he was called to assist in a case of difficult labor, in which the physician in attendance had been unable to effect delivery. The patient, a Scotch woman, had had two previous labors: the first natural, the second effected by forceps. In the present instance

she had been (as Dr. Fifeild understood) taken in labor at some time on a Thursday, but it was not until the afternoon or evening of the following day that the attendant had been able to make out the presentation, which was diagnosed as that of the breech, very high up. The forceps were then applied, and an arm had come down. An attempt was next made to turn, but unsuccessfully. A consultant was called, and a second trial of version made without avail. Nothing short of decapitation seemed able to deliver the woman.

When Dr. Fifeild was called the left arm was hanging from the vulva, livid, cold, and dead. Tracing this, he found, high up, the sterno-clavicular region. The head was thrown into the left portion of the pelvic basin. The lower extremities were out of reach, and decapitation seemed to Dr. Fifeild to be the only possible resource. This was accomplished by dividing the bones of the spine with a pair of Smellie's scissors, the muscles to a very small extent with long scissors, and then tearing through the neck with a blunt hook (the only instrument at hand), the body was almost immediately born. The head was then pressed down into the pelvic canal, and was finally delivered thence by a crotchet introduced into the mouth. In using the scissors great care was necessary in guarding its sharp points from the uterine tissue. The patient made a good recovery. Dr. Fifeild remarked that he had been long familiar with the midwifery of Plymouth and Norfolk counties, both in his own and in the sixty years' practice of his father, covering a period of eighty-five years and more, and yet he had never heard or known of a decapitation being performed in the region mentioned. In answer to questions, Dr. Fifeild stated that he did not turn because he could not reach a lower extremity; moreover, the waters had been evacuated some hours before his arrival.

Dr. MIXOT suggested that a very strong pair of curved scissors, such as are used for dividing the neck of a polypus, might be employed in decapitation.

Dr. FIFEILD said that with the long, sharp pointed scissors it was difficult to avoid injuring the womb, and really they were of slight service in the case. Regarding the manner of using the hook recently described and advocated by Dr. Richardson, it did not seem to commend itself, inasmuch as a twist sufficient to break the neck might bring the face against the uterine surface with damaging force. Dr. Fifeild observed that decapitation is said to have been done by passing a string around the neck, and then using it after the manner of a chain-saw with the two hands.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A NEW METHOD OF PERFORMING OVARIOTOMY.

At a meeting of the New York County Medical Society held January 24, 1880, Dr. Emil Noeggerath read a paper on the above subject. The results of operations for the removal of ovarian tumors, he said, had become so very satisfactory with our great gynecological surgeons, that with many of them success was the rule, failure to save the patient's life the exception; but since we must attempt to reach even better results, and lessen the number of deaths following difficult and protracted operations, any step directed toward the dangers connected with laparotomy

should be considered in order. The question of the importance of antiseptics during the performance of ovariectomy was, to some extent, still a mooted one; but from what he had seen in his own practice and in that of others, he had come to the conclusion that the more extensively antiseptics was applied, and the more varied was its use in a single case, the greater were the chances of recovery.

If we should not succeed in gradually working out a plan by which patients might be operated upon easily at their own homes, or in the hospitals spread over the country, we ought to send every case of ovariectomy to one or more central points, where all the circumstances were made so to cooperate that the life of the patient was rendered as safe as it could possibly be rendered. One great advantage of these centres of science and wealth was the institution of isolating wards or cottages designed exclusively to receive patients during and after the operation. The question arose, then, whether it was possible to make a room in a dwelling or a private room in a hospital as salubrious as one of these cottages at an establishment like the New York State Woman's Hospital. Dr. Noeggerath believed that he could answer in the affirmative, at least as regards the time during the operation and the next few days afterward; and he described his method of procedure as follows: "If I can have them, I select two rooms — if not, one — on the first floor; and begin with the removal of the carpets, all of the furniture, pictures, looking-glasses, bureaus, etc. Now the floor, walls, and ceiling are washed, first with water and then with a two-and-a-half per cent. solution of carbolic acid, on the day preceding the operation; after which vessels containing chlorine water are placed in the rooms and in front of the doors. The wash-closet, if any be present, is hermetically sealed up; all the water to be used afterward to be carried in from without. The mattresses have meanwhile been aired, and the bed-clothes, the suit or suits which are worn during and after the operation, and the towels have been washed in carbolic acid solution. On the evening preceding the operation all of the last-named articles, with two wooden tables, a chair, and an iron bedstead, or stretcher, are placed in the room. The windows are closed, and a piece of sulphur is burned for about half an hour. The outer dress of the nurse is also disinfected. After the operation the room is heated by a grate-fire, and a kettle containing carbolic acid solution is suspended so near the fire as to produce enough evaporation to have its presence remarked when you pass into the room. The nurse enters and leaves only through the adjoining chamber, which is exposed to the air day and night. Thus, conditions are presented which closely resemble those of an isolated cottage."

Having spoken of the three principal sources of danger, — hemorrhage, shock, and septicæmia, — each alone, or two or more combined, constituting the most frequent cause of death, the writer considered the question how to avoid shock. From Wegener's experiments on animals, and from clinical observations, which had been made since then, it could be assumed that the principal element of shock was lowering of temperature. Since so large a surface was exposed to evaporation, it could readily be seen how this cause would operate in ovariectomy. Another element in the production of shock was the prolonged contact of the contents of the abdomen with fingers, instruments,

etc., and their unavoidable dislocation; a fact also proven by experiments on animals. If we added to these the influence of narcotism, with its paralyzing effect on the heart, its well-known tendency to lower the temperature of the body, and the injurious effect of vomiting, which added to the mechanical insult offered to the viscera, he thought he had enumerated all the circumstances, a combination of which rendered laparotomy dangerous from this source. Beginning with the last, he then gave an account of the manner in which he attempted to prevent shock. After a long trial with the usual anæsthetics, he had returned to the use of chloroform, first, because he had failed in a number of instances to produce deep and uninterrupted sleep with ether; and, secondly, because nausea, vomiting, and coughing during and after the operation had been less frequent after the use of chloroform. A patient to be operated upon in the afternoon of a certain day was ordered to take on the day previous, and the one preceding this, one drachm, and on the morning before the operation thirty grains, of bromide of potassium, in accordance with the plan formerly proposed by Dr. Lente. The patients required less of the anæsthetic; the period of excitement was considerably diminished; the sleep was more natural; and vomiting was less frequent than without it. For the last two years he had added another safeguard also; namely, the administration of one or more doses of thirty grains of chloral per rectum; and since he had been employing bromide of potassium before, and chloral after, ovariectomy, vomiting had been an extremely rare occurrence. In order to prevent lowering of the temperature, he placed his patients on a rubber bed filled with water heated to 100° F. or 110° F. Dry heat was much less depressing than damp heat, which was almost universally employed, because it did not interfere with the evaporation from the lungs and from the skin; and it possessed the further advantage that it could be conveyed to the body in just such unvariable strength and duration as was required. Still another advantage over the old method was its effect upon the reflex centres in the spinal cord. Abdominal hyperæmia had been proved to be an essential element and a direct consequence of shock, and if we included with the reflex paralysis of the vaso-motor system that of the splanchnicus, in consequence of traumatic insult, all the phenomena were explained: the patients were pale; the brain was anæmic; the heart contained little blood, and the portal system of veins were engorged. We could, therefore, measure to a certain extent the degree of shock which was developed during ovariectomy by the amount of hyperæmia found inside the abdominal cavity; but since he had operated with his patients on the hot-water bed he had observed that even in operations where the viscera had been exposed more than an hour and a half the abdominal blood-supply had not apparently been larger than in the normal state.

The most important danger connected with ovariectomy, he continued, consisted in the formation of septic material in the abdominal cavity after the operation; and it was evident that it must be the effort of the surgeon to allow as little septic matter as possible to come in contact with the serous membrane. The desired object would be obtained most effectively if we could lessen the space and time of contact of the peritonæum with the air, hands, and instruments from what was now the case in the method of operating or-

dinarily employed. Dr. Noeggerath then gave the following details of the plan which he had adopted: "I commence by incising the skin, the subcutaneous layer of fat, and the fascia superficialis to the extent of about three inches. Instead of going on incising the tissues down to and through the peritonæum, I plunge the trocar at once into the cyst and empty it out. If I find that the liquid is bland, I proceed with the operation; if it should contain pus, decomposed blood, or dark, grumous fluid, I inject through the tube attached to the trocar about half as much of a two-and-a-half per cent. solution of carbolic acid as the fluid measured when removed. This is allowed to remain in the cyst for a while and is then withdrawn. This is done in order to remove the possibility of infecting matter passing from the cyst into the abdominal cavity during the further progress of the operation. After the cyst is fully emptied I depress the handle of the trocar toward the skin below the umbilicus, thus carrying all that section of the tumor which lies below the opening of the trocar against the anterior abdominal wall. Now the uplifted portion of the latter is incised upon the trocar, as a guide, down to the cyst-wall, which is lifted up and out of the peritoneal cavity by the instrument inside it, after which the pedicle is tied and the cyst removed." The advantages claimed for this proceeding over the ordinary method are the following: (1.) It simplifies the operation considerably, since the search for, and separate opening of, the serous membrane are entirely done away, thus removing the principal difficulty connected with that part of the operation which precedes the opening of the cyst itself. (2.) The chances of air, instruments, and hands, contaminated with septic material, entering the abdomen are considerably diminished, partly because the time during which the peritoneal cavity is exposed to their contact is shortened by just so much as it takes to empty out the sac; partly because the cyst collapses before the cavity is opened, and the suction originating from the inequable contraction of the sac and the abdominal walls is entirely done away with. (3.) The chance of noxious contents of the tumor running into the abdominal cavity is very much less as compared with the ordinary proceeding, and they can be rendered harmless by previous disinfection. (4.) The opening in the peritonæum is, on an average, smaller than with the old method, it being adapted in every single instance exactly to the requirements of the case. (5.) The shock which results from laying open the abdominal cavity is shortened by just so much time as it takes to empty out the cyst, the greater part of the operation being reduced to that of simple tapping.

The only two contra-indications to this method of which Dr. Noeggerath knew were: (1.) A preponderance of the solid over the liquid portion of the tumor, or where the whole mass consisted of very small cysts or semi-solid contents, too thick to pass through the canula. (2.) A small sac, either originally so, or reduced by previous tapping, on account of the danger of encountering a loop of intestine in front of the cyst. A third possible contra-indication would be the presence of ascites, but he had had no occasion to test this question practically. If anything unusual should occur after commencing with his proceeding, however, it could be interrupted at any step, and the operation finished after the ordinary method. At first sight the presence of adhesions might be taken for a grave objection, but during the operations performed

after his method he had met with the ordinary run of adhesive inflammation, its products extending to the omentum, the lateral parietes and anterior surface, and spreading far into the pelvis; yet he had found no difficulty in separating them, one after another, from the collapsed sac.

Of the twelve patients upon whom the operation had been performed, three had died and nine recovered. Numerically, this was a small percentage, but of the three patients who died one was forty-five, one seventy-one, and one seventy-five years old. The two latter had evidently atheromatous degeneration of the arteries. In the case of the first of these patients only four fifths of the cyst could be removed, on account of adhesions to the spinal column and the true pelvis. The ligature applied to the remaining mass, which he intended to treat according to the plan of Dr. Atlee, was tied in what is known as the Staffordshire knot. It slipped, and before another one could be applied a fearful hemorrhage occurred, which the woman only survived for three hours.

Before proceeding to describe his new method of after-treatment, the writer stated that in ordinary cases he left his patients for the week following the operation on the water-bed, which he now filled with cold water as soon as a rise of temperature called for antipyretic measures. He had found it as efficient as Kibbee's cot, and it had the great advantage over the latter of putting less strain on the nurse and causing less disturbance of the patient. If symptoms of nervous depression, or even collapse, were to begin to develop it could be filled again with hot water, and its stimulating effects thus called into action. The after-treatment properly began at the time when the cyst was being severed from its pedicle,—that is to say, we had at this moment to decide whether the peritoneal wound, namely, the peritoneal cavity, was to be treated as an open wound or to be closed. Although it was generally admitted that the question regarding the treatment of the pedicle was so far settled that in the large majority of instances the intra-peritoneal method was the one to be chosen, there remained a certain percentage in which drainage which was the only proper treatment. He then expressed the conviction that drainage of the pelvic cavity, as practiced by surgeons at the present day, no matter of what shape or material the tube was made, was a source of danger.

The only reasonable method of drainage was that proposed and performed with great success by Dr. Barskneuer, of Cologne, who had returned to the original idea of Sims, and drained the abdominal cavity through Douglas's cul-de-sac, with such modifications, however, as to overcome its disadvantages and dangers, on account of which it had been generally abandoned. He incised the cul-de-sac to the extent of at least an inch and a half, and introduced a tube of the size of the finger, with a number of large orifices in the supra-vaginal portion of it. To the tube there was further attached a cross piece, also perforated, for the drainage of the base of the pelvis. But even if we had an absolutely reliable method for draining Douglas's cul-de-sac, cases undoubtedly occurred where the procedure would fail; and Dr. Noeggerath had, therefore, employed a new method of after-treatment for cases where drainage was indicated. It consisted in the use of the permanent, full bath, the water being allowed to remain in constant contact with the peritoneal cavity. The bath used for treating patients after

ovariotomy consisted of a large tank made of boiler-iron, joined and riveted like a steam boiler, having beneath it a chamber, of about two inches in depth, for the reception of steam, in order to maintain the temperature of the water at an equal rate without such frequent changing as would otherwise be necessary. All along and outside its upper border were projecting iron pegs for the purpose of attaching a hammock, on which the patient lay in the water. The bath was connected with the hot and cold water-pipes, and also with the steam-pipes, and the hot and cold water was made to mingle in one common pipe before entering the tub, so that it could neither chill nor scald the patient as it ran in. Although it was desirable to have a bath as complete as the one described, it could be very well substituted in a private dwelling by a common movable bath-tub with a double bottom for the reception of hot water. The explanation of the action of the perpetual contact of water in preventing sepsis consisted in the fact, established by Wernich, that water in abundance is one of the most reliable agents for destroying bacteria. To the water was added enough common salt to make not quite a one half per cent. solution, and a small quantity of salicylic acid. The number of cases he had treated with the bath was too small to shape any final indications for its use. He knew, however, already one contra-indication, and within its scope are comprised patients with weakened constitutions. The drain on the system from loss of serum and fibrine was severe. Dr. Noeggerath said, in conclusion, that he proposed to employ the permanent bath as a substitute for ordinary drainage in ovariotomy, and, above all, after Freund's operation, after the removal of fibroid tumors, and after Caesarean section. He further stated that in the bath in one case an abdominal fistula an inch and a half in length, from which all of the solid faecal matter had been discharged for weeks, was closed in four days and a half so thoroughly that no feces were afterwards discharged through it.

In the discussion which followed the reading of the paper the following points were taken up by Dr. Emmet and other speakers:—

Is anti-sepsis altogether necessary?

Is the spray alone sufficient?

Is it safe to exclude the spray from the anti-septic method?

Is anti-sepsis feasible in private dwellings and in ordinary hospitals, as well as in the isolated cottages used only for ovariotomy cases?

Is chloroform or ether preferable as an anæsthetic?

What are the best methods of avoiding shock?

What are the disadvantages and contra-indications against puncturing the cyst before opening the peritoneal cavity?

Is the intra-peritoneal method of treating the pedicle applicable to all cases?

The advantages and disadvantages of drainage.

Quinine *versus* cold water in the after-treatment.

Drs. Thomas and Bozeman were expected to speak upon the paper, but were unfortunately both prevented from being present by illness.

—An interesting account of the examination of thermometers at the Yale Observatory, particularly of the establishment of the standards, by Mr. Waldo, astronomer in charge, may be found in the *Popular Science Monthly* for January.

Medical and Surgical Journal.

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SMALL-POX AND REVACCINATION

OUR readers are doubtless aware by this time of the many indications that another outbreak of small-pox may be at hand. The last epidemic subsided early in 1874, after a duration of two years, in the course of which the disease proved fatal to 1040 persons in Boston. Since then we have enjoyed an unusually long period of immunity, extending over seven years. The disease is now, however, awaking from its long slumber, and, like a giant refreshed, is ready to renew its onslaught. From Europe, where it has prevailed during the past year, it has reached this country, and has established a foothold in several of our great cities of the Atlantic coast. In New York during the week ending January 8th, there were 20 deaths from small-pox; in the week ending January 15th, there were 10 deaths; and in the week ending January 22d, again 20. In Philadelphia the weekly deaths by small-pox have lately exceeded 50. In Boston, however, no deaths from this disease have as yet been reported.

Such being the present situation, what now is the outlook? In the absence of any prophetic gift, we must be content to read the future from the past. Let us, therefore, first consider the history of small-pox in Boston, as exhibited in our records of registration.

The following table shows the yearly deaths by small-pox, in Boston, since the year 1811:—

Years.	Deaths.	Years.	Deaths.	Years.	Deaths.
1811	2	1833	—	1855	132
1812	—	1834	4	1856	78
1813	—	1835	7	1857	2
1814	—	1836	6	1858	3
1815	4	1837	13	1859	156
1816	—	1838	3	1860	162
1817	—	1839	60	1861	7
1818	—	1840	115	1862	13
1819	—	1841	57	1863	11
1820	—	1842	42	1864	113
1821	—	1843	55	1865	115
1822	—	1844	—	1866	51
1823	—	1845	31	1867	144
1824	1	1846	92	1868	8
1825	1	1847	23	1869	6
1826	—	1848	21	1870	32
1827	3	1849	21	1871	28
1828	2	1850	192	1872	738
1829	—	1851	63	1873	302
1830	—	1852	12	1874	2
1831	4	1853	6		
1832	2	1854	118		

introduction of vaccination in 1800, gradually regained its foothold in Boston, where it continued to prevail almost uninterruptedly, although with varying intensity, from 1839, when the disease for the first time assumed the form of a distinct epidemic, up to 1873. During this period of thirty-five years the course of small-pox has been marked by a succession of epidemic paroxysms, generally lasting from one to two years and separated by intervals of several years, during which a varying number of sporadic cases has testified to the more or less constant presence of the disease.

The latest epidemic, that of 1872-1873, having proved fatal to 1040 persons, was the most severe that has been experienced in Boston since the introduction of vaccination. In 1872 the death-rate by small-pox was 2.78 per 1000 living persons, and the deaths so caused amounting to 9.11 per cent. of the deaths by all causes. In 1873 the death-rate was 1.57, the percentage being 5.54.

Taking now the ages of decedents by small-pox, we can determine the ages at which the protection afforded by vaccination, as hitherto carried out in Boston, has proved insufficient. The following table contains two columns: the one showing the percentages of decedents at selected ages, in 1872; the other showing the percentages of inhabitants living at the same ages to the aggregate population:—

Ages.	Percentage on all Deaths by Small-pox, 1872.	Percentage on Aggregate Population.
Under 5 years . . .	26.5	12.5
5 to 15	5.8	18.5
15 to 20	11.3	9.6
20 to 30	36.0	24.6
30 to 40	12.4	16.8
Over 40	7.9	17.9

We here see that children until five, although constituting only 12.5 per cent. of the population, contributed 26.5 per cent. of all deaths by small-pox; while youths between 5 and 15, making 18.5 per cent. of the living, contributed only 5.8 per cent. of the decedents. The contrast between these two sets of figures is very striking, and shows, in the most peremptory manner, the deficiency of protection in the first years of life, and the efficacy of vaccination practiced later on, at the ages of school attendance. The relative degree of exemption enjoyed during adolescence and resulting from the postponed vaccination, undergone in obedience to the requirements of school-attendance, is seen to disappear gradually, so that we find again, between the ages of 20 and 30, a marked liability to fatal small-pox, which can bear but one interpretation: we here see evidence of an insufficient practice of *revaccination*, which measure of prevention is shown to become necessary within a space of 8, 10, or 12 years after the first vaccination usually undergone in childhood. Later in life, at ages from 30 to 40, and upwards, the liability to small-pox is known to diminish considerably, independently of preventive measures; and figures show this to have been the case in Boston.

From these figures we learn that small-pox, after having almost wholly disappeared from our community during the thirty or forty years which followed the

Such having been our past experience of this justly dreaded disease, which maims or disfigures so many more victims than it kills, what is the lesson to be learned and acted upon? The inference from all that we have heretofore suffered, and, indeed, from all the acquired knowledge and wisdom of civilized mankind, is obviously to the effect that every available means of prevention that is known to hygiene, whether public or private, should be got ready and brought to bear without delay, in order to forestall and ward off the first onslaught of the impending epidemic upon our community. The means of prophylaxis are familiar to all: vaccination, which annuls or greatly lessens the susceptibility to small-pox, is acknowledged to be the most powerful agency of prevention at our disposal; isolation of the sick, which prevents or restricts the dissemination of the contagium, is an efficient means of checking the spread of the disease. These two agencies are put into the hands of our sanitary authorities as weapons, to be used, if necessary, with compulsion.

Vaccination, however, as administered by our boards of health, as a compulsory measure, is legally limited in its application to the ages below the period of school attendance. In this form it reaches only infants and young children. At later ages, our sanitary authorities cease to exercise any supervision or intervention in this matter, and revaccination, a measure universally recognized as necessary after intervals of eight or ten years from the most recent successful vaccination, is a purely voluntary means of prevention, which all grown-up persons are free to adopt, but which they are also at liberty to postpone or altogether neglect.

Experience has shown that, in this community, the benefits of revaccination are far from sufficiently appreciated and utilized by the public. Such ignorance and inertness having been distinctly shown to be in the highest degree prejudicial, it is manifestly the duty of all physicians to do their utmost to counteract these shortcomings, by instructing and stimulating all those with whom they are thrown in contact, and by arousing in them a proper sense of their duty in this serious matter.

This is not the only community where the necessity of attention to revaccination has to be emphasized. In a recent editorial of the London *Lancet*¹ it was asserted that "since the great epidemic of small-pox in 1871-72 revaccination has assumed an importance in the question of vaccination it had not before possessed, particularly on account of the great number of persons who have been seized with small-pox beyond the age to which the compulsory clauses of the vaccination acts apply. It is to this class of persons that the present condition of things in the metropolis has peculiar importance. Their safety rests wholly with themselves, and assuming that they have all been vaccinated in infancy, an effective revaccination will make them more certainly proof against the disease than if they had previously suffered from it. . . . But one thing is clear, that persons who ought to be

revaccinated will act unwisely if they are not revaccinated as early as practicable, not waiting until the full swing of the epidemic (if it is to come) be upon us, when an abundant experience has taught us that it is not always easy to secure an efficient revaccination, partly from a deficient lymph supply, and partly from the condition of performance of the operation not always being the best."

Let our motto be *principiis obsta*; the means of resistance, vaccination, isolation, and revaccination; the two first agencies to be applied, if necessary as compulsory measures, by our sanitary authorities; the third, revaccination, needing to be strenuously urged upon the public, and carried out by the medical profession.

SINGLE AND DOUBLE SCHOOL SESSIONS ONCE MORE.

OUR esteemed correspondent, Ingleby, has favored the JOURNAL with another communication, to be found in another column, on the subject of school hours. In connection with the Prince School he gives the results of careful inquiries as to the ages of the pupils, which are interesting, as showing at what a tender age many children are sent to public schools, even in such a district as that where the Prince School is situated. We were evidently in error in believing from inquiries, made in a general way, that the majority of the children at that school are between twelve and sixteen years of age. We can only say we are sorry they are not, but see no occasion to change our opinions or the expression of them, which we strove to make plain and concise, in any way.

The original question at issue was one of single or double school sessions, the question of hours was a somewhat secondary one, brought, however, into more prominence by Ingleby's dislike to the reference made to Chadwick's deductions.

Whatever the proper number of hours of study may be for small children that number should be adopted for them, but we do not think it would be for their advantage to have a morning and afternoon school session through the winter in the new part of this city. Nor do we see why older children should be rescued from a five hours' session because younger ones ought not to remain at school more than three or four.

MEDICAL NOTES.

— The following is the proposed list of subjects for discussion in the Section of Medicine, at the International Medical Congress next August: (1.) Localization of disease in brain and spinal cord, so far as pathognomonic and diagnostic. (2.) Trophic changes of nerve origin. (3.) Vascular changes, functional and organic, in disease. (4.) Primary disease of the lymph system. (5.) Gout, rheumatoid arthritis, and rheumatism. (6.) Forms of renal diseases (Bright's diseases). (7.) Methods of physical diagnosis. (8.) Therapeutic methods: revulsions, blood-letting, diet-cure, uses of heat and cold, drug-cure, etc.

¹ The Lancet, January 15, 1881, page 106.

—An editorial in the *Philadelphia Medical Times* for January 29th, which is ascribed to the pen of Dr. Hamilton Osgood, under the title of the Amenities of Medical Journalism, gives prominence to the dark side of the editor's occupation.

—Dr. Daniel Perley, of Lynn, died on January 31st, after three years' illness, at the age of seventy-seven. He was born in Boxford, Mass. Received from Dartmouth the degree of A. B. in 1828, and of M. D. in 1831. Since 1831 he has practiced his profession in Lynn, and when obliged by sickness to retire from active life was the oldest practitioner in the city.

—In the *Comptes Rendus*, xci., Professor Bouchut speaks of some experiments he has made going to show that the milky juice of the fig-tree possesses a fermentative power of a digestive character. Having mixed some of it with a preparation from animal tissue, he found the latter well preserved at the end of a month. This fact, when brought into connection with Professor Billroth's case of cancer of the breast, which was so excessively foul smelling that all his deodorizers failed, but which, on applying a poultice made of dried figs cooked in milk, lost entirely the previously unbearable odor, gives an importance to this homely remedy not to be denied. — *Medical Press and Circular*.

—Professor Laboulbène, in a long and interesting lecture on the history of medical journalism, gives the following list of the leading medical periodicals published in America: *The American Journal*, *Boston Medical and Surgical Journal*, the reviews and medical journals of Cincinnati, Indiana (!), New York, etc., etc. — *Philadelphia Medical Times*.

—The Paris correspondent of the *Lancet* describes the plan of an ingenious philanthropist to diminish the mortality amongst the wounded in war by tattooing on the soldiers' bodies the principal points where compression may be made in cases of hemorrhage. Life may be lost in a few minutes by a wound of a large artery, and it is thought that the soldier might often escape if he knew where to command an artery whilst waiting for help.

WASHINGTON.

—On Wednesday, January 20th, Senator Williams, of Kentucky, called up, in the United States senate, the bill previously introduced by him to prevent the introduction and dissemination of epizootics or communicable diseases of domestic animals in the United States, upon which he made some extensive and valuable practical remarks. The bill was at his request referred to a select committee of five. The purport of the bill is to make it unlawful to import or introduce into or from one section to another of the United States any animal affected with a communicable, infectious, or contagious disease, except in accordance with provisions as set forth in the bill, or to offer for sale or sell the same, detailing especially such diseases as contagious pleuro-pneumonia, splenic fever, foot and mouth disease, hog-cholera, trichinosis, farcy, and glanders, etc. In its various sections the bill

gives the National Board of Health full power to report infected localities, directs United States district attorneys to prosecute violations, imposes fines from one hundred dollars to five thousand dollars, and imprisonment for not more than a year for such violations, authorizes investigations, and reports on the part of the National Board of Health, both in this country and abroad, with power to draught the necessary rules and regulations, to appoint a duly qualified veterinary supervisor, who shall be *ex officio* member of said board, to appoint veterinary surgeons, a sufficient clerical force, inspectors in foreign ports, etc., for the necessary carrying out of the provisions of the bill. The president is authorized to detail officers for this purpose, and one million dollars is the sum named to be appropriated to meet expenses incurred.

Senator Williams gave a comprehensive review of the prevalence abroad of cattle disease and its introduction into this country; he referred to Professor Gamgee's report of 1862 as first proving pleuro-pneumonia to be exotic and not indigenous, as had been supposed up to that time. The English restrictions upon the importation of cattle were made to protect their native herds from new infection from abroad while they were stamping it out at home, and the English are as anxious to get our cattle as we to sell them. He quotes Mr. T. C. Anderson, a short-horn breeder, as saying that within the last year we have shipped to England one hundred and fifty thousand high grade fat steers, worth one hundred dollars each, and that these would have brought one hundred and forty dollars more per head could they have been put out to grass to recover from the effects of the voyage. Since the Brooklyn importation of the Dutch cow a contagious distemper has spread almost unchecked. Massachusetts stamped it out completely as far back as 1867. No case of lung plague has occurred west of the Alleghanies, but within the last year forty thousand calves have been shipped from the Eastern States to the cattle yards of Chicago, so that it is but a question of time as to when we shall have a repetition of the experience of Great Britain, where these calves, infected in pestilential cow-sheds, carried disease wherever they went. Within the space of forty years Great Britain, with six millions of cattle, has lost by death alone from this plague more than five hundred millions of dollars. Pleuro-pneumonia usually kills from forty to seventy per cent. Such animals as appear to have recovered are so enfeebled as to be worthless for work, breeding, or beef. Another threatening source of danger is the importation of short-horn, Hereford, Holstein, and Alderney cows from Europe. Their aristocratic respectability gives them an easy passport, yet some of the largest and most valuable herds of England have been destroyed by this plague. The number of live stock in our country is estimated at forty-five millions of cattle, eighteen millions of mules and horses, fifty millions of sheep, and sixty millions of swine, worth in the aggregate three billions of dollars.

A necessary proviso in the bill is that affording compensation to the owners for the slaughter of in-

fect or sick animals, otherwise they will hide them in out-of-the-way places, or run them off and sell them to innocent purchasers, and thus establish new centres of infection.

Recent Literature.

Ophthalmic and Otic Contributions. By D. B. ST. JOHN ROOSA, M. D. and EDWARD T. ELY, M. D. New York: G. P. Putnam's Sons. 8vo, pages 107.

This book consists entirely of reprints of papers by the authors which have already appeared in various journals. They are nearly equally divided between the two subjects, and in the form here presented are convenient for the library and for reference.

The Pathology, Diagnosis, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By G. HEWITT, M. D. Third American from third London edition. Philadelphia: Lindsay & Blakiston. 1880.

In the present edition the author argues strongly in favor of the mechanical theory of uterine pathology; and many of his statements are forcible, full of sound reasoning, and borne out by daily clinical experience. Far too commonly, however, he ascribes the sufferings of the patient, primarily, to deviations in the position of the uterus. The position delineated in Figure 10, as the normal one, is too much inclined towards retroversion and retrocession, and is not that supported by most American authorities, nor the one commended to use by personal experience.

Chapter V., on the Diagnosis of Pregnancy, considering as it does the several conditions so often confounded with it, is exceedingly good, and full of sound and practical points. If practitioners would follow the instructions here given, they would, we are sure, make fewer mistakes in the diagnosis of pregnancy, and oftentimes spare themselves discredit and ridicule.

The very best part of the book is that on Flexions, or acquired deformities of the uterus, more especially that portion of the subject which treats of the causes of these malpositions. The author seems to have been particularly interested in this whole matter, and treats it in a manner correspondingly pleasing and satisfactory. He especially enforces the effect of antelexion in producing abortions, claiming a greater tendency to this accident than in retroflexion, and drawing his conclusions from two hundred and thirty-five cases of married women suffering from ante or retroflexion, treated in the University College Hospital, sixty-eight of whom had aborted one or more times. The treatment recommended for these flexions seems rather faulty, both as regards methods of replacement and means of retaining the organ in position; for example, the sound is too generally used for replacement, and the forms of appliances (particularly for backward displacements) ineffectual, certainly in the large majority of cases which it falls to our lot to treat.

Among typographical errors, mostly of small account, we notice on page 273, the word *perineum* used for *perineum*, in a sense which might well confound and lead to error.

The descriptions of the different gynecological oper-

ations, particularly that for rupture of the perineum, are quite imperfect and unsatisfactory. In fact, the whole subject of operative gynecology falls below the general high standard of the book.

It is a mistake to devote chapters to such symptoms of disease as amenorrhœa, menorrhagia, and dysmenorrhœa. They seem to us more properly considered under the head of the diseased condition which give rise to them.

Miscellany.

FIVE HOURS OF STUDY, ONCE MORE.

MR. EDITOR, — After a silence of four weeks, it is, perhaps, hardly courteous to recur again to the question of the long session at the Prince School. But on inquiry, the facts in the case have been found to be so exactly contrary to those on which the criticisms of the JOURNAL were based, that we now hope in presenting them to obtain an entire reversal of its judgment.

We quote from the editorial in the issue of December 30, 1880, page 645: "Our remarks were limited to children between the ages of twelve and sixteen, because we believed the majority of the children concerned to be between those ages, and should be sorry to think that this was not the case; moreover, in our estimation it is only for children between these ages that the question of a single or double session should come up at all."

The statistics appended, which are printed by authority, will, we think, prove that we have not without reason striven to attract the attention of the JOURNAL and its readers to this very great wrong done to little children. We have great pleasure in believing that they will show that the JOURNAL is "in hearty accord" with us in its judgment upon the real question at issue. To those who knew the influences at work in the Prince district, the result of the controversy was a foregone conclusion. But a deep conviction of the evil inflicted compelled us to make all the effort in our power to direct public attention to the subject. We had, we admit, counted upon the warmest approval of our views from the medical profession and from the JOURNAL. It was a bitter disappointment not to receive this indorsement. And it is with unqualified satisfaction that we now see that the disagreement was only apparent; that the words above quoted, when coupled with the statement which is here annexed, authorize us to expect the hearty support of the JOURNAL in the position which we have taken.

The children in the Prince building number four hundred and forty.

Of these, two hundred and ninety-nine (all but *three hundred*) are less than twelve years old.

Of these latter, *one hundred and thirty* are not nine years of age.

While the whole number *over twelve* is only one hundred and forty-one.

Nor is this all. Of the children *under nine years*, fifty-six are kept at school *five hours*; and the eighty-four others for *four hours and a quarter*.

In view of these facts, now for the first time made plain to the JOURNAL, may we not ask, in accordance with its own opinions above quoted, an acknowledgment that there is no want of accord between it and

us, and claim its earnest support in our protest against a procedure which violates equally the laws of school hygiene and the dictates of common sense?

CHAS. INGLERY.

THE GERMAN PRIVAT-DOCENT.

MR. EDITOR. — It has been my intention for some time, but one thing or another has prevented, to express to you my gratification on reading the educational number (October 14, 1880) of the Boston Medical and Surgical Journal. I take this first opportunity to do so, and at the same time the liberty of correcting, through your Philadelphia correspondent, a point in relation to that part of the article on foreign schools, which gives the impression to the reader that any graduate of medicine can set up lecturing as *privat-docent* at any time and place in Germany with the same freedom as in this country.

Having had an experience of several years as a medical student in the universities at Munich, Berlin, and Jena, I can assure you that it is not so easy a task to become a *privat-docent*. As it is the first step towards a professorship, they are as rigid and particular with it as with anything else in relation to education in that country.

I know that in my time to lecture upon any subject it was necessary, first, to be a graduate of at least two or three years' standing; second, to write for the faculty an original and exhaustive dissertation on the branch that the person desired to lecture on. If approved, a public examination was given upon the subject by the professor connected with the university in which the candidate is required publicly to defend his ideas and propositions. If this examination is creditable, a certificate creating him a *privat-docent*, with the permission to lecture, is given him by the faculty, approved by the provost of the university, and in some cases countersigned by the minister of public instruction.

To become a professor in Germany one must give evidence of not only learning but originality of thought and work on the subject he professes to teach. This is learned by the method of teaching in that country, as well as the system of rearing teachers through the school and promotion of lecturer (*privat-docent*) (where discoveries and original ideas generate) to that of extraordinary (*ausserordentlicher*) professor, and then to the full professorship (*ordentlicher professor*).

Original thinkers and workers as *privat-docent* soon become men of mark, and known all over the country. They become candidates for vacant chairs in any of the universities, and are called to fill such positions without regard to the locality of the school from which they are graduates. By this method education becomes, as it should be, cosmopolitan, and not local or sectarian. In this way only men of real ability reach such places, and become the teachers of the students. What a glorious day it will be for our great country when this system of filling all the chairs in our schools, colleges, and universities by independent, original thinkers and brain workers, without regard to their *alma mater*, shall be adopted instead of the present method of personal, social, political, and other degrading influences. I have the honor to be yours very truly,

P. D. KEYSER, M. D.

PHILADELPHIA, January 24, 1881.

In our account of the German *privat-docent* it was said that this position was *accessible* to any one having the degree of doctor of medicine. The use of this word, though scarcely erroneous, may very possibly have proved misleading. We are always glad to notice any corrections of statements in the educational number, the object being to perfect it as far as possible in the future. The continued evidences of the interest excited by that number of the JOURNAL are gratifying. — Ed.

ANTISEPTIC SPRAY.

MR. EDITOR. — It is to be regretted that in bringing before your readers the subject of the spray in surgery, in your issue of January 20th, the editor did not take pains to inform himself more fully in the matter. Bruns' article with a sensational title was quoted, and Mikulicz's experiments, which need further examination before acceptance as authoritative; but Dr. A. T. Cabot's excellent observations, and Dr. Watson's in reply to the original article by Dr. Stimson a year ago, are not referred to. Probably the editors only read German medical literature, or are desirous of avoiding "provincialism," the bugbear Mr. Henry James attempts to frighten us with, and dread quoting their countrymen. At any rate they looked for their science to the land of Schreib-Tisch generalization, and neglected the home productions, in this case of much better quality.

The writer does not even seem to have considered the arguments of those whom he quotes as authority, but mentions Dr. Homans's twenty-five cases as illustrating the fact that the spray is useful in ovariectomy. If Bruns and Mikulicz are correct in their reasoning the spray is not a means for covering the wound with a purified atmosphere, but is a poor method of irrigation.

If this view is true, spray in ovariectomy is certainly of little use; for it is inefficient in irrigating or washing the cavity of the abdomen, to which the air (but little purified according to these authorities) has complete access. If, however, the spray is beneficial not simply as a wash, but as conveying an antiseptic atmosphere, is a surgeon justified in any large operation laying open to the air an amount of tissue of any extent, by contenting himself with an occasional wash?

The fact of the matter is that very little as yet is known as to the action of the spray; and for the present the conservative surgeon does not expose his patients to possible risks, because he is inconvenienced. We venture to say that if ten of the skeptics as to the spray were obliged to submit to the operation of incising the knee-joint and wiring a fractured patella, at least nine of them would prefer that the spray be used. It might be unnecessary; but it might not. The tenth would probably regard his chance as at best a small one.

A superficial article on this subject is more to be regretted, as in this community there is a greater danger of half doing antiseptic surgery than of overdoing it.

In the wards of our hospitals perfectly antiseptic dressings are not very common, and what is needed is more thoroughness and not the spirit of the doubting Thomas, who hesitates whether to carbolicize his finger or not.

If the JOURNAL is unable to stimulate our faith, it should at least be careful in its *résumé* of facts.

DRESSER.

LETTER FROM LONDON.

MR. EDITOR, — Lately there has been quite a calm in the atmosphere of medical gossip here. A paper by Mr. Knowsley Thornton, One Hundred and Seventy-Two Antiseptic Abdominal Sections, With Remarks on the Causes of Death in the Fatal Cases, read before the Medical Chirurgical Society, provoked an expression of the most opposite opinions, regarding the value of the antiseptic conduct of such cases, upon which the author laid great stress. It was his habit to ligature the pedicle with catgut, to accurately adjust the edges of his wound, which he dressed with carbolized gauze, and did not disturb for nine days when he almost invariably found complete union. During the operation he practiced all the antiseptic precautions as most recently improved by Professor Lister. Mr. Thornton furnished a tabulated statement of one hundred and fifty complete ovariectomies, five incomplete ovariectomies, three exploratory operations with simple removal of fluid, eleven hysterectomies and abdominal sections for removal of uterine tumors, and three other abdominal sections, all performed antiseptically.

I enclose, for your use when treating of the special subject, the tables, which show fifteen deaths amongst the complete ovariectomies, and contain so many details of importance that it is impossible for me to attempt to do them any justice by summarizing. They will be worth looking for in the transactions of the society. Mr. Thornton was strongly commended for the frank and complete manner in which he had tabulated his experience, the practice of combining oophorectomies with ovariectomies in tabular statements, was strongly misadverted upon, as distinctly operating to destroy the whole possible value of statistical deductions therefrom.

It was pointed out that unfortunately tabular records of ovariectomy, originally schemed to furnish reliable statistical information, had been perverted from their legitimate use and been employed as data for the comparison of different operators' success. An abuse which had created a temptation, in too many instances greater than the operators could resist, to reduce the percentage of mortality by selecting the cases for operation, so as to exclude those which from their nature were calculated to prove hazardous. Mr. Thornton had not heeded the voice of the charmer, and one of his favorable critics, in commenting upon this, suggested that it would be fairer were the preëminently fortunate ovariectomists to add to their fatal cases, after operation, all those victims of ovarian disease, and avowedly fatal complaint, whom they left to die, rather than treat by the knife, — such patients necessarily dying without the chance of operative relief, or obtaining that at the hands of some less preëminently fortunate, but possibly less selfish and more humane, operator, whose statistics, as regards mortality, they must necessarily damage. The subject, as usual, afforded the ladies' doctors a grand opportunity for controversy, of which, as is their wont, full advantage was taken, and in a manner, too, which happily is not usual here amongst the practitioners in other special departments; for, not satisfied with the thrashing out of the subject before the authoritative society above named, some rushed into correspondence in the medical press, and thereby

endeavored to draw their opponent. But he maintained his own dignity, and that of the society before whom he had honorably laid his experience, by returning no answer. For, will any lovers of truth doubt that no good purpose can be served by endeavoring to continue the discussion, without the possession of additional facts, immediately after, or indeed while such a subject is before a scientific and authoritative body. A certainly ludicrous, if not indeed novel, argument was deduced from one opponent of antiseptics, after he had apparently almost exhausted himself, and yet was still unwilling to sit down before he had stated the overpowering evidence of the pyrexia due to antiseptic surgery, afforded by the assertion that since the introduction of the hobby into the Samaritan Hospital the consumption of ice had arisen to upwards of seventeen thousand pounds per annum, whereas previously "the matron used to have what was required from round the corner." This original pleader indicated that this mass of ice had been used for the ice cap, which had been needed to counteract the pyrexia developed through Listerism, but did not favor the society by stating for whom the ice cap was most needed.

At the Ophthalmological Society, on the 13th inst., a paper was read on Hypo-cleeral Cyclotomy, but it would not be fair to draw any deductions from the very limited experience quoted by other members than by Mr. Walker himself; whose remarks indicated him to be a believer in Dr. Brailey's hypothesis regarding the causation of glaucoma and a skeptic as to Mr. Priestly Smith's explanation of the same phenomena, except in perhaps a few rare cases. Under the title A Rare Form of Muscular Asthenopia, Dr. Brailey furnished a paper, giving elaborate details of the pains he had expended upon a slightly astigmatic patient, whose asthenopia was not relieved until a vertical dyslopia was discovered and compensated for by the wearing of a prism of three degrees. The president, Mr. Bowman, mildly suggested that he had met with very many similar cases, but had not usually found that they were relieved by prisms. Mr. Cooper made the practical suggestion that what Dr. Brailey had prescribed for his patient would only obviate the effect, whereas the practice of gymnastic exercise of the defaulting muscle, as recommended by Dr. Dyer, of Spitzberg, with the prism reversed, would often cure the cause of the trouble.

Mr. Hulke read a paper on Ophthalmoplegia Interna, and argued that disease of the ciliary plexuses in the choroid was a more tenable explanation of the phenomena, than to suppose, as Mr. Hutchinson had done, that they depended upon disease of the lenticular ganglion. Mr. Hutchinson replied, showing fully as much ground for his hypothesis as the author had opposed to it, and brought to his feet Dr. Gowers; who, in a most happy manner, suggested the much more feasible cause for the condition, namely, that it depended upon a disorder of the actual brain nuclei wherein the function was located. Physiologists had separated from one another, though they were immediately contiguous, the nuclei associated with the action of the extraocular muscles, those concerned in the pupillary reflex to light, and these again from those more anterior ones allied with the function of accommodation. The first of these, the most posterior, if diseased, would explain the phenomena of ophthalmoplegia externa, which was commonly syphilitic and unaccompanied by other nerve symptoms, and thus, supposing Dr. Gowers' hypothesis to be true, indicated the possibility of the posterior of

these cells being diseased without implication of their immediately anterior neighbors. Mr. Hutchinson's clinical experience had led him to consider that symptoms of ophthalmoplegia interna, the cause of which he laid upon disease of the lenticular ganglion, were strong presumptive evidence of syphilis. This clinical deduction might be considered as furnishing another link in the chain of evidence supporting the hypothesis of Dr. Gowers, that the symptoms depended upon an affection of the very particularized cerebral nuclei.

Mr. McHardy exhibited a specimen of hard glioma, confined to the optic chiasma, from a woman, aged thirty-six, whose symptoms dated back seven months, though vision had been affected for but less than half that period. The patient's vision was reduced to perception of light before she came under observation, no perimetry could be practiced; she was congenitally deaf, and the ophthalmoscopic appearances were just those so frequently met with in *tubercles dorsalis*, extreme blanching of the discs without diminution or tortuosity

of the vessels. Her gait had been reeling, with a tendency to fall to either side, probably in great measure owing to her defective sight; however, the case should tend to diminish the readiness with which one has of late been learning to diagnose cerebellar disease.

Dr. Williams, of Cincinnati, was unanimously elected amongst the first four honorary members of the Ophthalmological Society of the United Kingdom, a distinction which he shared with names respected no less than his own in the far-reaching circle of ophthalmologists, namely, Professors Donders, Helmholtz, and Hirschberg.

The very general interest in the of late predominantly important subject of Lister's antiseptic surgery has led me to visit King's College Hospital, where the system is to be seen in operation to its greatest perfection, but I have seen so much there, and have already so extended this letter that I must postpone a report until another mail day.

LONDON, January 15, 1881.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 29, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	707	299	24.75	18.39	10.33	6.79	.71
Philadelphia.....	846,980	402	130	24.38	9.95	2.49	3.73	13.43
Brooklyn.....	566,689	227	92	25.55	18.50	15.42	4.84	—
Chicago.....	503,298	215	100	21.86	16.74	9.75	4.19	1.86
St. Louis.....	—	133	52	11.28	22.56	3.01	1.50	—
Baltimore.....	393,796	135	39	19.27	5.93	8.15	8.15	—
Boston.....	363,938	169	58	21.89	13.02	11.83	1.18	—
Cincinnati.....	280,000	95	25	12.63	11.58	3.16	—	—
New Orleans.....	210,000	142	42	11.27	14.08	3.52	3.52	—
District of Columbia.....	180,000	70	20	14.29	15.71	5.71	—	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	57	27	28.07	12.28	3.57	14.03	—
Buffalo.....	155,159	—	—	24.39	9.76	17.07	4.88	—
Milwaukee.....	127,000	53	25	28.30	9.43	5.66	20.75	—
Providence.....	104,862	40	7	10.00	15.00	7.50	—	—
New Haven.....	63,000	20	6	10.00	5.00	—	—	—
Charleston.....	57,000	21	6	9.52	—	9.52	—	—
Nashville.....	43,543	27	7	11.11	14.81	—	—	—
Lowell.....	59,485	18	3	5.56	16.67	—	—	—
Worcester.....	58,295	24	10	29.17	12.50	—	16.67	—
Cambridge.....	52,740	27	10	18.52	25.93	7.41	—	—
Fall River.....	49,006	15	8	26.67	6.67	6.67	6.67	—
Lawrence.....	39,178	11	3	9.09	45.45	—	—	—
Lynn.....	38,284	10	4	10.00	30.00	—	10.00	—
Springfield.....	33,340	16	6	12.50	43.75	6.25	—	—
Salem.....	27,598	8	2	—	25.00	—	—	—
New Bedford.....	26,875	11	3	18.18	9.09	18.18	—	—
Somerville.....	24,985	8	5	37.50	25.00	37.50	—	—
Holyoke.....	21,851	6	3	16.67	16.67	16.67	—	—
Chelsea.....	21,785	12	—	25.00	—	25.00	—	—
Taunton.....	21,213	9	5	11.11	—	—	11.11	—
Gloucester.....	19,329	6	3	16.67	16.67	—	—	—
Haverhill.....	18,475	6	2	33.33	16.67	16.67	—	—
Newton.....	16,995	8	5	87.50	—	87.50	—	—
Newburyport.....	13,537	4	1	—	—	—	—	—
Fitchburg.....	12,405	8	1	25.00	25.00	—	12.50	—
Twenty-three Massachusetts towns	193,268	72	25	25.00	6.94	16.67	—	—

Deaths reported 2833; 1050 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 607, consumption 434, lung diseases 421, diphtheria and croup 236, scarlet fever 132, small-pox 63, diarrhoeal diseases 40, typhoid fever 34, malarial fevers 24, cerebro-spinal meningitis 23, erysipelas 22, measles 17, whooping-cough 10, puerpe-

ral fever six. From *diarrhoeal diseases*, New York 12, Philadelphia, Brooklyn, Chicago, and Boston four, Cincinnati and New Orleans two, St. Louis, Baltimore, District of Columbia, Buffalo, Nashville, Worcester, Fall River, and Quincy one. From *typhoid fever*, Philadelphia five, New York, Boston, Cincinnati, and Pittsburgh four, Chicago, Baltimore, and Spencer two, St. Louis, New Orleans, District of Columbia, Milwaukee, Cam-

bridge, Fall River, and Fitchburg one. From *malarial fevers*, Brooklyn six, New York five, Chicago four, St. Louis and District of Columbia three, New Orleans two, Nashville one. From *cerebro-spinal meningitis*, New York 13, Philadelphia three, Worcester two, Chicago, Boston, Cambridge, Haverhill, and Attleboro' one. From *erysipelas*, New York seven, Philadelphia five, Brooklyn two, Cincinnati, New Orleans, District of Columbia, Pittsburgh, Providence, New Haven, Lowell, and Springfield one. From *measles*, Boston five, New York four, Chicago two, Philadelphia, St. Louis, Cincinnati, Gloucester, Malden, and Spencer one. From *whooping-cough*, New York four, Philadelphia, Baltimore, Boston, Cincinnati, Pittsburgh, and Lowell one. From *puerperal fever*, St. Louis three, New Haven, Nashville, and Lawrence one.

One hundred and four cases of scarlet fever, 87 of diphtheria, and 20 of small-pox were reported in Brooklyn; small-pox, four in Pittsburgh; scarlet fever 41, diphtheria 13, in Milwaukee; diphtheria eight, scarlet fever one, typhoid fever one, in Somerville.

In 42 cities and towns of Massachusetts, with a population of 1,111,179 (population of the State 1,783,086), the total death rate for the week was 21.02, against 20.25 and 21.62 for the previous two weeks.

For the week ending January 8th, in 149 German cities and towns, with an estimated population of 7,660,002, the death-

rate was 25.5. Deaths reported 3749; 1734 under five: pulmonary consumption 583, acute diseases of the respiratory organs 345, diphtheria and croup 186, diarrhoeal diseases 115, scarlet fever 102, measles and röteln 57, typhoid fever 54, whooping-cough 46, puerperal fever 23, typhus fever (Danzig, Posen) two. The death-rates ranged from 12.7 in Darmstadt to 39.2 in Kiel; Königsberg 30.4; Breslau 28.7; Munich 30.4; Dresden 21; Berlin 23.3; Leipzig 21; Hamburg 24.1; Hanover 19.8; Bremen 20; Cologne 26.4; Frankfurt —.

For the week ending January 15th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 23.6. Deaths reported 3444: acute diseases of the respiratory organs 371, scarlet fever 99, whooping-cough 90, measles 74, diarrhoea 39, typhoid fever 35, small-pox (London) 27, diphtheria 19. The death-rates ranged from 13.4 in Brighton to 33.2 in Oldham; Sheffield 22.2; Birmingham 22.3; London 22.6; Leeds 22.7; Bristol 25.2; Liverpool 29.3; Manchester 32.4. In Edinburgh 23.1; Glasgow 24.1.

In the 20 chief towns in Switzerland, for the week ending January 15th, estimated population 522,856, there were 41 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 13, diphtheria and croup eight, typhoid fever four, scarlet fever two, whooping-cough one.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																			
Jan. 23	29.841	21	35	16	71	66	53	63	W	W	NW	13	14	20	F	F	C	—	—
" 24	30.108	18	28	9	60	40	51	50	W	W	W	9	7	7	C	C	C	—	—
" 25	30.122	17	29	5	76	52	67	65	W	W	W	12	10	12	C	C	C	—	—
" 26	29.986	22	29	10	62	53	48	54	W	W	SW	9	13	7	C	H	F	—	—
" 27	29.986	14	24	7	83	35	58	59	W	W	W	12	20	15	C	C	C	—	—
" 28	30.134	7	11	3	50	38	54	47	W	NW	NW	20	24	25	C	C	C	—	—
" 29	30.260	10	16	3	52	48	38	46	NW	NW	NW	17	24	22	C	C	C	—	—
Week.	30.062	16	35	3					W	W	W							—	—

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 29, 1881, TO FEBRUARY 4, 1881.

VOLLEM, E. P., major and surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. S. O. 24, A. G. O., January 31, 1881.

BURTON, H. G., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Niagara, N. Y. S. O. 18, Department of the East, February 1, 1881.

SUFFOLK DISTRICT MEDICAL SOCIETY. — There will be a special meeting at 19 Boylston Place, on Saturday evening, February 12th, at seven and a half o'clock. The regular meeting will follow. Dr. A. N. Blodgett will read a paper entitled *The Collodion Treatment of Sprains*. Dr. B. O. Kinnear will open the discussion.

All members of the Massachusetts Medical Society are cordially invited to be present, and to join in the discussion.

H. C. HAVEN, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Lectures on Syphilis, delivered at the Harvardian Society, December, 1876. By James B. Lane, F. R. C. S. Second Edition. London: J. & A. Churchill. 1881.

Objective Points in the Treatment of Phthisis. By William Porter, M. D. (Reprint.)

Table of One Hundred and Seventy-two Antiseptic Abdominal Sections. By Mr. Knowsley Thornton

Transactions of the Medical Society of the State of Pennsylvania at its Thirtieth Annual Session, held at Altoona, May, 1880.

On the Operative Treatment of Hare-Lip. By W. I. Wheeler, M. D. Dublin: Printed for the Author by John Falconer. 1880.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons, Session at Barre, Mass., June, 1880. Philadelphia: J. B. Lippincott & Co. 1880.

The Development of the Osseous Callus in Fractures of the Bones of Man and Animals. By Henry O. Marcy, M. D. (Reprint.)

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, M. D. Vols. IV., V., and VI. New York: E. B. Trent & Co.

A Manual of Diseases of the Throat and Nose. By Francke Huntington Bosworth, M. D. New York: William Wood & Co.

Cæsarean Section, with Removal of the Uterus and Ovaries after the Porro-Müller Method. By Elliot Richardson, M. D. (Reprint.)

Report of the Albany Hospital for the two Years ending January 31, 1880, with an account of the Hospital Bazar. Albany: Burdick & Taylor. 1880.

Quarterly Report of Medical Officers, United States Army, with their Stations and Duties, January 1, 1881.

Annual Reports of the Managers and Officers of the New Jersey State Lunatic Asylum, at Trenton, for the Year ending October 30, 1880.

Elements of Practical Medicine. By Alfred H. Carter, M. D. Lond., etc., etc. Philadelphia: Presley Blakiston. 1881. (From A. Williams & Co.)

Lectures.

CLINICAL LECTURE.

DELIVERED BY PROFESSOR A. JACOBI, AT THE COLLEGE OF PHYSICIANS AND SURGEONS, OCTOBER 6, 1880.

THE first case which I present to your notice to-day, is that of Kate D., aged three years, whose history is as follows: About a month ago the child fell out of bed, a distance of perhaps eighteen inches, to the floor. Nothing unusual was noticed, immediately after this accident, but a week later, the mother, while putting on the child's shoes, observed that there was a swelling on the inner aspect of the left foot. Since then she says that it has not increased in size to any considerable extent, but has remained the same. At times the child complains of pain in the foot, more particularly, however, at first than at present. There is a swelling now over the head of the first metatarsal bone, and a slight swelling on the outer aspect of the foot, and the skin is slightly reddened. The child moves the foot pretty well, but there is marked fluctuation on the inner side, less on the outer. A small opening was made in the swelling last week, and some of the pus let out. This opening has closed again. Now if this abscess is the result of caries of the tarsal bones, why the case may remain in this condition six months, a year, a year and a half, the child may even lose the foot, and it is especially important, in the treatment, to take into consideration the intimate relations of the synovial sacs in this part of the foot with each other. The case must be treated antiseptically, and the incisions which shall be made from time to time small, so as to prevent the entrance of air. For a dressing afterward I shall order equal parts of water and Squibb's disinfectant. The disinfectant is a two per cent. solution of carbolic acid in water. The incision which I made a week ago has, as you see, healed up, but the abscess cavity has not been filling up very rapidly, and I shall make a second small incision to-day. If you had to make an opening in such an abscess fifty times a year, it is better to do so than to make too large an opening and so let in air. I squeeze out the pus, but very gently. It is a mistake to squeeze too hard. If you have made a small incision and then squeeze hard, to get rid of the contents of the abscess, you will only add to the existing inflammation. An incision into an abscess, when the admission of air is of no consequence, ought to be large. Then whatever is liquid will flow out of itself, without violent squeezing, and if there is pus not fully formed it will flow off in a day or two, but where we have to do with joints, as in this case, it is better to make a number of small incisions frequently, than to risk the admission of air. I cannot say all that I should like to in regard to this case to-day, as we have not time to go fully into it, because there are many waiting, but I shall bring the case before you again when I shall have an opportunity to speak further about it.

Our next case is Minnie S., aged nine years. Her mother tells us that about four weeks ago she noticed that the child could not pick up nor hold articles as well as usual. If she attempted to pick up anything she was likely to drop it immediately. This state of things was noticed on the right side first, but soon afterward extended to the left side of the body, and involuntary muscular twitchings appeared. The child

cannot now speak as well as before, because the muscles of the tongue are also affected. The mother says that she had a similar attack four years ago, but of a milder character. Her sleep is much disturbed at present because the muscular twitchings persist during the night-time, sometimes being so violent as to throw her out of bed. There is no tenderness along the spine. The mother says that the child has had "growing pains" quite frequently, but has never had rheumatism. There is present a mitral regurgitant murmur, however. Now the important points in this history to which I shall call your attention are these "growing pains," so-called, and the fact that there is a heart murmur present. The large majority of cases of chorea minor depend for their origin on an endocarditis which results usually in mitral incompetency. The so-called growing pains which children complain of are either muscular or articular. In the large majority of cases they are articular, and occur in the hip, knee, or ankle, and have no connection whatever with the process of growing, which is physiological and not attended with any pain whatever. These pains of which this child complained were true rheumatic pains and nothing else. In this case, as often happens, these obscure sensations of pain were followed by an endocarditis, as a result of the rheumatism, and that endocarditis has brought about a mitral incompetency. When, then, you have such a group of symptoms as these, "growing pains," endocarditis, the chorea minor is the third member of the group and is dependent upon the other two. This girl has had chorea minor before and no doubt from the same cause. There is one point in her history that is peculiar, and that is the fact that she has had these convulsive muscular movements at night-time, so that, as a consequence, her sleep is much disturbed. This is unusual in cases of chorea minor. As a rule, it is only in the severe cases of the disorder that these muscular twitchings persist during the night. When they do occur they complicate the case very much, for if there is anything which will get this child over her trouble, it is sleep. When the rest is disturbed, as in her case, the children become anæmic and the slightest thing will throw them over. I have no doubt that there is hypertrophy of the right ventricle. I will percuss and see. As I draw the chalk mark on the skin you will see that the heart dullness extends to the right, beyond the sternum and beyond the mamillary line. There is, then, as I have said, hypertrophy of the right ventricle. In the large majority of cases of chorea you will find heart lesions. In fact, it is on former attacks of endocarditis that most of these cases depend for their origin. And now comes the important question. What are we to do for such cases? For general reasons, and as there is but little fever here, this child must take iron; not, however, those preparations of iron which act as vascular irritants, such as, for instance, the muriated tincture. I should rather give the subcarbonate, or the pyrophosphate instead, in doses amounting to twenty to twenty-four grains daily. She may also take digitalis, either the fluid extract, of which she will bear two to four minims during the course of twenty-four hours, or an equivalent amount of the tincture. To control the chorea itself there is that symptomatic remedy, arsenic, which does more than all the rest. She may take it in the form of either of arseniate of sodium or potassium; of Fowler's solution, if the potassium salt is chosen, three drops in water, after meals. This dose may be increased gradually to twice the amount, and more. It

is of the greatest importance that she should rest well at night, and to give her the sleep she so much needs I propose to give her fifteen or sixteen grains of the hydrate of chloral every night, even twenty-four grains in a single dose, if necessary. Of the bromide of potassium or sodium she may take fifteen to twenty-four grains.

CASE III. This child, nine months old, fell out of bed three months ago; and shortly after the accident, the mother says that she noticed a swelling on the child's back, which remained about the same until three weeks ago, when it increased in size, and during the past week the skin covering it has become of a purplish color. The swelling is now about the size of a goose egg. There was another abscess, higher up on the back, which opened spontaneously, and another on the inner side of the right leg, which is still there. There was also an abscess on the right arm, which broke, and is not healed up yet. The tissues around it are still hard. Here is a history, then, of a nine months' old baby, who has, for the last quarter of a year, been the subject of a succession of abscesses. Now there is some etiological connection between these abscesses; they must have all a common source; as, for instance, in the heart; for the heart may be the source of such abscesses when there are vegetations on its valves, as a result of endocarditis, which vegetations, becoming torn off and carried into the circulation, are lodged in various situations and give rise to the formation of abscesses. This condition might also be the result of a pyæmic process starting from one abscess. This is an important point; for it is in just this way this spontaneous pyæmia, as this is called, is developed in the very young, giving rise to just such a series of abscesses as this child suffers from, which apparently have no common etiological source.

The most innocent abscess may give rise, in the young, to a pyæmic process, which is the result of absorption of purulent matter, and the patient may die, as a consequence. I have seen embolism of the pulmonary artery, which resulted in a fatal issue, come from a varicose ulcer of the leg. When you open these abscesses it is not uncommon to find that immediately after one or two new ones start up in the vicinity, particularly if the first abscess is of a furuncular nature. This will not happen if you disinfect the wound, nor are you to cut too soon. Wait until the matter is near the surface and then, making an incision, disinfect so that no absorption can take place through your incision, which is a fresh wound. A coagulum of blood retained may decompose, and the septic material, being absorbed, may give rise to a fresh abscess; therefore you must be careful to disinfect the wound thoroughly with carbolic acid. You may use a much stronger solution than that used in the spray, — a ten, twenty, fifty per cent. solution, or sometimes I apply even the concentrated acid itself. If you do this, you will be safe. Last week there was no discolorization of the skin over this swelling; but there is now, as you see, which shows that the skin is participating in the inflammatory process. The wound must not be large which you make. If you allow a large quantity of pus to escape from its confinement you relieve a large number of blood-vessels suddenly from pressure, and a hæmorrhage into the sac may take place, from which future mischief may ensue. If the pus is evacuated gradually the pressure on the vessels lining the sac wall is slowly reduced,

and hæmorrhage is not so likely to take place. After your incision is made, you will adopt the usual antiseptic treatment.

CASE IV. W. L., aged two years, has the following singular history: At birth, as the presentation was transverse, the left hand being the presenting part, the attending physician performed version, during which operation the left humerus was fractured. This is something which not infrequently happens during version, even when the child is not rachitical; so there was nothing remarkable in that; but about two months afterward the child was somewhat roughly handled and the right humerus was said to have been fractured at that time. Again, when the child was six months old the left femur was fractured, and soon after that the tibia also, but no callus was recognized. After an interval of six weeks the left tibia was again fractured, and the left humerus has been fractured three times. During the first year the child was nursed at the breast. The two upper incisors appeared at the age of six months, and a few months afterward the lower incisors. The remaining teeth appeared afterward, in rapid succession, all being cut before the child was eighteen months old, but were poorly developed, and soon decayed. Now here is a child just two years old, who has been the subject of more fractures than you would expect to occur in an entire congregation during that period. The left humerus has united at an angle, as you see, an angle, I should say, of about 130°, with the concavity looking backward, and there is an immense convexity in the right humerus, but no angular deformity. The forearms are normal. The sternum is more prominent than it ought to be; the diaphragmatic portion is drawn inward. The child has sixteen teeth, of which eight are already decayed, which is very far from being the normal state of affairs. Soon after birth the child had coryza, and an eruption on the skin. There have been a number of fractures here, which are more frequent in the old than in the young; for the bones of a child do not fracture so easily, because they are more flexible and contain less earthy matter, but more organic, than do the bones of an adult. Why is it, then, that we have so many fractures in this child? When a bone has its normal constituents it will not fracture readily; but when it is very soft it fractures easily. This often happens in bones which are the subject of rachitis, and sometimes in that case the fracture is not complete, but only partial. There is an infraction instead of a fracture. The bone inside the periosteum will be bent only, or the periosteum, which is very soft, untorn itself, will hold the ends of the bone together, so that you will get no crepitation because the periosteum acts like a splint. Infraction or fractures like this still produce deformity, as you see in this case before you, even though well attended to from the start, because the diseased condition of the bone prevents proper repair.

From certain symptoms in this case, as the coryza, the decayed condition of the teeth, and the eruption on the skin, it is probable that this child has hereditary syphilis. Indeed, when rachitis is observed in the bones, at the same time that the teeth are soft, it is highly probable that the child is syphilitic, and when rachitis appears very early it is often nothing more than syphilis of the bones. It was George Wegner who first called attention to the fact that a softening of the costal ends of the ribs is, in almost every case, due to hereditary syphilis, and that the syphilitic and

the rachitical softening of the costo-cartilaginous junctions cannot be distinguished from each other.

When you see such a case as this you are to make a careful distinction between a rachitis which is due to syphilis and one which is not. There are, it is true, quite a number of such cases, which are due to syphilis; but that is not true of them all, and it is important that you should make the distinction; for in *bonâ fide* rachitis you would avoid mercurials, but when due to syphilis you must resort to mercurials if you expect to cure.

Original Articles.

A CASE OF HYDROPHOBIA OF DOUBTFUL ORIGIN.

BY S. L. ABBOT, M. D., AND R. H. FITZ, M. D.

WILLIAM ROEDEL, aged seventeen, a confectioner by trade, born in Germany, a resident of Boston, entered the Massachusetts General Hospital April 24, 1879. He was of nervous temperament; but previous to the attack for which he had been admitted, his health had been usually good. Three days before entrance, after dinner, he fell asleep on a lounge, and slept several hours, until aroused by his mother. On awaking he was suddenly seized with severe pain in the abdomen (about the umbilicus especially), over the sternum, and in both legs, particularly in the thighs. He went to bed, but could not sleep. The pain through the following night was excessive. During the next day and night it continued, entirely preventing sleep. On the morning of the third day he, for the first time, had difficulty in swallowing. When food or drink was offered him he experienced a choking sensation even before it touched his lips, and the act of swallowing was very difficult. The general pain continued during the day and the next night; but on the following morning, the date of his entrance to the hospital, was somewhat mitigated. No history of any animal bite, at any time, could be obtained from the patient or the friends who brought him to the hospital. Five weeks before, the terminal joint of the ring finger of the left hand had been caught in the cogs of a machine at the shop where he worked, and the tissues were somewhat torn. The part healed readily, however, being disabled for two or three days only, and at the date of entrance was entirely well, being not at all sensitive to touch or compression.

At the time of admission the patient's face had a wild expression, the pupils were dilated, and after being put to bed he made frequent attempts to sit up; but on being spoken to sharply he desisted. When drink was offered him the muscles of deglutition of the mouth, face, and upper part of the body were thrown into violent spasmodic contraction. This was excited even when the cup was as much as three feet from him, and he immediately made an effort to rise, accomplishing it with a little assistance, but falling back again unless supported. Liquid given with a spoon caused choking and was swallowed only after the most determined efforts. There had been no nausea, vomiting, or salivation. The pain in the umbilical region was increased by pressure. There seemed to be partial loss of power of motion in the legs. Temperature 98.6° F., pulse 112. At eleven p. m. had potass. bromid. fifty grains, chloral, ten grains, and slept until

1.30. Restless until three a. m., when he had fifty grains of bromide of potass., and slept until morning. Drank four ounces of milk, with effort, twice in the night. Could take no solid food.

April 25th. Swallowed with less difficulty this morning, but still complained of pain in both thighs, mostly at the inside; none below the knees; while at rest there was no pain in the thighs. Pulse 80, of moderate strength. Tongue covered with a thin fur. R. Tr. belladonnæ five minims, potass. bromid. ℥i., chloral hydrat. gr. v. and beef tea fl. 3 iv. every two hours. During the following night he slept none, although he took forty-grain doses of bromide of potass. every two hours until five a. m. He swallowed in all eight ounces of beef tea with some difficulty. At the time of visit on the 26th he was somewhat delirious, the pupils being largely dilated, but sight unaffected. Pain in legs less, with loss of muscular power. Urine passed freely. Fanning excites shuddering spasms like those caused by drinking (as was shown by Dr. T. B. Curtis, who was examining the case with me), and precisely like those produced in sensitive persons by the cold shower bath, or wading into cold water.

During the afternoon the delirium increased, and swallowing became more difficult; and at five p. m. it was nearly impossible. He had had regularly every two hours tr. belladonnæ five minims, potass. bromid. ℥i., tr. valerian. ammoniat. minims xx., and had also, got down four ounces of beef tea at the same intervals, the last dose being swallowed only after a most violent struggle. During the following night the delirium was excessive, the patient shouting violently, and struggling to get out of bed, requiring constant restraint. He took two doses of fifty grains of bromide of potass. each, but refused more. He also swallowed in all eight ounces of beef tea. After 1.30 his violence was excessive, and the extremities became cold. At this time he began to spit white, frothy sputa.

April 27th. Patient very delirious, spitting frequently, and refusing food and medicine, struggling violently, in a great passion with his attendant, endeavoring to get out of bed. No power of motion in legs. On directing the attendant to loose his hold and firmly ordering the patient to be quiet he became more calm and answered questions, saying he wanted to get out of bed so that he might go home. On being offered a teaspoonful of beef tea he swallowed it without difficulty, but refused more, saying he did not want it. He complained of much pain in the throat, and, if raised in bed, in his back. At eleven a. m. a subcutaneous injection of one third of a grain of sulphate of morphia was given without any obvious effect. At two p. m. he was so violent that a camisole was put on. He shouted and raved all the afternoon. At 5.45 a subcutaneous injection of one half grain of sulphate of morphia and one grain of ergotine was given. At 6.30 he was much quieter, and the respiration was quite slow. After eight p. m. the delirium increased, and at eleven p. m. and 1 a. m. he had subcutaneous injections of one grain of ergotine. During the afternoon and evening he spat frequently, and at midnight frothed at the mouth. He continued more or less raving until he died at 2.30 a. m. of the 28th.

Woorara was not administered in this case, as it had signally failed in other cases of hydrophobia in the Massachusetts General Hospital.

After the death of the patient it was learned for the first time, from his brother, that he had been bitten

during the previous summer or autumn by a flying squirrel. Subsequently his mother confirmed the statement. She said that the boy, sometime during the previous year, on returning from a walk to Forest Hill, brought with him in his pocket a flying squirrel which he obtained there, and which he said he had taken from its young. The inference is that it was during the summer, and that the specimen was a female. When taken from the boy's pocket the animal was very much excited, uttering loud outcries, apparently greatly enraged, and bit one of his fingers very severely, until, in the words of his mother, the blood streamed down his hand. In spite of her earnest entreaty to let it go, he held it, however, until a box was obtained into which it could be put. Here it was left for the night, but effected its escape before morning. The bite readily healed in a day or two, and gave the boy no special trouble. He was represented by his mother as being a good-natured fellow, of exuberant spirits, and inclined to handle animals rather roughly. She said she had often remonstrated with him for his treatment of the family cat, fearing he might be injured by it. She had not known, however, of his ever having been bitten, except by the squirrel. Her account of the commencement of the patient's illness differed somewhat from that previously given by the patient himself and the friends who accompanied him to the hospital. She stated that for two years he had been subject to periodical headaches, more especially in the right frontal and temporal regions. On the afternoon of the previous Sunday, the 20th of the month, he was in great spirits, and caused much amusement by masquerading about the house dressed in his sister's clothes. During the evening he was taken with a severe headache, the pain passing down to his jaws, and having a neuralgic character. It became so intense that his mother gave him a large dose of brandy, and he subsequently slept. The next day a dentist extracted the right upper canine tooth, which it was thought might have caused the pain. The following night, however, the pain returned, and was only quieted by another large dose of brandy. It recurred on the next night, and was treated in the same manner with the same result. It was not until Wednesday, the 23d inst., that the severe pain came on in the abdomen, from which he was suffering when he entered the hospital.

There can be no question that the case under consideration was one of genuine hydrophobia. The initial symptoms in this affection vary very much in different cases, but were in the present instance not materially different from those sometimes reported. It certainly was not a case in which the fears or the imagination of the patient had anything to do with the symptoms, for so little importance had been attached to the squirrel bite that it seems to have been quite forgotten by the patient himself, and was only brought to the memory of his friends by persistent inquiry after his death.

Common rumor has frequently reported cases of hydrophobia as caused by bites and scratches from excited animals not afflicted with this disease. Most medical writers, however, give little credit to such stories, and as a rule they are rejected as unreliable. Cheifus, however, says, in his *System of Surgery*, "from numerous and careful observations it cannot be doubted that the bite of beasts much excited, or when disturbed during copulation, may produce canine madness." The question is surrounded with difficulties, par-

ticularly as well authenticated instances are given of hydrophobia caused by absorption of the virus by an abraded surface which had been merely licked by a hydrophobic dog. It has also been claimed that the disease may be caused by the bite of a dog while in heat but not rabid; and Dr. Hammond mentions two fatal cases which he had seen, one of them that of a child only three years old, in each of which the bite was inflicted by a bitch said to have been in this condition.

It may well be questioned, however, whether the squirrel bite had anything to do with the attack in the present instance. If it had not the case must be set down as spontaneous in its origin, or as caused by some infection not known to the friends of the patient and forgotten by himself. The confidential relations between the boy and his mother were such that it is not at all likely that he could at any time have been bitten by a dog without her knowledge.

The autopsy was made by Dr. R. H. Fitz, April 28, 1879, twelve hours after death. The dura mater showed no abnormal appearance, the vessels of the pia mater were universally injected. Sections through the substance of the brain showed abundant puncta vasculosa, and the gray matter of the convolutions in general was of a somewhat purple tint. Nothing abnormal was observed in the ventricles or within the substance of the brain. The medulla oblongata was found to be softer than normal, but was at once placed in Müller's fluid, without further immediate examination. Sections through the spinal cord showed no unusual appearances, nor was anything abnormal found in the membranes of the cord.

The examination of the heart showed nothing abnormal. The aorta was hypoplastic.

Both lungs were distended; and the left showed a considerable degree of interstitial emphysema. Small patches of ecchymosis were found throughout both lungs; they were most voluminous posteriorly where were two of the size of lemons, not dense but spongy. A section through one of these patches at the base of the left lung showed a central cavity, containing odorless gas, the walls of which floated in water as a brightly shreddy mass.

The pleural surfaces were intact.

The spleen was normal in size, of a dark purple color, the follicles indistinct.

Both kidneys were extensively injected, and occasional ecchymoses were found in the capsule.

The bladder was empty, its walls contracted.

The liver was of normal size, of a bluish color, and contained an unusually large quantity of blood.

There was post-mortem softening of the stomach with perforation. The mucous membrane of the lower part of the small intestine was ecchymosed in points and patches, without giving evidence of further alterations.

Portions of the brain and cerebellum, the entire medulla and the spinal cord, were hardened in Müller's fluid, and subsequently preserved in alcohol. The microscopical examination of these organs was negative for all parts with the exception of the medulla oblongata.

In examining the hardened brain and cord only trial-sections were made, while the entire medulla was cut into successive sections, in which were found the changes to be described.

These correspond very closely with those previously

met with in a case of hydrophobia reported by Dr. G. B. Shattuck and Dr. Fitz, in the *Boston Medical and Surgical Journal*, 1878, xcix., page 261.

Whatever difference existed was one of degree only, the milary lesions being much more abundant in the present case.

In the statement of the nature of these changes it may be said that they consist of minute circumscribed accumulations of small round cells, which have been not inappropriately called "milary abscesses." Furthermore large numbers of small round cells were found in the external coat of many of the blood-vessels, both arterial and venous, especially of the latter. Their number was often such as to form a dense mosaic, without there being any perceptible overlapping. It is desirable to allude to this fact, as the opinion has been expressed that the milary abscesses previously referred to were merely transverse or oblique sections through the walls of such altered vessels. Again, hæmorrhages were very commonly met with, either within the perivascular lymph spaces, as irregularly defined patches, or in the substance of the medulla, without any evident relation to the course of the blood-vessel. Although the blood-vessels, notably the veins, were often found largely distended with blood, and in certain instances to such an extent that the idea of a thrombosis was suggested, yet the absence of any secondary changes within the vessel, wall, or immediate vicinity, made it impossible to decide that such an engorgement with blood might not have been the result of conditions existing at, or immediately before, the time of death.

The topographical examination of the medulla showed that the hæmorrhages were most abundant at the lower end, just above the decussation of the pyramids. When the region of the olivary bodies was reached, the milary abscesses, periplebitis and periarteritis were the prominent features, there being but little evidence of hæmorrhage. The prevalence of the milary abscesses was greatest in that part of the medulla above the middle of the olivary bodies, corresponding with the nuclei of the vagus and hypoglossus nerves. They were found in considerable numbers still higher, in the vicinity of the nucleus of the abducens.

Their situation was almost wholly in the posterior portion of the medulla, mainly in the reticular formation along the roots of the vagi, among the fibres in certain instances, especially in the vicinity of the round respiratory bundle.

Two abscesses were found within the nucleus of the hypoglossal nerve, and two within the vagus nucleus. Abscesses were also found within the olivary bodies, at their anterior border. At the uppermost part of the medulla the abscesses were found on both sides of the raphè, between this and the fibres of the abducens nerves, also in the reticular formation between the facial and the abducens.

Although these collections of cells are spoken of as abscesses, it is to be doubted whether in all instances actual abscesses were present. The indifferent cells were usually separated from each other by certain distinct intervals, wider at the periphery of the accumulation than at its centre. Within such an agglomeration capillaries and ganglion-cells were sometimes seen, the latter presenting a homogeneously granular appearance, with distinct nuclei, giving no evidence of being isolated from the surrounding nerve tissue. Indeed, neither in ganglion-cells nor nerve fibres were evident changes

detected. It is to be mentioned, however, that such a statement can be regarded as only of relative value, as the examination of these constituents of the medulla was made only after the tissues had been hardened.

Attention may again be called to the absence of appearances of a colloid or granular degeneration, which could be regarded as in any way distinct from changes repeatedly observed in the examination of nerve tissues from individuals whose brains during life gave no evidence of disease. Colloid masses of a rounded shape are often found in abundance in such cases, and have always been attributed to changes occurring during the process of hardening. In reality gaps arise, often in great abundance, which become filled with a homogeneous substance, translucent, feebly refracting light. This substance becomes readily stained by hæmatoxyline but is dissolved when the section is placed in a solution of ammonio-carmin. The gaps remaining have a sharply defined border, in which no evidence of degenerative or inflammatory change is to be observed.

The lesions found in the two cases examined at the Massachusetts Hospital correspond so closely with each other, and with those met with by Gowers and Kolesnikoff, both in man and dogs, that for the present they are to be regarded in their situation as the essential alterations to be looked for in hydrophobia. They are readily seen, and may be stated as indicative of an acute bulbitis. As the milary nature of the agglomerations of cells is so striking, and as Leyden has already reported cases of acute bulbitis which differ in many respects from cases of hydrophobia, the hydrophobic form of bulbitis may be characteristically spoken of as an acute milary bulbitis.

With this anatomical diagnosis, if further investigation continues to corroborate the results recently arrived at, much will be gained with regard to a proper understanding of the pathology of hydrophobia. The nature of the symptoms points directly to important changes in this region, which pursue an active course during a very brief period, and the phenomena are such as may readily be referred to the irritation of certain of the nerve-centres which are supposed to have their seat in the medulla.

The obscure ætiology of certain cases of hydrophobia is well known, and the question has often been raised whether animal poison had ever been inoculated in certain instances. It is quite possible that an acute inflammation of the medulla may have as varied an ætiology as an acute inflammation of the kidney. As already stated an acute bulbar paralysis is recognized by clinicians, and has been found by Leyden to be associated with limited lesions in the medulla. The symptoms are sufficiently well characterized to enable the diagnosis to be made, although the origin of this affection is at present indefinite. In the acute milary bulbitis the symptoms are also sufficiently characteristic, and in certain cases the exciting cause may be held to be sufficiently apparent.

There are cases, however, where the bite of an animal, not known to be rabid before or after the biting, has been followed by the disease hydrophobia, and it may well become a matter of extremely practical interest to determine whether it is not possible for an individual to produce within himself an acute bulbitis by an intense fear of the symptoms whose nature he may be more or less familiar with.

Were this possible, the number of cases of hydrophobic bulbitis might readily become diminished, with

the exact knowledge that an individual might produce this lesion within himself without the inoculation of a specific virus. The same means which caused the disease might prove equally efficient in producing a cure.

The above suggestion has presented itself in connection with the observation of definite, not to say characteristic, lesions in the case of a disease whose existence has repeatedly been denied, and in which the etiology is somewhat obscure.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.

BY F. I. KNIGHT, M. D.

THE ASSOCIATION OF DISEASES OF THE HEART AND KIDNEYS.

THIS association has long been recognized, and the tendency now is to consider them both products of a general diathesis, a morbid condition of the blood, which fluid, after having remained in retirement, as it were, from all consideration as bearing upon the production of local organic diseases, is again assuming its proper place in pathological inquiry. The present status of the above subject is well shown by the writings of Drs. Mahomed and Fothergill, extracts from which appear below.

Dr. F. A. Mahomed¹ says that now that we have got the sphygmograph the time has come when the pulse must once again be studied accurately; a new class of diseases has been revealed to us, and a safe guide for their treatment has been afforded. It has long been a well-known fact that high pressure exists in the systemic circulation both in acute and chronic Bright's disease, but it has been very generally believed that this pressure is produced by the impeded circulation of poisoned blood, and that this poisoned condition of the blood is due to the imperfect elimination of the excrementitious material by the kidney. Thus, the sequence is supposed to be, first, diseased kidney; second, retained effete material in the blood; third, impeded circulation; fourth, the cardio-vascular changes characteristic of Bright's disease. This view makes the kidney change primary, the cardio-vascular secondary. Dr. Mahomed has tried to prove that this sequence of events should be reversed, namely, that a poisoned condition of the blood is the primary condition, that this produces an impeded circulation through the capillaries, and subsequently the cardio-vascular changes, while the bad blood produces a congestion of the excretory organs, that is, of the skin, mucous membranes, and kidneys, but especially of the latter. The arguments upon which this hypothesis has been based are as follows: (1) that high arterial pressure is found to exist before any sign of failure of the kidneys to perform their functions occurs; (2) that certain poisons are known to produce kidney disease, that these poisons produce high pressure in the arteries, while no symptoms of kidney failure are discoverable; on the other hand, the kidneys are often found to be excreting rather more than their usual amount. (3.) The condition of high pressure is found to occur in some young people in all other respects perfectly healthy, but liable to a certain class of petty ailments. Such patients have very often a family history of gout or Bright's disease, and if they live long enough will al-

most inevitably develop it in themselves. (4.) Far from the kidney disease being the primary condition, he finds that patients with primary kidney disease, such as is seen in surgical kidneys or scrofulous kidneys, even of the most advanced nature, do not have high pressure in their arteries, while patients with acute Bright's disease, if the poison be acute and temporary, may lose all signs of high arterial pressure during their recovery, even at a time when the kidneys are manifestly crippled, the urine being albuminous, and the solids deficient in amount.

Looking at the matter from this point of view, Dr. Mahomed has tried to prove that the high arterial pressure and the subsequent cardio-vascular changes are the primary and most important conditions to recognize, while the kidney symptoms are only secondary, and are not even essential conditions; thus certain cases occur, and are not very unfrequent, in which the cardio-vascular changes of Bright's disease are present, but in which no marked changes are discoverable in the kidneys.

Dr. Mahomed considers that chronic Bright's disease is caused by a condition of the blood or tissues which may be either hereditary or acquired. It may be regarded as a diathesis, the existence of which can be recognized by the condition of high pressure occurring in the systemic circulation produced by the increased resistance to the circulation of the poisoned blood in the tissues. It produces extensive anatomical changes throughout the body, but especially in the cardio-vascular system, the kidneys, mucous membranes of the lungs, and gastro-intestinal canal, and in the skin. It reveals itself during life by functional disturbance of one or all of these organs, but the disorder of any one may afford the chief clinical characteristics of the disease, and lead to an incomplete diagnosis, in which its true nature is frequently overlooked.

The chief clinical aspect under which these cases present themselves are as follows: (1.) There is what may be considered the normal state of the individual, or what he calls "health," his ordinary "every-day" condition. (2.) Failure of the heart due to high pressure in the systemic circulation or of the right side secondary to the lung changes. (3.) The disease may especially show itself by its effect upon the lung, producing bronchitis, asthma, and especially emphysema; not unfrequently it appears as pleurisy, sometimes pneumonia. (4.) The symptoms may all be referred to the brain,—vertigo, headache, loss of memory, sleeplessness, convulsions, coma, or apoplexy.

With the brain may, perhaps, also be classed those conditions which affect the eye and the ear, hæmorrhages into the retina or tympanum. (5.) The liver may appear diseased, either functionally or with portal obstruction and ascites, resembling cirrhosis, the result of capsulitis. (6.) The stomach and intestines may divert attention from the more serious malady, presenting symptoms of gastro-intestinal catarrh, dyspepsia of various kinds, vomiting, diarrhoea, or constipation. (7.) The kidney may give the leading symptoms, and some signs from it are perhaps more frequently present than any others except the cardio-vascular ones; the chief are polyuria, low specific gravity of urine, and the occasional presence of albumen.

In all of these conditions a high arterial pressure, as indicated by the pulse, is the only constant symptom, and will always lead to the recognition of the disease except when fever is present; for then the pressure is

¹ Guy's Hospital Reports, series 3, vol. xxiv., 1879.

reduced, and the pulse may become dicrotic. Among the tests of high pressure, Dr. Mahomed gives the following, to be applied to the sphygmographic tracing. A line must be drawn from the apex of the up stroke to the bottom of the notch preceding the dicrotic wave. No part of the tracing should rise above this line; if it does, then the pulse is sure of high pressure. The height of this notch is another good gauge of this pressure. The higher it is from the base line of the tracing the higher is the pressure; the nearer it approaches the line the lower is the pressure.

It is in the early cases, if possible before organic changes are produced, that we should seek to treat Bright's disease. It is only by watching arterial pressure that we can recognize the commencement of disease. To promote the excretions, diminish the ingestions, and strengthen the heart, appear to be the chief indications for treatment. Purgatives are perhaps the surest and readiest means of reducing blood pressure. Next to purgatives may be placed diaphoresis. Frequent warm baths, water packs, or Turkish baths, with a certain amount of vapor mingled with dry air, are invaluable. These latter require to be used with care, and their effect upon the individual watched. The diet is of course of very great importance, and the diet for Bright's disease has been clearly laid down by all writers on the subject as a non-nitrogenous one. Sweet wines and beer are always forbidden, and whiskey appears to be generally considered the least harmful form of alcohol. Simple rest in bed is a mode of reducing pressure by no means to be despised.

Digitalis is a drug which has a twofold action in these cases. It helps the heart, and is of the greatest value when there is any dilatation of that organ, and it also acts as a most valuable diuretic.

In treating the high pressure of Bright's disease, it is of the utmost importance to recognize the true cause of the disease, and to treat that. In cases where the pressure is so high or the symptoms so severe as to call for immediate relief, the lancet will always be our most invaluable remedy. Dr. Mahomed has seen the greatest benefit derived from bleeding in cases of dilatation of the heart, — of the left side as well as of the right. So also in so-called uræmia, either with or without convulsions, or to relieve the pain in aneurism, bleeding is a most excellent practice. The author believes that in cerebral hæmorrhage bleeding should almost invariably be adopted. Bleeding will not only reduce the pressure, and therefore further reduce the tendency to hæmorrhage, but it will also increase the coagulability of the blood.

Pulse of high pressure, as we now recognize it, was exactly the pulse which the old practitioners invariably bled, the *pulsus magnus durus et tardus*. Dr. Mahomed feels convinced that we cannot do better than to follow their example in this, for by this practice the lancet obtained its greatest triumphs, and established for itself the first place among remedies.

Under the title of The Gouty Heart, Dr. Fothergill has an exceedingly interesting chapter on this subject.¹ The association of changes in the heart and arterial system, with changes in the structure of the kidneys, has now long been recognized. James, of Exeter, observed it in 1817. His view was that subsequently announced by Bright, namely, "that the altered quality of the blood might so affect the minute and capillary

circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system," and hence arose hypertrophy of the left ventricle. Rokitsky recognized the fact that arterial degeneration, true apoplexy, and cardiac hypertrophy were found with chronic renal disease. In 1855 Traube published some writings on the connection betwixt chronic disease of the kidneys and changes in the heart. At first he thought the rise in the general arterial tension due to the contraction of the kidneys and obstructed renal circulation, but he soon gave up this hypothesis as untenable (though it is still given as his mature view by many authors); he then adopted the view of impeded arterial flow, and in 1872 he was fully acquainted with the views of George Johnson as to the thickening of the muscular walls of the arterioles. He held, however, that this muscular thickening was not found in all cases. In 1852 Handfield Jones described the fibroid change in the arteries, which he considered as not inflammatory. In 1867 George Johnson described changes in the walls of the arterioles, namely, a thickening of the muscular coat by which the blood flow was obstructed. In 1872 Sir William Gull and Dr. Sutton read a conjoint paper on Arterio-Capillary Fibrosis, that is, on a change which was a fibrous thickening rather than a hypertrophy of the muscular wall of the arterioles, and found along with renal fibrosis. They hold this is a general fibrosis in which the kidneys often share, but not necessarily so. They hold that "the contraction and atrophy of the kidneys are but part and parcel of the general morbid change. The kidneys may be but little if at all affected, whilst the morbid change is far advanced in other organs." Considering it unsettled whether the view of Dr. Johnson or that of Gull and Sutton be the correct one, Dr. Fothergill proceeds to describe the disease. The condition of lithiasis is the first link in the pathological chain. The blood is imperfectly depurated and the waste products of albuminoids undergoing retrograde metamorphosis are present in excess. It has been asserted, that the presence of such waste products excites arteriole contraction immediately (George Johnson), while others, as Traube and Ludwig, hold that the arteriole spasm is set up by the effects of the waste-laden blood upon the vaso-motor centre, by which general contraction of the peripheral arterioles is excited. To the finger and sphygmograph at once there is furnished evidence of high arterial tension. Hence follows cardiac hypertrophy. The bulk of urine is of great diagnostic value. When the arterial tension is high the pressure in the glomeruli of the kidney is great, and the flow in the tubuli uriniferi is swift. When the pressure on these thin-walled glomeruli is lowered the bulk of urine passed is small. Thus the free flow and large bulk of urine of low specific gravity which characterizes the early stages of Bright's disease contrasts in a striking manner with the small bulk of concentrated urine laden with lithates, and of high specific gravity, which is seen in cardiac dropsy. There are certain points connected with the cardio-vascular changes of chronic renal disease which are of great importance, and are worthy of description. One of these is the slow steady pulse so characteristic of this combined condition. Whenever the arteries are full the pulse is slow. We saw, in describing the innervation of the heart, that when the roots of the vagus nerve are flooded with blood the inhibitory fibres are thrown into action and the systole of the

¹ The Heart and its Diseases, with their Treatment. Second edition. Philadelphia: Lindsay and Blackiston. 1879.

ventricle is retarded. If any skepticism exists as to the association of the slow pulse with arteriole contraction in the mind of any reader, it will at once be dissipated by dropping five or seven drops of nitrate of amyl on a piece of lint or a handkerchief and allowing the patient to breathe it. In a few seconds the blush caused by the dilation of the peripheral arteriole is accompanied by a complete alteration of the character of the pulse; a slow, hard, incompressible pulse is exchanged for the rapid compressible pulse of pyrexia. In a few more seconds this passes away and the pulse is again slow and hard. In spite of the inhibitory action of the vagus fibres apoplexy is not uncommon. The blood pressure is constantly high in the encephalic vessels, specially in those who are intellectually active. Exacerbations of the abnormally high blood pressure are produced, among other causes, by contraction of the cutaneous capillaries brought about by the fall in temperature, and by a more than commonly waste-laden condition of the blood. The blood highly charged with nitrogenized waste excites further contraction of the arterioles with their hypertrophied muscular walls, and then follow apoplexy, angina pectoris, or, if the heart is both dilated and hypertrophied, palpitation. Hence the importance of a judicious regulation of the diet. Another rarer outcome of the high blood pressure of this disease is aneurism. The sustained high arterial tension leads to atheroma, which may be general or in patches. Disease of the aortic valves is common in the class of persons who acquire the gouty heart, and it is Dr. Fothergill's strong conviction that mitral disease of the chronic sclerotic, or contracting form, found in elderly persons, especially in the form of regurgitation, is also found with the changes now being described. The strain to which the aortic valves are subjected by the long-continued high arterial tension is now generally recognized as the cause of aortic valvulitis. Dr. Fothergill thinks that mitral valvulitis is produced in the same way. In estimating the prognosis of valvular disease, so associated, we must take care to remember that the valvulitis is not the commencement of the disease. We must recognize the valve mischief as part of a large general process of which indeed it is one of the later outcomes.

As a consequence of the waste-laden condition of the blood, a number of apparently morbid actions are set up in subjects of lithiasis, which are apt to be regarded as diseases *per se*, a diagnostic error which is serious, as it tends to lead the practitioner away from the real nature of the illness and its appropriate treatment. Whenever a patient is seen presenting the following indications of lithiasis, namely, a tense pulse, a loud aortic second sound, with a hypertrophied left ventricle (or, may be, dilated and hypertrophied both), and passing a considerable quantity of urine, specially getting up at nights to make water, or whose urine is often laden with lithates, — then it behooves the practitioner to bear in mind the condition of lithiasis, no matter what the peculiar ailment of which the patient may complain. Affections of the mucous membrane, as bronchitis, or diarrhoea; of serous membranes, as pleurisy, or pericarditis; skin affections, as eczema; muscular pains called rheumatism, neuralgia, osseous disease, or arthritis, all may be the direct outcome of imperfectly depurated blood, the condition known as lithiasis, or, as Murchison preferred to denominate it, lithæmia. Curious attacks of dyspnoea are not at all rare in the subjects of lithiasis.

Basham, who knew them well, called them "inexplicable." Niemeyer attributed them to œdema of a transient nature; but though this may be so in advanced cases of heart failure, the attacks are too sudden and too transient to be so occasioned in the early stages. They may be due to spasm of the pulmonary capillaries, or, more probably, to the disturbing effect of the waste-laden blood upon the respiratory centres. In sleep the respiratory centre acts less energetically than in the waking state, is to some extent depressed, in other words, and the waste-laden blood probably further depresses it, till an attack of dyspnoea is the result.

Space will not allow us to give further abstracts from this very interesting chapter, which occupies over fifty pages of an octavo book. The treatment of the gouty heart follows the pathology of it. There is the treatment of the early stage previous to heart failure; and the management of the later stage, when the failing circulation has to be included therein. The first point is to remember that the presence of nitrogenized waste, in excess in the blood, is the initial departure from health. Consequently, the dietary is of primary importance, and not one grain of nitrogen beyond the absolute wants of the system should be taken in the food. The dietary should consist of foods beginning with F, — fat, fish, fruit, and farinaceous foods. A lobster salad is the typical dish for the gouty man, with perfect digestion; without a powerful digestion it is poison, producing acute indigestion. The further indications of treatment of both stages are exhaustively treated.

(To be concluded.)

Hospital Practice and Clinical Memoranda.

KING'S COLLEGE HOSPITAL, LONDON; REPORT OF OPERATIONS.

EXTIRPATION of the larynx was performed on the 16th inst., by Mr. Pick, at St. George's Hospital, for malignant disease, in an adult who had been previously relieved by tracheotomy, but whose life was threatened by frequently recurring hæmorrhage. I hear that the patient has rallied most satisfactorily from the operation, which was performed under an anæsthetic administered through the tracheotomy tube, the wind-pipe being plugged. The entire thyroid and cricoid cartilages were removed, and the hæmorrhage was not formidable; this I believe to be the twenty-third occasion on which so complete an operation has been carried out. I subjoin notes, the result of my visits to King's College Hospital, where I found Prof. John Wood, with whom Professor Lister shares the chair of clinical surgery, and Professor Smith, the occupant of the chair of systematic surgery, as also all the operators there, equally convinced of the practical importance of the antiseptic method, though I could not gather that Professor Lister's hospital colleagues were completely in unity with him as regards his hypotheses relative to the grand revolution he has had the honor to introduce into the treatment of wounds.

Though King's College Hospital is small by comparison with many others in this metropolis, it is attended by a large number of students, furnished from the medical department of King's College, and would appear to possess an altogether exceptionally rich

field for pathological surgical experience. At least I should judge so as, when I resolved to note for you a week's operating there, I found myself saddled with an attendance on at least three days of the week, and as it happened on the particular one I chose with no less than four days, had I gone to the ophthalmic operations, which I did not do on learning that Professor McHardy adopted no special antiseptic measures, the rigid cleanliness alone excepted, in the conduct of his operations on the eye-ball itself, which he considers to be furnished by nature with more than a fanciful antiseptic guard, in the arrangement of the cilia and the lachrymal flow.

At Professor Lister's clinical lecture on Monday, January 10th, the first patient had been treated for hydrocele of the tunica vaginalis testis; the serous fluid had been drawn off, and a drachm and a half of tincture of iodine (*Edinburgh Pharmacopœia*) three times as strong as the tincture of the *British Pharmacopœia*, injected, to excite a smart inflammation in the sac. The professor said the tincture of iodine and the resulting exudation were absorbed, and the cavity obliterated; similar phenomena occurred in pleurisy and pericarditis. A very severe inflammation was necessary to insure such results, as hydrocele itself was a very mild inflammation, hence, without a sufficiently strong irritant no effect would be produced.

Support for the scrotum is essential during the inflammatory stage, which attains its height in from three to five days. The skin has a sympathetic blush, such as is seen around a tight stitch, when the tunica vaginalis is inflamed by the injection. Very little pain or inconvenience had been experienced by the patient, who was carried in, lest by any movement the exuded lymph should be "churned up" in the serum, and prevented from becoming organized. Such treatment is apt to be too severe for young children, in whom, fortunately, a radical cure may be effected by what is but palliative in the adult; hence a cure is usually effected by tapping antiseptically and applying to the skin some such lotion as vinegar and spirits of wine, of each a pint with a drachm of the chloride of ammonium.

Professor Lister next showed a woman, with a painless, fluctuating, mammary tumor, probably sero-cystic, and said that the cure of such cysts by incision with drainage, though ultimately successful, was very tedious; that chloride of zinc injection was more rapid but less certain in its action, whilst a treatment combining the two was infallible. "The tumor is soft, easily movable under the skin, therefore not likely to be malignant; it appeared rather suddenly three weeks before Christmas, and its subsequent increase has been insignificant. It conveys a distinct sense of fluctuation and elasticity, but it would be erroneous to consider these signs absolutely diagnostic of a benign growth, for many soft solid tumors, adenoid sarcomata, present similar characters, but, if serous matter escape when a puncture is made the disease is probably sero-cystic, whereas the escape of a jelly-like matter or blood favors the diagnosis of malignancy."

The tumor was then tapped with a trocar and canula; serous matter escaped; a probe was passed into the external opening, which was slightly enlarged, and a drainage tube was passed over the probe to the bottom of the wound. Antiseptic dressings were then applied, and the bandaging of an antiseptic breast dressing was demonstrated.

Professor Lister next discussed the case of a man with an ununited fracture about the middle of both bones of one fore-arm. The injury had originally been compound and comminuted, through the limb being caught in some weaving machinery. Another fracture sustained at the same time had united soundly. Some months previously the ends of the still ununited bones had been cut down upon and secured together with stout catgut by an efficient operator; the failure of this first operation was probably attributable to the use of catgut in place of wire, the former becoming dissolved or organized long before the purpose could be effected for which it had been applied in this particular case. Professor Lister said when a bone is broken across exudation takes place, followed by the formation of embryonic tissue, in which the bone is laid down. This naturally suggests the question, Why should embryonic tissue lead to the formation of bone in one case, and in another to the formation of new skin, as in a cutaneous ulcer?

In a common open sore, granulation tissue forms and leads to the production of blood-vessels and nerves in the centre with a formation of skin at the edges. There are two modern theories: (1.) That the formation of all kinds of new tissue is due to wandering amoeboid cells, undergoing change after their passage from the blood-vessels, in one case becoming the nuclei of blood-vessels and in another epithelial tissue. (2.) That these products are due to proliferation of already existing structures.

Professor Klebs has experimented on sores in a frog's foot, and proved that epithelium cells are capable of wandering about, and possess amoeboid movement. This is comparable with pleurisy from cancer, when there is first mammary scirrhus, which invades the whole gland; next the patient is attacked with pleurisy, and an autopsy reveals a tubercle of cancer in the subpleural tissue. There the cancer cells must have migrated from the infected mamma, through the thoracic wall, into the pleura, without apparently affecting the intervening structures.

After the production of the embryonic tissue, perfect rest of the parts is absolutely necessary for the formation of bone, as, if movement take place, softening instead of hardening goes on, and finally fibroid tissue appears, after which rest alone is powerless to induce the formation of fresh bone.

Professor Lister operated upon this ununited fracture on Friday, the 14th instant, when he practiced Esmarch's bloodless method, and explained the importance of using a flat rubber ligature for the *upper* extremity, where, from the scantiness of soft parts and exposed condition of main nerve trunks, paralysis was apt to result from the constriction of a cylindrical elastic cord, which was to be preferred in the case of the lower extremity, where an opposite condition of parts obtained. He cut down upon the fractured extremities of the bones, and working with a periosteum detacher, thoroughly denuded them, and removed from their immediate neighborhood a large comminuted fragment, which he had little doubt played no inconsiderable part in preventing union. He said there were three essentials to the osseous union of fractured bones: (1.) Absolute rest. (2.) Apposition of the fragments. (3.) The absence of any foreign body such as a comminuted portion might become, between the fractured extremities. He next fitted the ends of the bones to one another by removing from each, with

the saw, sufficient to adapt them in length and surface. The operation was completed by securing the fragments of each bone together with a loop of stout silver wire passed through holes drilled for the purpose. No vessels required to be ligatured on the removal of Esmarch's bandage, and the wounds were not sewn up, lest so doing should result in a confinement of the serum which must necessarily exude in such a case, and could not give trouble if allowed free vent; in a case treated antiseptically, Professor Lister mentioned that when he first filled a surgical chair his old teacher, the celebrated Syme, in a tone of condolence, regretted that there then remained so little more to be discovered in surgery; but how vast and important were the strides that the surgical art had since made, even as exemplified in the operation just completed. Professor Lister said, "Consider the steps of it, minus an anæsthetic, minus the bloodless method, minus the subperiosteal manipulation, and minus the security afforded by its thorough antiseptic conduct, all important facts culled since my student days!"

On Tuesday, the 11th inst., Professor Wood operated on two men for the radical cure of old irreducible inguinal hernia. In the first case the contents of the sac proved to be entirely omentum, so changed as to possess much the character of a fatty tumor. Professor Wood most carefully unfolded and dissected every portion of this omental mass, commenting, as he did so, upon the grave importance of not overlooking the possible presence of a small knuckle of intestine therein. He next secured the pedicle with stout carbonized catgut ligatures, which constricted the whole of it in sections before its amputation was accomplished. After removing this mass and a portion of the sac, he brought the sides of the canal together with stout silver wire sutures, disposed so as to invaginate some hernial sac and omental stump, and thus block up the canal. It was at least the twelfth time that he had performed such an operation with the removal of the sac and its omental contents, and had not then met with a death in consequence. He pointed out that for its safe performance the operation required an accurate anatomical knowledge of the whole neighborhood, complete arrest of all oozing before any parts were returned into the canal, and the avoidance of any portion of gut enveloped in omentum. He said, however, if in such a case a portion of gut were cut off the accident need be by no means fatal. With the injured gut so disposed that its contents could pass freely along the proper course, and a due vent afforded for any fecal escape from the intestinal wound, which might be stitched up with an ordinary glover's continuous suture, localized peritonitis might quickly isolate the mischief, and convert the case into a simple one of artificial anus. A condition which experience teaches is more easily cured than maintained. He alluded to the comparative immunity with which, under proper precautions, the parietal peritoneum could be manipulated, and attributed the old surgeons' dread respect for that membrane to a conservative servitude to the writings of Celsus, who quoted from a previous genius, stated that a wound of the fine membrane about the guts was fatal. Hence, Professor Wood emphasized the important practical point of differentiating between the visceral and parietal peritoneum.

Saturday, January 15, 1881, Professor Wood operated on a girl, aged eighteen, suffering from malignant disease of the humerus. The tumor, which had been

growing for six months, was so large that it was feared to have involved the scapula. The skin over the upper part of the tumor was glazed, thin, and looked as if implicated. Amputation at the shoulder joint was performed by short anterior and long posterior skin flaps. The tumor, though involving the supraspinatus, was removed without the scapula, and as the operator remarked, the patient's health was such as to preclude the more serious operation. The tumor proved to be a periosteal myelo-sarcoma. Professor Wood operated for the radical cure of an inguinal hernia, by the method which is described with his name in surgical works, and which he has himself practiced upwards of two hundred times without encountering a fatal case.

He treated a case of varicocele by passing a needle threaded with silver wire through the skin behind the veins, then bringing it round in front of them, and out at the point of entrance. The continuous tension of the loop, embracing the veins, was insured by adjusting the ends of the wire to a C-spring clamp, which was strapped *in situ*. In a child with extreme rachitic deformity of the tibia, he chiseled a wedge-shaped portion of bone out of the convexity of the tibia, and restored the limb to a normal position.

Professor Smith operated next. A case of necrosis of the head of the humerus, which had been treated by free incision and drainage, in the hope that exfoliation would complete a cure, was now submitted to excision. The head of the humerus contained a sequestrum of necrosed bone and a cloaca situated close to the cartilage; but both the scapular and humeral cartilages were unaffected.

A case of fistula in ano enabled the operator to demonstrate the tunnelings dependent thereon, which so frequently occur, and are overlooked. He slit up five such and plugged the wounds with lint.

Mr. Bell treated a varicocele by the compression of two elastic bands, which he passed before and behind the veins by means of a cannula, and after putting the bands on the stretch clamped them together with lead plugs at the entrance and exit wounds, so that the compressed veins should ultimately be ulcerated through.

LONDON, January 24, 1881.

Reports of Societies.

WINTER MEETING OF THE COUNCILORS OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE winter meeting of the councilors of our state society was called to order at eleven o'clock, February 2d. The president, DR. HENRY W. WILLIAMS, in the chair.

The first business in order was the customary reading of the records of the last meeting by the secretary.

The president then mentioned the names of the committee he had appointed to confer on the petition of the Norfolk District Society for a new act regulating the commitment of the insane to hospitals. His nominations were confirmed.

The decease of Drs. David P. Smith, late vice-president of the society, James C. Dorr of Medford, D. W. Burleigh, of Lynn, and Ebenezer Alden of Randolph, probably the oldest member, was next reported, with eulogistic remarks.

The president read the names of delegates to other state societies, and then appointed Drs. Edes and B. S.

Shaw as committee to audit the treasurer's account, Drs. Langmaid and Rotch to examine the library, and re-appointed Drs. Hosmer, Millet, and Presbrey as committee to examine the by-laws of district societies.

DR. CHARLES D. HOWANS, chairman, then read the report of the committee on finance, recommending that the dues of four delinquent Fellows who are able to pay, but decline to do so, be collected by legal process. The recommendation was accepted. Cases in which remittance of dues was suggested because of age and poverty were referred to committee on membership and resignations.

The report of the committee on membership, DR. J. AYER, recommended that certain Fellows be allowed to retire. Accepted. Also that one Fellow be dropped for non-payment of dues for five years.

DR. F. I. KNIGHT, of Boston, asked upon what principle the council sues one man and drops another.

DR. AYER replied that this may be explained by means of the five-year law, which allows the society to drop a man in certain cases the circumstances of which requires this course in preference to another.

DR. FRANCIS, of Worcester, asked for a reply to the frequent and heretofore unanswered question: When a man is dropped does he cease to become a member?

DR. MINOT explained by saying that when a man is dropped the society rids itself of a scallawag, who disappears below the surface and never reappears. In the case under consideration the man's refusal to pay his dues and his indifference requires legal proceedings.

DR. BOWDITCH asserted that the council has no right to expel a man. This is a duty of the committee on membership.

DR. MINOT replied that a dropped man is not expelled; his name is simply omitted from the catalogue.

The president then said that delinquent members may be dropped by a law of some years' standing.

DR. AYER then read this by-law, which is as follows:—

(SECT. 7.) "Any Fellow who has not paid an assessment to the society for five consecutive years, and who, after due notification of his delinquency, neglects, or declines, without sufficient excuse, to pay his dues, may, on report of the committee on membership and resignations, be dropped from the roll of Fellows by a vote of the councilors."

DR. LYMAN asked why a delinquent should not be sued.

DR. DRAPER, referring to the case under discussion, said the man was bankrupt in morals as well as in purse. To sue him would be useless. To drop him is an easy manner of relieving the society of an unworthy member.

DR. CUSHING (Norfolk District), chairman of the committee on the petition of the Norfolk Society for an act relative to treatment of the insane by the public authorities prior to their commitment to asylums, now read their report, which was embodied in—

"An Act with regard to the commitment of insane persons to hospitals for the insane.

"SECT. 1. The superintendent of any public, private, or corporate hospital for the insane may receive for custody and detain therein for any period not exceeding three days, and without any order of judge or justice, any person as insane whose case is duly certified to be one of emergency by two physicians qualified by law to sign certificates of insanity in this common-

wealth; and at the end of three days, or earlier if need be, any insane person so detained shall be discharged, unless committed according to law by the proper judge or justice.

"SECT. 2. It shall be lawful for the superintendent of any insane asylum to entertain and keep in such asylum, as a boarder and patient, any person who is desirous of submitting himself to treatment, but where his mental condition is not such as to render it legal to grant a certificate of insanity in his case: provided, always, that such boarder shall make written application for such treatment, and that he shall not be detained for more than three days after having given notice of his intention or desire to leave such asylum, unless a certificate of insanity, signed by two qualified physicians, and an order from a judge or justice have been obtained.

"SECT. 3. One of the physicians signing a certificate may be an officer (medical) in connection with an insane asylum, provided the person certified to be insane is sent to an asylum with which such physician is in no way connected.

"SECT. 4. All acts and parts of acts inconsistent herewith are hereby repealed."

The report concludes as follows:—

"Voted, That the bill as proposed be adopted, and that it be referred to the councilors as the recommendation of the committee."

"Voted, That in regard to the alleged too easy commitment of patients to insane asylums, and the too easy discharge therefrom of insane criminals and paupers, the committee have no recommendation to make."

DR. CHARLES F. FOLSOM, secretary, stated that the 31st day of January would be the limit of the time set for the introduction of new matter before the legislature, and that, therefore, at his request, Senator Crocker had proposed an amendment to the law regarding the commitment of the insane to hospitals, which will give the councilors opportunity to be heard.

DR. MILLET, vice-president, mentioned insane paupers who were not properly protected. One was that of a young woman temporarily deranged who was sent to the Danvers Asylum, but who from motives of economy was taken away by the authorities of her town and sent to an almshouse. Another case now in an almshouse is refused admittance to the asylum by the overseers of the poor. He thought such cases of equal importance with those mentioned in the bill, and that they should be included before it goes to the legislature.

DR. FOLSOM admitted that there was a certain amount of justice in the criticism, but the cases are those which can hardly be touched by the council. Our asylums are filling rapidly. These pauper cases could be better managed elsewhere by friends who would undoubtedly be able to pay \$1.50 per week for their board in the almshouse. Board in the asylums costs \$3.50, and they are too full to take these harmless cases which can be cared for just as well in an almshouse as in an asylum. In regard to cases removed from the asylum: this is always done with extreme care. If anything the mistake consists in discharging too few rather than too many. There are so many cases that the difficulty of decision in some is great. In the very case quoted by Dr. Millet it seems to have been better to send her to the almshouse where she was cared for properly.

DR. MILLET thought the case so unjustly treated

that he took the woman to his own house. An overseer had applied for her discharge from the asylum, and it was done forthwith. If treatment in the asylums is not humbug, discharge should be decided judicially and not hastily.

The president mentioned cases which were turned from the doors of the asylum and consigned to a lock-up because no legal commitment had been made. One patient on the approach of officers cut his throat, and others in acute mania were made worse by this form of management.

DR. LYMAN hoped Dr. Millet's suggestion would be added to the report. But it was then moved that the report be adopted in its present form, and the motion was carried without opposition.

DR. MILLET moved that the same committee be requested to bring the matter to the notice of the legislature.

On motion of DR. BEACH, of Boston, Dr. Millet's proposition was amended by the addition of the president to the committee.

The motion was then confirmed.

SECRETARY GOSS read a communication from a physician of Rockport in relation to legal steps taken to secure his dues. This Fellow thought the demand of the treasurer emphatically unjust in principle, because he had never been notified of meetings nor called upon for annual fees until notice had been given the treasurer by another member, and then came a demand for fees for the two years during which he was practically unrecognized.

DR. DRAFER, the treasurer, on being asked for information, moved that the communication be laid on the table and the petitioner be given leave to withdraw. He had exaggerated his position. Having become a Fellow many years ago he went West, and there is no record of his ever having withdrawn from the society. He can therefore be held for \$118. Disappearing for years, he reappeared in 1875 and asked for readmission. The treasurer had a letter from him acknowledging reception of the notice of his readmission. As to the annual notices the treasurer knew nothing, but they do not affect the man's duty. If members were to complain of lack of attention, non-reception of society notices, etc., the committees would have a busy time. No Fellow seemed to know anything of the petitioner, not even members of the society of his district.

DR. C. D. HOMANS remarked that there is no rule which obliges the society to send notices before dues are paid.

(It might have been added that even life insurance companies send notices that premiums are due only as a courtesy, and do not hold themselves liable in case such notices are not sent to policy-holders.)

SECRETARY GOSS did not know the petitioner had any reason for complaint. His name may have been overlooked, but he doubted it.

By vote the petitioner was given leave to withdraw.

The secretary then read a communication from the censors of the Suffolk District Society and of the society at large calling attention to the need of greater uniformity in the examination of candidates. Since the division of the society inquiry discovers that some boards of censors exact almost no examination from candidates. The communication therefore asked for action in the matter.

DR. SHATTUCK thought this a very important subject. He did not believe that with seventeen boards of censors there can be uniformity. A candidate will be rejected by one board and passed by another. He thought that to have so many boards of censors was a great mistake.

By a vote of the council the matter was referred to a committee of five nominated by the chair, namely, Drs. Hosmer, Paddock, Nickerson, Dudley, and Bradford.

Names of gentlemen proposed for honorary membership were then read, and referred to the committee on membership.

The treasurer announced that in his will the late Dr. John Clough, of Woburn, left the sum of \$100 "to be expended for three of the best papers on the treatment of disease by moral management *versus* medicine or drugs." The amount is to be awarded in sums of \$50, \$30, and \$20 respectively, Drs. Bigelow, Ellis, and Harlow to be the committee of award.

Accepted by vote, and the secretary requested to announce the subject for competition.

DR. S. L. ABBOT on behalf of Dr. H. I. Bowditch read a motion proposing that women shall be admitted to examination as candidates on equal terms with men.

DR. BOWDITCH referred to the history of the movement and the reconsideration of the vote of the council, and thought as a matter of pride the Fellows of the council ought to know their own minds too well to adopt the suggestions of the censors of one district society.

The president then gave full details of the movement, and closed by reminding the council that the censors offered their protest simply because they found they were incurring the danger of a heavy fine in case they examined women under the present condition of the by-laws, and therefore asked a reconsideration of the vote which admitted women to examination. The council saw the justice of this, and voted to reconsider their vote. The question then remains as it did at first.

DR. PINEO, of Hyannis reminded the council that the annual meeting of 1880 adjourned to a definite hour of the afternoon preceding the next annual meeting for the discussion of this question.

The president admitted the adjournment, but stated that Dr. Bronson, the mover, though he mentioned this question, did not in his motion include the subject for discussion at the proposed meeting.

DR. SHATTUCK expressed the opinion that the question is a pernicious matter, and that the minority is a large one. He thought that to bring up such a subject at our centennial meeting would only disturb the peacefulness of the occasion. He read a letter from a former Fellow who voted women into the Chicago Medical Society. The result was no further protest from the minority, but a quiet and gradual loss of interest on the part of influential men, who finally ceased to attend meetings, and the gentleman himself heartily regretted his vote.

DR. BOWDITCH did not know that the society met for the mere purpose of harmony. He had no especial wish to admit women, but when a woman of ability with whom he had consulted for thirty years comes and says, "I want recognition from the Massachusetts Medical Society," he knew not how to object. The Boston University turns out homœopathic women, the Harvard Medical School refuses to admit women, and

the university admits them only to the annex. The result will be hordes of half-educated medical women. The question ought to be considered for justice's sake.

DR. LYMAN moved that the matter be laid on the table, and said: We are in harmony. The society never stood higher and never worked more smoothly. Our next meeting will be centennial. At least one half the society feel strongly against the admission of women. If the members were to go into the New York society, presided over by a woman, and listen to discussions by the strongest men of that body, he would come home feeling glad that women were not in ours. Justice has two sides. We have a right to consult with women if they be properly educated, but let us not bring up the objectionable question of their admittance here.

In regard to consultation with women it was shown that the by-laws do not forbid it unless the women be imperfectly educated or are indulging in practices forbidden to the Fellows. No member would wilfully consult with uneducated females. If by error he did so, he would undoubtedly be willing to apologize to the society.

DR. LYMAN, being requested by Dr. Francis to withdraw his motion, in order to admit a remark, declined to do so.

The question was then called, and received a strong affirmative vote, thus tabling the subject.

DR. WELLINGTON offered a motion to this effect: *Voted*, That a plurality vote shall elect officers of district societies.

The president expressed the opinion that in this matter the council had no right to interfere with the branch societies.

DR. WELLINGTON said a discussion had arisen as to whether a majority or a plurality vote would elect, and hence his motion.

DR. SHATTUCK moved that the question be referred to the proper committee for consideration. *Voted* in the affirmative.

The president proposed to refer the subject to the committee on by-laws, if agreeable to the council. *Affirmed* by vote.

The meeting then adjourned.

ANNUAL MEETING OF THE NEW YORK STATE MEDICAL SOCIETY.

THE Medical Society of the State of New York met in Agricultural Hall at Albany, on Tuesday, February 1st, with the president, Dr. W. H. Bailey, of Albany, in the chair. Among the papers read on the first day of the session were the following: *Neuro-Retinitis*, by Dr. David Webster, of New York; *The Significance of Facial Hairy Growth among Insane Women*, by Dr. A. McLean Hamilton, of New York; *A Contribution to the Pathology of Orbital Tumors involving the Bones of the Orbit*, by Dr. C. S. Bull, of New York; *Nasal Stenosis*, by Dr. J. O. Roe, of Rochester; *The Transplantation of Large Pieces of Skin without Pedicle*, by Dr. Arthur Matthewson, of Brooklyn; *Medical Induction Coils (with exhibition of instruments)*, by Dr. L. E. Felton, of Potsdam; *On Dressing the Umbilical Cord*, by Dr. Daniel Lewis, of New York; *Perichondritis Auriculæ*, by Dr. T. R. Pooley, of New York; and *The Surgical Treatment of Epithelioma of the Cervix Uteri*, by Dr. W. W. Potter, of

Batavia. The reports of the treasurer and librarian, and of the Merritt H. Cash prize essay fund were also read, and Dr. O. D. Pomeroy, of New York, exhibited a new aural and throat mirror and a modification of the ear syringe.

The committee on legislation made its report; a considerable portion of it being devoted to the question brought up by a resolution recommended to the consideration of the State Society by the Broome County Society, which urged the regulation of the dispensing of medical charities, and suggested that a committee of the State Society should ask the legislature to require all institutions receiving state or municipal aid to restrict the admission of patients or the dispensing of medicines or treatment to those only whose pecuniary circumstances instantly demand assistance. The committee, while it believed that the proposed legislation would prove of great service in controlling the evils connected with the present system in the rural and sparsely settled portions of the State, did not believe that it would be of equal benefit in the larger cities, and were not, therefore, disposed to favor the passage of the general act, as proposed. In the evening, Dr. William Hailes, Jr., of the Albany Medical College, delivered a lecture before the society entitled: *A Plea for More Practical Work in the Laboratories of our Medical Colleges*, which was illustrated by means of the stereopticon.

The following papers were presented on the second day: *Litholapaxy, with entire Removal of Fragments at same Sitting by Bigelow's Aspirator*, by Dr. N. L. Snow, of Albany; *Thoughts on Sanitation*, by Dr. Harvey Jewett; *Cicatrical Contraction of the Thumb, Fingers, and Palm of the Hand, resulting from a Burn*, by Dr. Alfred C. Post, of New York; *Hysterical Vomiting in Pregnancy*, by Dr. J. C. Warren, of New York; *Medicinal Eruptions*, by Dr. H. G. Piffard, of New York; *The Administering of Nitrite of Amyl*, by Dr. H. G. Piffard; *Inter-Parietal Hernia*, by Dr. George F. Shady, of New York; *Exostosis of the Frontal Sinuses*, by Dr. H. Knapp, of New York; *Vesical Calculi, with Operations*, by Dr. A. Vandervoort, of Albany; *Double Talipes Equino-Varus*, by Dr. A. M. Phelps, of Chateaugay; and *Early Diagnosis of some Organic Diseases of the Nervous System*, by Dr. E. C. Seguin, of New York.

Dr. A. Jacobi, of New York, vice-president of the society, read a report on the care of children, which was referred to a committee with instructions to confer with the Society for the Prevention of Cruelty to Children, in regard to certain points embodied in the report. Dr. J. C. Dalton, from the committee on experimental medicine, presented a report in which reference was made to the steps taken by Mr. Bergh to procure the passage of an act prohibiting vivisection, and it was voted that the secretary should transmit to the committee on public health of the legislature the objections of the society to its passage. A motion by Dr. Post that in the sense of the society the bill should not be made a law was unanimously adopted by a rising vote. Dr. E. V. Stoddard, from the committee on hygiene, reported that after consultation with the State Board of Health it had been decided to make diphtheria the special subject of consideration, and made a statement of the work that had been done in this direction. Dr. Elisha Harris, secretary of the State Board of Health, expressed the hope that the committee on hygiene would persevere in its inquiries in regard to diphtheria.

and other contagious diseases. During the month of January, he said, fifty towns had reported the prevalence of diphtheria and forty-eight the unusual prevalence of scarlatina.

The committee on the president's address in its report recommended that three of the suggestions of the president (Dr. H. D. Didama, of Syracuse, president last year) should be adopted. As to the first, that the profession should coöperate with the State Board of Health, the committee recommended the adoption of a resolution that county medical societies be requested to instruct their committees on hygiene and public health to place themselves in communication with the State Board of Health. The second suggestion was in reference to certain proposed changes in the examinations or the degree of Doctor of Medicine in this State, and the committee recommended that the committee on legislation should be instructed to take the necessary measures to secure the amendment of the existing law in order that these might be carried out. The third suggestion was that such changes should be made in the code of ethics as would enable it better to conform to the present wants of the profession, and the committee recommended the appointment of a special committee of five to report upon the subject in 1882.

In the evening the annual address of the president was delivered in the assembly chamber at the Capitol. It was of a general character, and among the topics touched upon were: the importance of preliminary training before entering upon the study of medicine; the advantages of a thorough drill in the fundamental principles of the latter; the duty of the physician to instruct the community in sanitary science and prudence; the social and moral relations of the medical man; the functions and objects of medical societies, and the value of the latter to the community at large. After the president's address the annual banquet came off at the Delavan House, at which the usual toasts were responded to.

On the third day several biographical sketches of deceased members were read by titles, and Dr. James Chapin, of Medina, presented a paper on A Case of Cystic Degeneration of the Chorion. Clark Bell, Esq., of the New York Medico-Legal Society, then read, by invitation, an elaborate paper on Reforms in Regard to Coroners' Offices, which treated of the many abuses which exist under the present system of making autopsies and in the selection of coroners in New York city and elsewhere throughout the State. The paper was discussed at some length, and, on motion of Dr. Squibb, of Brooklyn, it was referred to the publication committee, with a recommendation that it be published, and also to the committee on legislation, with instructions to confer with the representatives of the Medico-Legal Society in reference to the matters contained in it. The president announced the following committee on Revision of the Code of Ethics, as ordered by the society in accordance with the suggestion of the annual address of last year: Drs. William G. Wey, C. R. Agnew, W. S. Aley, H. G. Piffard, and S. O. Vanderpool. The following papers were then read: A Device for Retaining Dislocations of the Clavicle at its Distal End, by Dr. C. L. Stiles, of Oswego; and The Benign Aspect of Syphilis, by Dr. George H. Fox; after which Dr. Lewis Bulch, of Albany, read a review of the second trial of Jesse Billings, Jr., for the murder of his wife, in the course of which he explained the tests made of the effects of

gun-shot injuries of the human skull, and exhibited a number of skulls which had been experimented upon, as well as that of the murdered woman.

A resolution was adopted urging the various county societies to endeavor to secure the coöperation of the other incorporated and district medical societies throughout the State in the enforcement of the "Act to regulate the licensing of physicians and surgeons," passed May 29, 1880, and also one to the effect that in the opinion of the society it was desirable for the legislature thoroughly to amend and revise the laws of the State in regard to the office and duties of coroner, and recommending for their consideration the recent statute adopted by the State of Massachusetts.

The last business before adjournment was the annual election, the following being the principal officers elected: president, Dr. A. Jacobi, New York; vice-president, Dr. William Govan, Stony Point; secretary, Dr. William M. Smith, Maulius; treasurer, Dr. Charles H. Porter, Albany. Dr. S. G. Wolcott, of Utica, was elected delegate to the Massachusetts State Medical Society.

Recent Literature.

Diagnosis and Treatment of Ear Diseases. By ALBERT H. BUCK, M. D., Aural Surgeon to New York Eye and Ear Infirmary; Instructor in Otology in the College of Physicians and Surgeons of New York. New York: Wm. Wood & Co. 8vo, pp. 411.

This constitutes one volume of Wood's Library of Standard Medical Authors, and its aim, as stated in the preface, is "to present, in text-book form, a picture of diseases of the ear as they have appeared to the author in hospital and private practice."

It begins with a sketch of the physiology of the organ of hearing, which gives in a clear and concise form the points important for understanding the pathology of the organ; this is well illustrated, and sufficiently thorough for the purpose intended. Next follows a chapter on the examination of patients, giving the tests for the hearing, and the instruments for and methods of examining; no exception can be taken to the advice here given, which is excellent, although we cannot help feeling it might have been a little more concise.

After this we have the diseases divided as follows: diseases of the auricle, of the external auditory canal, methods of examining the middle ear, diseases of the middle ear (non-purulent forms), of the middle ear (purulent forms), fractures of the temporal bone, diseases of the mastoid, miscellaneous conditions of the drum-membrane, ossicles, and tympanum, aural disease in which the labyrinth is believed to be involved.

All of these subjects are treated in the most interesting and, generally, in the most thorough manner, and some of them, where the disease either from its many varieties or from its seriousness seemed to demand it, are copiously illustrated by cases. This insertion of cases seems to us, in a few places, carried to excess, and to diminish rather than add to the pleasure of reading the book, but in others, as, for instance, in mastoid disease, they are indispensable for rendering the subject clear, and they, at least in this place, do this in a way that would be impossible by simple descriptive text.

For impacted cerumen we are rather surprised to see such strong ground taken in favor of the use of instruments rather than the syringe, and in ordinary hands cannot regard the instruments as so safe as the stream of water. To be sure there is a possibility of conditions behind the obstructing mass which contraindicate syringing, as the author states; but, aside from ignorance of the accurate anatomy in those who are not dealing with the organ daily, there is always the possibility of abnormal curvatures and exostoses which are extremely sensitive. We still believe that preparatory softening and then syringing will better meet the majority of cases than any other method.

The connection of inflammations of the vaso-pharynx with ear disease is well discussed, and the rules for applications to the vaso-pharynx are clear, simple, and good.

The description of acute purulent inflammation of the tympanum is excellent, and the treatment advised judicious and thorough. Chronic otorrhœas are admirably portrayed, and careful attention given to the innumerable varieties which are seen in practice; in this subject, however, we notice one, and the only important, omission in the whole book; more specific directions should have been given in regard to looking after the relapses which are so apt to occur in any case where the drum-membrane has been destroyed; such relapses, if treated immediately—and the patient can generally be told what to do for himself—are readily relieved, but if not so treated are apt to degenerate into a chronic condition, requiring long-continued attention on the part of the surgeon. Every such case should, in our opinion, be warned of this possibility, and instructed accordingly.

In regard to syphilitic ear disease, Buck, while not asserting positively his belief in its existence, inclines to think that there is such a specific trouble. He gives three interesting cases as illustrations, the chief characteristic of which was a melting away of the drum-membrane; but inasmuch as we have seen the same thing occur several times in cases of phthisis and in scrofulous children, we are inclined to think that it may occur in any wasting disease, and that at least that form is not specific.

The relation of life insurance companies to chronic otorrhœas is referred to in a note on page 236, where it is advised that, if the discharge is thin, odorless, unattended by pain in the ear or head, or by pressure anywhere about the ear, the applicant be taken; but if the discharge is abundant, offensive, occasionally bloody, or attended by occasional pain in the ear or side of the head, the risk should be regarded as extra hazardous.

For all inflamed mucous membranes, Buck is a strong believer in the use of nitrate of silver; four hundred and eighty grams to the ounce to the tympanic mucous membrane is, however, unsafe.

We are glad to see the introduction of the term "desquamative inflammation" used in reference to collections of epithelium in the tympanum, but its use could be further extended, as the same thing occurs in the deeper meatus, and Wendt, who first introduced it, considers it due to an inflammation of a thin membrane covering the bone.

In speaking of the artificial drum-membrane no mention is made of Yearsley's cotton, which we believe is the most useful of any of the forms, when any can be used.

The most thoroughly original part of the book is that upon fractures of the temporal bone, which should form the basis for further investigations.

On page 359 we find the term emissary mastoid veins applied to the veins and foramina leading from the mastoid cells, which is entirely incorrect, as the term has a strict anatomical meaning,¹ and can only be used for the large connection between the lateral sinus and the superficial tissues on the side of the neck, and the same mistake is made in another place in speaking of phlebitis of this vein, and a misquotation of another author is consequently made.

The whole book is eminently practical, the treatment advised is judicious and efficient, with the two exceptions we have pointed out; it is almost entirely a record of individual experience, but contains many original practical points in diagnosis and treatment. We can most heartily commend it.

John Hunter and his Pupils. By S. D. Gross, M. D., LL.D., D. C. L. Oxon., LL. D. Cantab. Philadelphia: Presley Blakiston. 1881. 8vo. pp. 166.

The JOURNAL has already shown its appreciation of this tribute to the "founder of scientific surgery" by the imperfect abstract of advance sheets to which the courtesy of the publishers has allowed it to treat its readers. The book itself does not disappoint the high anticipations raised by the foretaste.

It is refreshing to read the story of a life so fully devoted to science, and the reader will readily appreciate Professor Gross's enthusiasm for his subject, which led him to extend what was originally intended for an essay to its present size.

One cannot help feeling that Hunter, like Milton, must have been an exceedingly disagreeable man to live with; at the same time he had the faculty of inspiring singular affection on the part of certain pupils; something of the same charm hangs about the record of his life, and one forgives his ill-temper, his bad manners, and his coarse expressions, as did Abernethy and Cooper and Pylsiek, in admiration for his devotion to science and his love for truth.

A noticeable feature of the essay is the fact that it presents Hunter surrounded by the other medical men of his day. The reader not only sees Hunter as an individual, but acquires a knowledge of the state of medicine and of the medical men of the time, while the sketches of his pupils show the continuation of his influence upon scientific medicine years after his death, in America as well as in England.

Possibly some of Hunter's letters might have been given with advantage; part of the Jenner correspondence would have shown the devoted scientist and the affectionate friend, and illustrated his singular lack of education; still we must confess the letters would have added little, since they contain little of value, and are scarcely more than a catalogue of Hunter's wants joined with expressions of regard.

The phototype of Sharp's well-known engraving of Sir Joshua Reynolds's portrait is an excellent reproduction, and forms a fitting and handsome frontispiece.

The volume will prove an ornament to the study table, where it will be a constant incentive to whatever is best and noblest in a noble profession.

¹ Vide Henle, page 357.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 17, 1881.

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TRAVERS VERSUS BOARDMAN: AN ACTION OF TORT, AND WHAT IT TEACHES.

AN action for damages was tried last week before the superior court of this county, wherein the defendant was a well-known and reputable physician of Boston. The medical elements involved in the suit are so peculiar that we believe a summary of the case will be instructive to our readers. The material facts brought to light at the trial were as follows: In the autumn of 1878, a woman, the plaintiff in this case, applied at the Boston City Hospital for treatment for some uterine disease; she was referred to Dr. W. E. Boardman, the regular physician on duty in the department for such patients. In the course of the treatment, which extended through more than two months, Dr. Boardman, in the presence and with the assistance of Dr. Wyman, the medical externe, performed on one occasion the simple operation of puncturing the cervix for local depletion, the knife being used, of course, with a vaginal speculum in position. This was the only operation to which the patient was ever subjected at Dr. Boardman's hands. The case was dismissed as convalescent before Christmas; and at that time the woman testified her appreciation of the services rendered by urging Dr. Boardman to accept some tokens of her regard. The next that was heard of the case was about three weeks later, when the patient re-appeared, charging Dr. Boardman with malpractice, and insisting that he should "do something for her." This was a premonitory symptom of her present "complaint," which, as presented by her, under oath, in court, before a crowd of men, is in effect as follows: She alleges that at her fourth and last visit to the hospital, Dr. Boardman, with Dr. Wyman's assistance, placed her in position on a table, and then, without her permission, and, as she believes, for experimental purposes only, amputated her clitoris and with it excised a piece of the mucous membrane of her vulva "as large as her hand;" that she bled freely after this operation; that she knows the parts removed to have been as she describes, for she saw them in a basin where the doctors placed them; that as soon as the operation was finished she arose from the table and went home; that in consequence of that operation she has been in mental and physical misery most of the time in the interval since; her menstruation has stopped; she has spasmodic pains; she has lost many pounds in weight; she is disabled for her ordinary work; she has distressing hallucinations; and she has been obliged to break an engage-

ment of marriage because, with the loss of her clitoris, she has found on trial that her sexual desire has departed; that she knows her clitoris is gone, for she has examined her person with the aid of a mirror. For this loss, and for its direct and indirect consequences, she claims damages from Dr. Boardman to the amount of \$3,000.00. Her allegations as to the mutilation of her vulva were supported at the trial by the testimony of one of her neighbors, a spinster, who examined the Travers' genitals soon after the alleged operation, and found "a piece of the clitoris gone"; also by the testimony of two men (who are unknown to fame or to the regular profession, but who, because they write "Dr." before their names are by that mark as good as the best in a court of law), one of whom swore that he was of the opinion that the clitoris had been amputated, for he had examined the woman more than a year after the alleged malpractice, and had observed a linear scar at the place where the clitoris ought to be. The cross-examination of these foreign gentlemen was extremely racy. The only other inspection to which, so far as the testimony showed, the woman had submitted herself was on one occasion when Dr. J. A. Lamson, a regular physician, examined her in company with another well-known practitioner; both agreed that they found no defect or loss of tissue whatever about the genitals, the spot indicated by the plaintiff as the scar of the operation being the meatus urinarius and readily admitting a female catheter. Such are the essential facts of this case.

Considerable medical expert testimony of excellent character was introduced for the defense; but we cannot dwell upon it. Dr. Boardman, while denying unequivocally that he had in any way operated upon the plaintiff's clitoris, admitted, with the experts, that, assuming the operation to have been done as stated by the woman, such an operation would be an unjustifiable mutilation, and rightly described as malpractice, an ingenuous indication of the complete trustworthiness of his defense. It was pointed out also by the experts that with the vaginal speculum (Higbee's pattern) in position, such an operation as was alleged by the woman to have been done at that time was impracticable, and that it would have been physically improbable that she could leave the operating-table and go home at once after so much mutilation; moreover, that the remote effects which she described, especially the suppression of the catamenia, were not such as would follow amputation of the clitoris.

We regret that we have not the space for an extended abstract of the honorable Judge Putnam's charge to the jury. It contained but few morsels of encouragement for the audacious plaintiff. He said distinctly that for the jury the question was one mainly of veracity; if the jury had any doubt of the woman's story, for upon her rested the burden of proof, then they must bring a verdict for the defendant. To assist the jury to understand the full bearings of the case, his honor stated very clearly the principles of law involved; that in a physician's dealings with his patient there is an implied contract, as distinguished from a written or expressed contract; that in discharging this

contract, a physician must possess a reasonable degree of that skill, learning, and experience ordinarily possessed by physicians living at the time; that in the exercise of this skill, learning, and experience, he needs to use ordinary care; and that as regards liability it makes no difference whether or not the service rendered was gratuitous.

The jury deliberated many hours on the simple question of veracity before them, and at length reported that they were unable to agree; it was stated on good authority that they were equally divided.

Now, this case suggests many reflections; we can mention two or three only of the comments that occur to us. In the first place, this trial illustrates the deplorable facility with which such actions may be brought, and the outrageous advantage which designing persons have in bedaubing honorable physicians with the slime of innuendo and suspicion. The nastiest strumpet in the town has it in her power thus to annoy the best and noblest man among us. In dispensary and hospital practice, as well as in the privacy of office work, the physician of highest skill and purest motives may fall afoul of one of these harpies, may unsuspectingly do the simplest operation for her relief, and a few months later may find himself in court, a defendant in a suit wherein he is accused of doing things which he never did or dreamed of doing, the doing of which, indeed, would stamp him as a fool or a knave. Until some right of supervision is exercised by judges so that such fraudulent suits are prevented from obtaining a place on the docket, or until the law requires that all costs, including the defendant's counsel fees, shall be paid by the plaintiff if he loses his cause, these miserable actions of tort will be springing up, smirching the reputations of honorable men and displaying their names in the daily press in such a manner as to mislead the public into a feeling akin to a belief that the accusation is more than half true.

Then what shall we say of the "trial by jury"? In this case six men believed the utterly improbable story of this female Thersites, who babbled her filthy yarn with indecent freedom and was able, by her vile allegations, to neutralize in their minds all that could be brought to contradict her or to show the inherent improbability of her nasty narrative. Such a phenomenon is not reassuring to honest suitors, and does not inspire reverence for this ancient method of administering justice.

Of the conduct and character of so-called professional men, whether lawyers or physicians, who lend themselves to promote the prosecution of such actions at law as the present, of their motives, their behavior in court, their expectation of reward, we forbear to make extended criticism; we have an opinion which if expressed might not be considered complimentary to those privy counsellors.

Finally, the present case is an illustration, for the thousandth time, of the need of a change in the methods of using medical experts. If, before the trial, any one of the able physicians there present had been agreed upon by both parties, or, in default of such agreement, had been appointed by the court, to present and inter-

pret the medical data of the case, including proper notes of the plaintiff's present physical and mental condition, the sneer of her counsel that "the doctors all hang together, of course they do; that's to be expected," would not have been heard; indeed the case would probably have been taken from the jury. When the choice and testimony of medical experts in civil and criminal suits rests by authority on some more substantial foundation than mere partisan expediency and availability, we shall not be obliged to read in the newspapers, between the lines of the court calendar, that the jury in a given case were unable to agree, because half of them considered a scheming woman and two irregular practitioners more trustworthy than six of the best-known among the regular physicians of Boston.

We hope that Dr. Boardman will insist on a new trial before another jury, for the matter ought not to rest in its present undecided state. He is sure of the sympathetic support of the administration and medical staff of the City Hospital; indeed, he may regard the entire profession as his allies, in a matter touching so intimately the common interest.

SMALL-POX AND REVACCINATION.

By an excusable oversight we were led to make an incorrect statement in our editorial on this subject in last week's JOURNAL. We there stated that vaccination as administered by our local boards of health, as a compulsory measure, was legally limited to the ages below the period of school attendance, and that revaccination was a purely voluntary means of prevention which grown-up persons might adopt or neglect as they saw fit. This is, however, not quite accurate. Our statement was based on section 27 of chapter 26 of the General Statutes of Massachusetts, and we overlooked the very next section, which indirectly gives the local boards of health the authority to compel the revaccination of all the inhabitants whenever, in their opinion, the public health requires it, excepting only such of the inhabitants as can prove to the satisfaction of these boards of health that they have been successfully vaccinated or revaccinated within five years.

The Boston Board of Health recognize fully the great advantages of revaccination as a powerful agency in the prevention of an epidemic of this dreaded disease; but they do not feel that as yet the public health has required any official action on their part looking to an enforcement of the authority vested in them by the general statutes. They rely on the medical profession to use every effort to secure the vaccination or revaccination of that portion of the population who are in need of it, and who are likely to apply to physicians for advice. This cooperation of the physicians with the sanitary authorities will be of the first importance. There will then only be left the unwilling and indigent for the exercise of the arbitrary powers for their protection invested in the Board of Health. These, we are assured, will be brought to bear in due time. The subject was discussed in the Board

of Health more than two months ago, but, for good reasons, action was deferred for a time. Meanwhile, there is no emergency; but should such arise, either in the city or at quarantine, the health authorities are amply equipped and ready for the prevention or suppression of any epidemic of small-pox which might arise. The Small-pox Hospital can within twenty-four hours receive and accommodate sixty patients. Every physician is obliged to report immediately the existence of any case, and the board are prepared to remove at once such a patient, and to take prompt measures to prevent any spread of the disease. There has been but one death from small-pox in Boston during the last three years, and there is at present no case either in the city or at quarantine.

Meanwhile, the Boston Board of Health looks to the medical profession to see to it that their patients are properly vaccinated or revaccinated whenever such steps seem for any reasons to be called for, and the community can rest assured that the board on its part is ready to take prompt measures for the public safety whenever occasion shall demand such.

AN ANTISEPTIC REPLY TO "DRESSER."

In the last issue of the JOURNAL there appeared some criticisms upon our editorial remarks of January 27th, on the spray in antiseptic surgery. These criticisms were over the signature "Dresser," a signature possibly indicative of the writer's past or present hospital experience, possibly of his manner of serving up the JOURNAL; however that may be they were certainly sufficiently solemn and serious. The writer laments our want of *chauvinism*—we apologize for going outside of Webster for our words—in the field of science, where he apparently considers this quality even more desirable than in politics or letters. He also regrets what he is pleased to term the superficial character of our remarks, having, it seems, prepared himself for the perusal of an exhaustive, if not final, treatise,—an indirect compliment to the average editorial of the JOURNAL, which is duly appreciated. "Dresser," who also seeks his words abroad, thinks, moreover, that if unable to stimulate faith the JOURNAL should at least be careful in its "*résumé* of facts." Although confessing that very little is as yet known as to the action of the spray, our critic may himself be fortunate or bigoted enough to have reached the highland of unquestioning belief in antiseptics in general and of the spray in particular, and be content to be there without knowing why; but some concession is due to those less well satisfied, doubting Thomases, to whom he refers, and who are still hesitating whether or not to carbolicize their fingers. Anything which will help honest beliefs or unbeliefs, or which contributes to the elucidation of disputed subjects, it is the duty of a journal to bring, as far as may be, to the attention of its readers, never forgetting that many of them are capable of reaching their own conclusions as to the value of these contributions. Dis-

cretion and authority should temper but not strangle enterprise.

The Louisville *Medical News*, referring to our mention of Von Brun's "Fort mit dem spray,"—which it renders "No more of this nebulous myth,"—stigmatizes us as believers in the theory and practice of Lister; Dresser, on the other hand, is disappointed that we do not "stimulate such faith." It is evident that neutral ground is unsafe where a question is concerned so vexed and so exciting as the value of antiseptic spray in surgical operations.

The articles of Von Bruns and Mikulicz are worthy of note as recent foreign contributions to a subject likely to be more and more actively discussed. They merely show the tendency of theory and practice in other medical centres. Mikulicz's experiments have, it is true, much the appearance of being made to order or to support a previously assumed position, but they deserve attention from the writer's propinquity to so distinguished a surgeon as Billroth.

If it can be satisfactorily *proved* that the spray or any other part or the whole of antiseptic surgery as practiced by Lister is unnecessary, so much the better; it should not, however, be done in a spirit of boyish and jubilant triumph over a man deserving so much of humanity and of the profession.

Dislocated hips were unquestionably reduced here and there by manipulation before Professor Bigelow's work on The Hip was issued, but the process was not popularized nor explained on a sound mechanical and anatomical basis. Before Lister there was *no* methodical antiseptic surgery as such. Let this fact be *always* and *forever* acknowledged.

Lister's present methods may be modified or superseded, but the impulse which he has given to antiseptic surgery, the hopeful aspiration after better results which he has created, will survive.

The excellent contributions of our home workers towards a true appreciation of the value of antiseptics were not quoted by us, these being well known to, and easily within the reach of, most of our readers. Those interested in this controversy over antiseptics who have not already acquainted themselves with these contributions, and we imagine the number must be very small, will do well to look up a paper,¹ by Dr. A. T. Cabot, giving a statement of experiments on the strength of antiseptics, as well as an article² by Dr. Stimson on the value of the carbolic spray as a preventive of putrefaction, and the reply³ to the same by Dr. Watson.

All three of these papers are worth study, and it was not so much with the object of stimulating either faith or skepticism as with the desire of inciting to more of just such work that we called our readers' attention to this subject. Any of our countrymen who may succeed in accurately determining the real value and exact results of antiseptic procedures in operative surgery will not fail of an appreciative recognition.

¹ Boston Medical and Surgical Journal, vol. ci., p. 755, 1879.

² American Journal Medical Sciences, January, 1880, p. 83.

³ American Journal Medical Sciences, October, 1880.

MEDICAL NOTES.

—The newly-elected president of the London Clinical Society, Mr. Lister, on taking the chair for the first time, will deliver an introductory address on the Catgut Ligature, and a discussion will probably follow.

—At Bedford, England, last week, no less than forty anti-vaccinators were brought up at the Borough Police Court, charged with neglecting to have their children vaccinated. The offense was in no instance denied, and the defense simply "conscientious objection." Most of the defendants had been previously convicted of a similar breach of the law. The bench, notwithstanding, only imposed a fine of six pence, remitting the costs entirely. A like amount was ordered to be paid by those whose children had not been vaccinated before they were three months old, while, in other cases, orders were made for the operation to be performed within three months.

—The table of suicides for the city of New York for the year 1880, prepared by Dr. Nagle, register of vital statistics, shows that the total number was 152, of whom 121 were males, and only 31 females; 74 were married, 34 single, and twelve widowed. Germans were in the majority, reaching 64. United States, 35; Ireland, 20; France, Poland, Scotland, and Italy, 3 each; England, 5; the balance, of other countries. The means of self-destruction employed were: shooting, 39; drowning, 14; hanging, 28; cutting, 20; leaps from heights, 9; gas, 2; poison, 40.

—The opposition to the confirmation of Dr. C. F. Folsom's nomination to the National Board of Health, which, as far as we can learn, originated with a member of the Massachusetts delegation to the national House of Representatives, will certainly not meet with the approval of the profession in the State of Massachusetts.

NEW YORK.

—Since the first of January slightly over one hundred cases of small-pox have been reported. The most of these have occurred among the Italians and negroes in the lower part of the city; but even Fifth and Madison Avenues have not been without a small proportion of cases. In the month of January the health officers vaccinated 6,471 persons free of charge, and from fifty to a hundred individuals now present themselves for vaccination each day at the Health Department. Many physicians in the city get their vaccine virus from the Vaccination Bureau, which also supplies all the public hospitals, dispensaries, and other charitable institutions, and is constantly in receipt of orders from all part of the country. The farm where the virus is obtained is one of thirty acres situated near Clifton, New Jersey, on the Erie railroad. The department is at present using from ten to twelve calves a week for the purpose. The reconstructed small-pox hospital on North Brothers' Island is now fitted up for the accommodation of about forty patients, and it is the desire of the Health Commissioners to relinquish the Riverside Hospital on Blackwell's Island entirely, if an

appropriation can be obtained to put up the requisite additional buildings in the former location, and to purchase a suitable boat for the transfer of patients.

A record of the city's mortality during the past year, arranged by streets, has just been completed in the Bureau of Vital Statistics, under the direction of Commissioner Janeway. The largest number of deaths in any one street occurred in First Avenue, namely, 681; of which 620 were in tenement-houses, and 392 among young children.

—The committee of the "Hospital Saturday and Sunday Association," appointed to make a distribution of the moneys collected during the last week of 1880, met in the Mayor's office on February 10th, when it was announced that the total amount collected was \$36,199.56, of which \$15,199.56 had been specially designated by the donors, while the remainder was to be appropriated to the general fund.

—At the stated meeting of the Academy of Medicine, held February 3d, Dr. William T. Lusk exhibited a specimens of uterine hydatids, with explanatory remarks, and the president, Dr. Fordyce Barker, delivered his second inaugural address, which was characterized by his usual elegance of diction. In the course of it he congratulated the academy on the substantial progress which it had recently made in its various departments, and spoke of the important relations and responsibilities which it bore to the profession and the community at large. Congratulatory remarks were also made by Dr. Beverley Cole, of San Francisco, and by Drs. Willard Parker, Austin Flint, S. S. Purple, James Anderson, and Frank Hamilton, of New York; after which the Fellows of the Academy and their guests repaired to the dining-room, where the "loving cup" was passed around and a collation was partaken of.

The annual meeting of the Committee on Books and Papers of the State Charities Aid Association was held the last week in January, and the large attendance on this occasion showed the public interest that is felt in the work of the committee, which was organized February 1, 1874, at the suggestion of Mrs. Alfred Pell. The annual report stated that during the year 1880 a daily average of four hundred papers had been collected from the boxes in railway-stations, ferry houses, and other public places, and these had been sent, as heretofore, to the large hospitals and other charitable institutions. Of course, many of the inmates did not read at all, but since an effort had been made to cultivate this taste it was learned from the chaplain of Blackwell's Island that whereas formerly only about fifteen books were taken out of the library then in the course of a week, the average was now one hundred a week. During the past seven years packages of reading-matter had been sent to one hundred and thirty-five different institutions. Mr. William E. Dodge, who presided at the meeting, made a few remarks, in which he stated that he thought the report of the committee was a model one, giving, as it did, a complete story of this quiet, beautiful charity. An ordinary man, he thought, could hardly understand the tedium of hospital life, and the committee had

done much to help those who had to endure this. Many of the patients in the hospitals, and especially those in the surgical wards, were well enough to read, and the papers and books which are furnished through this agency were of inestimable value to them. Addresses were also made by Messrs. Willett, Philip Schuyler, and others.

— At the last meeting of the Medico-Legal Society, February 2d, Dr. E. C. Harwood exhibited a section from the cervical vertebrae of a woman who had attempted to commit suicide by shooting herself in the mouth. The ball lodged in the bone, as was discovered after her death, six weeks later, and remained as evidence of the attempted suicide, which the woman had endeavored to conceal. The legal bearing of the case, he said, was in relation to its connection with the coroner's office, which had made no investigation of it, since the certificate of death did not indicate that an attempt at suicide had been made.

Miscellany.

REVACCINATION.

MR. EDITOR.— Hoping, as we all must, that the small-pox epidemic with which you threaten us may visit us lightly, I, for one, wish we might be spared one of the most disagreeable companions of an epidemic which, however, has already reached us. I refer to dogmatic statements concerning either prevention or cure, which rest on no more certain basis than the hobbies of their author. Forgive me if I allude to your editorial of February 10th.

Your tables of ages are interesting; and I quite agree with you that they show the necessity of vaccination and also of revaccination at from fifteen to twenty years of age; but where in the world do you find your authority for the statement that revaccination is a "measure universally recognized as necessary after intervals of eight or ten years from the most recent successful vaccination"? Now, of course, you did not mean to say that this was *universally* recognized. Hobby must have taken the bit between its teeth for a moment. Nothing is universally recognized about anything that I know of, least of all epidemic diseases, unless it can be that they are nasty things. But why do you think that it is recognized at all? What statistics have you in support of it? Because the effect of the first vaccination is greatly weakened during the years of rapid growth does it follow that a revaccination in adult life does not give a more permanent immunity? You seemed filled with holy horror at the ignorance and inertness of those who do not share your apprehension. It seems to me from your quotation from the *Lancet* that that excellent journal has also bestridden its hobby. How does it know that an effective revaccination is a better protection than small-pox itself? Certainly some have the disease more than once, certainly vaccination is not always a protection; but why so precise a statement? As I have said above, I admit the advisability of revaccination in early life, and I should advise it again to any one directly exposed or likely to be so; but let us remember that we have a large and increasing class of the idle and nervous who, for want of better employment, distress themselves about infection and contagion. They do harm to them-

selves and harm to others, and the fire of their hyperaesthesia is fed by dogmatism such as I have referred to. Now it seems to me that such positive statements should be made only on positive evidence.

DELTOID.

LETTER FROM WASHINGTON.

MR. EDITOR: As we do not like to be outdone by our English brethren, the medical profession here have recently issued a very lively second edition of the *Guys Hospital* experience, which is worthy of note. It is already known to the readers of your journal that a movement has been on foot for some time past to establish a general hospital without regard to age, sex, color, previous condition or sectarian influences. To do this Congress has to render assistance, and as we are nobody's constituents nobody cares to help us along, unless, in our capacities as doctors, we can bully sick Congressmen, or have the means to dine and wine them into complaisance for the sake of good fellowship. But, emboldened by the prospect, slim as it is, of the establishment of such a suitable hospital, some of our long-suffering brethren in attendance upon Providence Hospital, in this city, joined their efforts to the movement, and may have been a little indiscreet in their expression of opinion as to the condition of things now, and for a long time past, existing in said Providence Hospital. For this, and other reasons, the head of the institution, Sister Beatrice, a sister of charity, requested the resignation of those who were the most outspoken, which they were obliged to present, and their colleagues went with them without hesitation, but not without exception, as two of the staff still remain, and they both represent the older practitioners of the District, and have Catholic interests at stake; how far this may influence their action in the matter is of course not for me to say. Dr. Johnson Eliot, as one, in remaining continues to represent the interests of the medical department of Georgetown University, he being a clinical professor of that college. Dr. Eliot was chairman of an important committee to further the scheme for a new hospital, bring it before Congress, etc.

Our daily papers have for some time past been filled with statements, interviews, etc., from both parties, and the profession was curious to know who would fill the places of the deposed medical board. Of course there were medical men ready and willing for the asking, and some guessed quite correctly in advance a fair proportion of those appointed; which appointments were not made until there had been a full and free expression of opinion on both sides. The old staff represented very satisfactorily our two medical colleges and the general profession. The new staff contains but one college man (with the exception of Dr. Eliot holding over). Dr. Robert Reyburn, a lecturer in the medical department of Howard University, which institution was originally for the benefit of the colored race, but is now thrown open to all, male and female, white and black, with a fee of \$80 for all the expenses incurred in a three years' course. Dr. Reyburn was formerly in charge of the Freedman's Hospital, and a professor of the same college where he now is, was afterwards in the Georgetown University Medical Department as professor of surgery, then as professor of anatomy; on the reorganization, a few years ago, of

that college faculty, a complete change was made, and his professorship was vacated. Three of the new staff are also connected with the Columbia Hospital for women. They were appointed some time since to fill the places of a staff which had seen fit to resign in a body, on account of what they considered objectionable features in the hospital management; this occurrence has already been fully alluded to in previous pages of this journal.

Our first intimation of the trouble that was a-brewing came in the shape of a public appeal made to the President of the United States, and signed by James Rea and others, including several clergymen, dated December 28, 1880. It was to the effect that the existing contract between the sisters in charge of the hospital and the surgeon-general of the United States army, which was to provide for seventy-five beds for Government patients, at \$15,000 a year, should be annulled by thirty days' notice, and no new contract made with this or any other *sectarian* institution. It further states as reasons for such a request, that this contract was abused, and was in a certain sense a fraud, and then complained of abuses in the personal management of the hospital, in that the prescriptions were compounded by sisters of whose pharmaceutical attainments the physicians had no knowledge, and that sometimes the medicines as given were found to be very different from the medicines as ordered, and not suitable to the purpose. That no physicians or visitors were allowed in the house after 8 P. M., and they, the physicians, were not called in attendance through the night. In consequence of the harsh and inhuman enforcement of these rules fatal results sometimes followed.

This was a very severe arraignment, and, as subsequent events gave color to a suspicion that some of the medical men in attendance may have furnished material for such an appeal, Dr. Rea published a statement that none of the information which upon the appeal was based had been supplied by the doctors. It may be well, also, to state here that the physicians have always had access through the night to the patients in the hospital.

The appeal was very properly referred by the President to Surgeon-General Barnes, who furnished his reply almost immediately, first stating that the mode of admission of these patients, as far as his office was concerned, was conducted in a proper, business-like manner. Then he compliments the hospital as follows: "*The medical staff of the hospital is most excellent, including some of the leading members of the profession.*" "The institution was created by the religious order having charge of it, and will compare favorably with similar *sectarian* hospitals. Its rules are no more stringent, its medical attendance and nursing no less excellent, and its good results as great." "Frequently the number of free patients borne on the Government roll is in excess of the number appropriated for, and it is but just to the management of this institution to say that under all circumstances they have cheerfully exerted themselves to meet the necessities of the poor and suffering."

He points out that there are no other hospitals suitable for transient paupers, and that to annul the existing contract without some other provision would be to inflict much suffering, especially at this season.

The tone of this letter is as if written by one who was confident that so far as the workings of his office

was concerned, the contract with the hospital was perfectly correct and proper in its object and mode of execution. That so far as the hospital was concerned, having such confidence in the medical staff, which he expresses in strong terms, if there was fraud or mismanagement in that direction he would have received some decided intimation from them; and that not having this he feels warranted in his expressions of opinion. Notice that he compares it favorably with similar *sectarian* hospitals, as if in his mind there was a distinction, but that he does not wish to be biased by any sectarian prejudices *against* the hospital. It is but fair to presume that, taking everything into consideration, if that letter were to be written over again, its contents would be of a very different nature.

With the publication of this letter from Dr. Barnes is a statement from the sister in charge that the mode of admission is regular, vouchers all right, etc.; that religious views are not interfered with, and that the reason there is no resident physician is because of the telephonic communication. But the telephone has only been in use in the hospital for a few weeks, and this objection has held good for years. That the sister who compounds the medicines is a thoroughly competent pharmacist, and her ability is vouched for by those *competent* to examine into that question; and, finally, that the physicians have all the authority they may desire, and no interference with their directions regarding a patient is permitted.

Just here a serious mistake was committed by the staff giving their tacit agreement to this letter and statement, as, armed with the letter for a shield against further objections, the sister in charge demanded forthwith the resignations of some of the staff. Again, they made a mistake by yielding to the solicitations of the senior member of staff, putting the matter in his hands, and allowing a week to pass by in the hope of adjusting the difficulty, instead of coming out positively, with no compromise, and declaring the existing state of things. But it was of no avail; they had to go, and their fellows went with them.

In their resolutions, signed upon resigning, they state that the Congressional act of incorporation of the hospital confers no authority whatever upon the medical board, either in the general management of the hospital or in the treatment of the patients, and that the members of the medical board have found it impossible to enforce or obtain enforcement of their necessary regulations for the hospital or its sick. This was signed by Drs. King, Ford, Howard, Beale, Lincoln, Thompson, Charles E. Wagner, and Prentiss; subsequently, Drs. Loring, Richez, and Burnett resigned as consulting ophthalmologists and aurists; Dr. Trott as clinical clerk, and Dr. D. R. Wagner is reported to have resigned; but no public statement to that effect has appeared over his name, and his name stands second upon the list of the new staff, which is as follows: Drs. Tyler, D. R. Wagner, Newman, Bulkley, McKim, Roberts, Stanton, J. T. Young, Bayne, Eliot, and Reyburn.

It is not necessary, and it would only take up space, to attempt to give in detail the published opinions of the individual members of the medical board, save in one or two special points, as they all concur in adding force to the resolutions as adopted. Dr. J. Ford Thompson laid the blame mainly upon the sister in charge; that his experience with the hospital previous to her assuming control — and he has been with the

institution from its beginning — was that of a harmony which enabled all to work for the common object.

Dr. N. S. Lincoln stated that the sisters did not wish the medical board to have the privilege of choosing their associates; that it was necessary at one time, when a number of cases of erysipelas were in the wards, to threaten an investigation on the part of the health officer, so as to enforce the necessary precautions for preventing the spread of the disease; that certain hours were set apart, three times daily, for the administration of medicines, which were not to be deviated from; and cases suffered accordingly. He cited one case where a patient was left to suffer in agony, while the sister completed her prayers before giving an anodyne. That the sister who acts as the pharmacist can only put up the simplest kind of medicines, and that the sister in charge emphatically refused to allow respectable young graduates to remain in the hospital over night, while old debauchees have spent three months at a time there. He said the building was built by the United States Government from an appropriation by Congress of \$30,000. This sum might be materially increased in amount by taking into consideration other and subsequent appropriations.

Dr. A. F. A. King stated that there were no diet lists; that but few instruments were purchased, however inexpensive; that, notwithstanding the sisters had recently purchased real estate mounting up in cost into the thousands, there was no money for such purposes, — not even a microscope in the hospital, — and that it was customary for the sisters to give chloral hydrate, liquor, etc., to cases of delirium tremens, at their own discretion. He cited a case of delirium tremens where he had positively and repeatedly interdicted the use of liquor, and at two several visits found his patient under its influence. Remonstrance was of no avail; for the sister in attendance thought it best to give it, and a report to the sister in charge only resulted in her sustaining the sister in attendance. Dr. King further said there had been no post mortems held in the institution for three years past.

This would seem to be enough, if not too much, for a letter on local matters, were it not that the institution is dependent mainly upon the Government for its support, and that it is the money of the people of the United States which is contributing to it. Further, it is the only institution here which patients from other cities, accustomed to the benefits of proper hospitals, can make use of in case of accidents or prolonged sickness.

A full and thorough investigation, as ordered by Congress, ought to follow such statements as these, if any more money is to be appropriated by Government to this hospital.

A new phase has recently developed, which may give a political complexion to this state of affairs; but, if so, it will be undeserved. A few students attended the usual Sunday morning clinic, and found two colored students from Howard University in attendance; whereupon the majority of them left the hospital. This was entirely a personal matter. The medical board have made no distinctions of this sort. Howard University students, male, female, and colored, have been in attendance upon the clinics without any interference. The class lists of both colleges each year show a fair proportion of New England students, and this question of color has never crept into the colleges as yet. W. L.

February, 1881.

PROFESSOR GAIRDNER ON POINTSMEN'S WORK.

IN connection with our recent remarks upon defects of vision in railroad employees, we are led to call attention to the *Lancet's* notice of a case of passing insensibility in a pointsman on a Scotch railway, whose duties entailed serious and prolonged strain upon the nervous system, as showing that defects of vision form but one class of dangers to be guarded against.

Professor Gairdner, of Glasgow, moved by recent railway accidents due to faults of pointsmen, publishes a letter in a Glasgow contemporary, in which he details the case which he had treated in the Royal Infirmary in 1872. This patient was a pointsman at Rutherglen station, where from 250 to 300 trains were due every twenty-four hours, or about one train, on an average, every five minutes. Though the intervals at night were long, in the daytime they were such that, in the man's own words, "trains would pass for an hour together as close as they could follow." The work was divided into a day and a night shift, the latter being thirteen hours, the former eleven. The pay was £1 a week. There was no time for meals, which had to be taken while at work. The wonder would be how any man so situated could escape giddiness or some break-down in the nervous system. The fact that men do so, so often, is a wonderful testimony to the principles on which the nervous system is constructed. But, as it happened, this man came to suffer from a nervous complaint characterized by passing insensibility, of which the patient was sometimes quite unconscious. The man said that when his duty was most anxious the disorder was at the worst. Dr. Gairdner thinks the public are to be congratulated on that man having come under treatment. It seems highly probable that in this way an accident was averted. Since then Dr. Gairdner has taken pains to ascertain the rules of French lines, and finds them much more considerate of the limitations of human faculty. On the Scotch line the hours have been reduced to eight, but without special intervals for taking food. The patient got well after two or three months' hospital rest and treatment. Dr. Gairdner sets a good example in publishing this case. By itself it shows the need for more consideration of responsible railway servants. If any of our readers have similar cases in their clinical books they will do well to publish them. It must especially be remembered that in the worst attack in the hospital the patient had no memory of what had occurred.

A CURIOUS FACT IN ANIMAL REPRODUCTION.

WITH some comments of its own the following curious freak in parturition, extracted from the *Journal de Médecine Vétérinaire de Lyons*, is given by the *Lancet*.

A curious fact has recently occurred which throws some light on similar cases reported of the human species, but which have been received with considerable doubt by some authorities. Last April, on a farm in the department of Isère, a mare about ten years old gave birth, at full time, to a foal. Soon after the throes of parturition recommenced, and with assistance another foal was brought into the world. Twin foals are sufficiently rare to cause astonishment at any time, but the astonishment of the attendants was changed

into amazement when they discovered that it was not a horse foal they had taken from the mare, but an unmistakable mule. The little creature, unfortunately, and as is generally the case with twins in solipeds, did not long survive its birth. The veterinary surgeon who was subsequently called in made inquiry into the case, and as a result he gives the following explanation: It is a very common practice in Dauphiné to present the mare, when in œstrum, twice to the stallion, and at a brief interval, believing that fecundation is more certain by this procedure. But, as it seldom happens that the villagers can obtain the services of a stallion which can serve the mare twice with only a few minutes between, or yet a second stallion, and as male asses are by no means scarce, they oftentimes employ one of the latter to succeed the horse. And this is what happened with the mare alluded to.

The case is not absolutely unique, even in equine physiology, however, for Fleming, in his Text-book of Veterinary Obstetrics (p. 152), gives six similar instances, and one in which a mare, put first to an English stallion and soon after to a Barb, produced twin

foals—ono resembling the first, the other the second stallion. It may be noted that, of all the domestic animals, the mare is the least disposed to multiparity.

SUDDEN ILLNESS AMONGST THE POOR, AND MEDICAL ATTENDANCE.

THERE is a very comfortable doctrine abroad that doctors are at everybody's service in an emergency, and that they are bound to rise from their beds and go to a distant alley to save a life or ease a pain, without the least prospect of recompense. But why is such mercy to be shown only by doctors? Why does not the public share with doctors the cost and the credit of such service? It is society's duty, not that of any single profession, to see that no human creature, however poor, dies without medical aid. A country like this should make provision for the emergencies of its poor, and not throw the whole onus on the much enduring and little paid members of our profession. — *Lancet*.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 5, 1881.

Cities.	Population estimated.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,209,561	718	296	24.23	15.74	10.72	5.85	.14
Philadelphia.....	846,980	405	123	23.21	5.43	2.22	2.22	15.06
Brooklyn.....	566,689	247	91	25.51	18.62	15.38	4.45	.81
Chicago.....	503,298	—	93	—	—	—	—	—
St. Louis.....	—	136	46	8.09	16.91	2.21	.74	—
Baltimore.....	393,796	179	60	16.76	11.17	5.03	6.70	—
Boston.....	363,938	194	68	18.56	19.07	14.95	.52	—
Cincinnati.....	280,000	90	33	7.78	16.67	2.22	—	—
New Orleans.....	210,000	110	37	13.64	10.91	1.82	5.45	—
District of Columbia.....	180,000	92	34	13.04	14.13	4.35	—	—
Cleveland.....	160,000	—	—	—	—	—	—	—
Pittsburgh.....	156,649	78	32	30.77	12.82	10.26	10.26	—
Buffalo.....	155,159	51	13	29.41	15.69	21.57	3.90	—
Milwaukee.....	127,000	41	20	34.15	12.20	7.32	21.95	—
Providence.....	104,862	43	13	18.60	11.63	11.63	4.65	—
New Haven.....	63,000	22	5	9.09	18.18	4.55	—	—
Charleston.....	57,000	38	9	—	15.80	—	—	—
Nashville.....	43,543	20	7	5.00	5.00	—	—	—
Lowell.....	59,485	22	6	18.18	9.09	9.09	4.55	—
Worcester.....	58,295	29	8	27.59	17.24	6.90	3.45	—
Cambridge.....	52,740	22	10	18.18	13.64	13.64	—	—
Fall River.....	49,006	26	11	19.23	3.85	11.54	—	—
Lawrence.....	39,178	13	4	23.08	—	7.69	7.69	—
Lynn.....	38,284	17	8	5.88	23.53	—	5.88	—
Springfield.....	33,340	24	9	8.33	33.33	4.17	4.17	—
Salem.....	27,598	9	3	22.22	—	11.11	—	—
New Bedford.....	26,875	13	0	7.69	7.69	—	7.69	—
Somerville.....	24,985	—	—	—	—	—	—	—
Holyoke.....	21,851	6	2	16.67	16.67	—	—	—
Chelsea.....	21,785	9	1	—	—	—	—	—
Taunton.....	21,213	10	1	10.00	20.00	10.00	—	—
Gloucester.....	19,329	11	8	—	36.36	—	—	—
Haverhill.....	18,475	7	5	28.57	—	14.29	—	—
Newton.....	16,995	6	3	33.33	16.67	—	16.67	—
Newburyport.....	13,537	5	0	—	—	—	—	—
Fitchburg.....	12,405	4	—	—	—	—	—	—
Twenty-four Massachusetts towns.....	197,049	62	16	9.68	17.74	8.06	—	—

Deaths reported 2759; 982 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 548, consumption 441, lung diseases 383, diphtheria and croup 221, scarlet fever 110, small-pox 64, diarrheal diseases

37, typhoid fever 28, malarial fevers 21, erysipelas 20, cerebro-spinal meningitis 19, whooping-cough 17, measles 11. In addition, Chicago reports deaths under five years 93, from "zymotic" diseases 56, lung diseases 32, diphtheria and croup 28, consumption 25, scarlet fever seven, small-pox six, cerebro-spi-

nal meningitis five, malarial fevers four, erysipelas three, typhoid fever two, diarrheal diseases one; total deaths not given. From *diarrheal diseases*, New York 22, Brooklyn and District of Columbia four, Philadelphia and Boston two, New Orleans, Pittsburgh, and Buffalo one. From *typhoid fever*, Philadelphia nine, Worcester three, New York, Brooklyn, Baltimore, Cincinnati, Pittsburgh, and Fall River two, New Orleans, District of Columbia, Lowell, and Clinton one. From *malarial fevers*, New York six, Brooklyn four, New Orleans three, District of Columbia and Pittsburgh two, St. Louis, Boston, Buffalo, and Cambridge one. From *erysipelas*, New York nine, St. Louis, Baltimore, and Cincinnati two, Boston, District of Columbia, Providence, New Haven, and Worcester one. From *cerebro-spinal meningitis*, New York six, St. Louis three, New Orleans and Milwaukee two, Philadelphia, Baltimore, Worcester, Lawrence, Holyoke, and Haverhill one. From *whooping-cough*, New York and Baltimore four, Philadelphia three, Pittsburg two, Brooklyn, St. Louis, Cincinnati, and Salem one. From *measles*, New York five, Boston two, Brooklyn, Pittsburgh, Nashville, and Newton one.

Nine cases of small-pox were reported in Brooklyn; six in Chicago: one in St. Louis; diphtheria 38, scarlet fever eight, in Boston; small-pox five, in Pittsburgh; scarlet fever 36, diphtheria 10, in Milwaukee.

In 42 cities and towns of Massachusetts, with a population of 1,089,975 (population of the State 1,783,086), the total death-rate

for the week was 23.39, against 21.02 and 20.25 for the previous two weeks.

For the week ending January 15th, in 149 German cities and towns, with an estimated population of 7,706,995, the death-rate was 26.2. Deaths reported 3889; 1713 under five: pulmonary consumption 612, acute diseases of the respiratory organs 380, diphtheria and croup 190, scarlet fever 88, whooping-cough 64, typhoid fever 54, measles and röteln 44, puerperal fever 14, small-pox (Spandau, Königsberg, Munich, Nuremberg) 4, typhus fever (Berlin) two. The death-rates ranged from 17 in Darmstadt to 36.7 in Kiel; Königsberg 29.2; Breslau 28.7; Munich 33.6; Dresden 23.6; Berlin 24.8; Leipzig 23.4; Hamburg 26; Hanover 20.6; Bremen 25.3; Cologne 27.9; Frankfurt 22.8; Strasburg 24.7.

For the week ending January 22d, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 28.8. Deaths reported 4199: acute diseases of the respiratory organs 617, scarlet fever 103, whooping-cough 93, measles 72, small-pox (London) 22, diarrhoea 35, typhoid fever 32, diphtheria 13. The death-rates ranged from 19.5 in Portsmouth to 45.5 in Plymouth; Birmingham 23.6; Leeds and Bristol 24.3; Sheffield 24.8; London 28.4; Liverpool 35.6; Manchester 43.4. In Edinburgh 21.4; Glasgow 35.6; Dublin 45.7.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
Jan. 30	30.069	12	15	4	52	80	82	71	N.	W	W	5	4	4	O	Snow.	O	—	.10
" 31	30.176	15	21	9	82	54	62	66	NW	NW	NW	10	16	12	O	F	C	—	—
Feb. 1	30.081	10	16	5	54	46	78	59	NW	NW	NW	13	9	14	O	F	O	—	—
" 2	30.019	-1	9	-5	66	50	66	61	NW	NW	NW	20	23	27	C	C	C	—	—
" 3	29.971	11	19	-5	68	53	81	67	NW	NW	NW	17	20	15	C	C	F	—	—
" 4	30.115	17	27	5	80	50	66	65	NW	NW	NW	15	13	16	C	C	C	—	—
" 5	30.316	25	32	14	70	47	62	60	NW	NW	NW	15	10	11	O	C	F	—	—
Week.	30.107	22	32	-5				64										10.05	.10

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 5, 1881, TO FEBRUARY 11, 1881.

GRAND, J. B., captain and assistant surgeon. In obedience to S. O. 14, C. S., A. G. O., relieved from duty in Department of Texas. S. O. 20, Department of Texas, January 29, 1881.

REED, W., captain and assistant surgeon. To accompany Battery 1, Second Artillery, from Fort Ontario — abandoned — to Fort McHenry, Md., and then report by letter to these headquarters for further orders. S. O. 25, Department of the East, February 9, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting will be held on Monday evening, February 21st, at eight o'clock, in the hall, 19 Boylston Place. Reader, Dr. Cutler. Subject, A Case of Fibrinous Bronchitis.

A. T. CAROL, Secretary.

THE censors of the Suffolk District Medical Society will meet for the examination of candidates at 19 Boylston Place, Thursday, February 24th, at three o'clock.

BOOKS AND PAMPHLETS RECEIVED. — Report of the Medical Director of the Department of Texas relative to the Soldier's Bation and its Increase under certain Circumstances.

Anæmia in Infancy and Early Childhood. By A. Jacobi, M. D. (Reprint.)

Coulson on the Diseases of the Bladder and Prostate Gland. Sixth Edition. Revised by Walter J. Coulson, F. R. C. S. London: J. & A. Churchill. 1881.

Bulletins of the Public Health issued by the Supervising Surgeon-General under the National Quarantine Act of April April 29, 1878. (Reprint.)

Cases with Hydrophobic Symptoms. By James Collins, M. D., and Charles K. Mills, M. D. With Microscopical Reports by Carl Seiler, M. D. (Reprint.)

Clinical Lectures on the Physiological Pathology and Treatment of Syphilis, together with a Fasciculus of Class-Room Lessons covering the Initiatory Period. By Fessenden N. Otis, M. D. New York: G. P. Putnam's Sons. 1881.

On Certain Conditions of Nervous Derangement, Somnambulism, Hypnotism, etc. By William A. Hammond, M. D. New York: G. P. Putnam's Sons. 1881.

Extensive Scalding from Prolonged Exposure to Steam at High Temperature. By Norman N. Chapman, M. D. (Reprint.)

Sphygmograms; With Notes of Autopsies by M. R. Hopkins, M. D. Buffalo, N. Y. (Reprint.)

Myopia (common called Near-Sightedness) in its various Phases. By Julian J. Chisholm. (Reprint.)

Chronic Bright's Disease in Children caused by Malaria. By Samuel C. Buscy, M. D. (Reprint.)

On the Action of Carbolic Acid upon Ciliated Cells and White Cells. By T. Mitchell Prudden, M. D.

Hand-Book for Coroners: containing a Digest of all the Laws in the Thirty-Eight States of the Union, etc., etc. By John G. Lee, M. D. Philadelphia: Published by William Brotherhead. 1881.

Original Articles.

THE DIAGNOSIS OF LOCOMOTOR ATAXIA IN THE EARLY STAGES.¹

BY JAMES J. PUTNAM, M. D.

I AM well aware that in what I say to-night I shall bring forward nothing which is new to those members of the society who have had the time to follow, step by step, the recent developments in such special departments as these; and that, regarded as an exposition of the whole subject, the paper must necessarily leave unnoticed far more than it expresses, even of the discoveries which are of comparatively recent date. The practical importance of the subject must justify the attempt to present it in this imperfect form.

There is hardly a single organic disease of the central nervous system which has received the amount of study, within the past decade, that has been bestowed upon the affection which bears in England and America the name of its chief symptom, progressive locomotor ataxia, given to it by Duchenne in 1868, and in Germany the less compromising designation of wasting of the spinal cord, *tabes dorsalis*, an old and indefinite Hippocratic term, restricted by Romberg to this particular form of chronic spinal disease.

It is, perhaps, a little unfortunate that Duchenne, with his brilliant power of defining and formulating, thus riveted by a name the attention of the profession upon this symptom of motor incoördination; for the result has been that other symptoms, of no less real importance, have received a much less generous share of notice at the hands of the profession.

Among the rest, the *early signs* of the disease which is to occupy us to-night have not been adopted fully enough into the general conception of the affection, nor into the best books of general medicine.

It was formerly believed that there must be stamping with the heels and staggering with closed eyes, or no locomotor ataxia. Yet, as a fact, it may well be that ten or even twenty years before a sign or certainly anything more than an insignificant shadow, of this incoördination is to be made out, the disease, with its malevolent prognosis, is distinctly recognizable, and it is none too early to apply the appropriate treatment if it is to be of any avail.

The perfect insect and the larva are not, at once, nearer to and further from each other than the strutting, staggering ataxia, on whom every student makes a "snap diagnosis" in the street, and the man who comes to you for relief for a rheumatic trouble in his legs, which he has had for half a dozen years, and traces back to his grandfather's gout; or for incontinence of urine, which comes and goes; or for his failing eyesight, for which he accuses, perhaps, too much tobacco.

The difficulty of making a correct diagnosis is increased at this stage by two causes: first, because the symptoms bear a close resemblance, at times, to those of other diseases, — cerebral tumor, typical neuralgia, so-called idiopathic atrophy of the optic nerve, stone in the bladder, gastritis, organic disease of the rectum, rheumatism, even certain forms of mental insanity; and, secondly, because the patient, without intending it, does the best he can to throw the physician on to the wrong track. The theory which he has formed in

his own mind of the relationship between his various ailments is — though often positive enough, to be sure — quite different from that which the acute physicians of Europe learned to formulate only ten or a dozen years ago. So bent is his mind on the trouble which is at the moment uppermost that he may return an unhesitating negative to direct leading questions as to the existence of symptoms which a further cross-examination proves to have been harassing him off and on for five or six years back.

Especially true is this of the neuralgic pains, with which, in the vast majority of cases, the long and complicated drama opens. Unless these have been really severe, it will often be only after prolonged questioning that the patient admits a history of "rheumatism," as he always calls it, assuring you at the same time that it has been of no account; but ask him then to describe it, and, ten to one, he will do so in almost the identical, well-worn expressions of the classical treatises. The pains would come and go, he will say, with great rapidity, boring into the knee or the heel; or occupying a space on the fleshy parts of the thigh, in front, behind, at the sides, which could have been covered by the end of a finger; or grasping the leg as in a vice; then disappearing, to return again in a month or two, or before a storm, rarely, except in this latter respect alone, suggesting true rheumatism.

Before describing in greater detail the symptoms of the early stages of the disease, it may be well to sketch hastily the outlines of its pathology and clinical history.

The rule-of-thumb statement of the pathology of locomotor ataxia has long been that it consists in a sclerosis of the posterior white or fibrous columns of the spinal cord. This definition needs, however, circumscription. The morbid process is probably not, in the first place, a sclerosis, in the sense that the interstitial connective tissue is primarily or prominently affected, though it certainly is more or less involved, as are also the membranes over the posterior portion of the cord. Neither do the nerve fibres present to any great extent (Leyden) that histological appearance of increased density which has sometimes earned for them the name of being sclerosed. It is doubtful whether the term, atrophy (with Leyden), or inflammation (with Charcot), is the best to designate the change which the tissues undergo, but the important point, and one on which most observers are now agreed, is that the process is, at any rate, a primary affection of the nerve fibres themselves.

With regard to its distribution, although in later stages of the disease the whole area of the posterior columns is usually involved, this is true in the beginning only of restricted portions, which I have drawn upon the blackboard; those, namely, which are known as the internal radicular fasciculi, or, following the French terminology, the zones of the posterior nerve radicles, or the *bandelettes externes*. Disturbances of the other parts of the posterior columns may occur without causing either the ataxia of movement or the sensitive disturbances which are characteristic of locomotor ataxia.

It is to Charcot and his pupil Pierret that this discovery is due, and its importance will at once be seen when it is remembered that disease is thus performing a physiological experiment of the greatest nicety. We have three cardinal symptoms to explain, — pain, alterations of sensibility, and incoördination of movements; and all are due, if this observation is correct, to disease

¹ Read before the Boston Society for Medical Improvement, February 14, 1881.

in these little bandelettes of fibres. The two former are readily referable to irritation or destruction of fibres coming directly from the posterior nerve roots, which are known to enter largely into the composition of these fasciculi (whence, indeed, their name). When absolute loss of sensibility occurs it is usually inferred that the posterior cornua are involved likewise. The explanation of the ataxia is less easy, and need not be discussed here, but it is clear that accurate anatomical investigations such as these are likely to help largely towards its discovery.

Besides these portions of the posterior columns, it commonly, if not always, happens, as stated, that the posterior nerves themselves are affected; often the neighboring meninges; eventually, the entire area of the posterior columns; and occasionally the posterior gray cornua, the neighboring portion of the lateral white columns, and even localized spots in the anterior cornua, though very exceptionally. In this manner not only the spinal cord in its whole length is attacked, but parts placed still higher in the cerebro-spinal axis.

Temporary paralyses of almost all of the other cerebral nerves are common, deafness and loss of smell occasionally occur, but I am not aware that an anatomical explanation for these symptoms has actually been demonstrated, except in the case of the first, third, and fifth nerves.

The lesion of locomotor ataxia seems to stand, moreover, in a close relationship to that of the progressive paralysis of the insane, a disease which has an organic lesion of the brain as its basis, and this undoubtedly accounts for certain of the motor disturbances met with in that extraordinary disease.

It is less common for mental symptoms to appear as forerunners of a typical locomotor ataxia; the latter finally becoming the principal affection, but this too is met with, as I shall be able to illustrate.

Clinically, the history of a typical case of locomotor ataxia is usually regarded as divisible into three stages, which shade into one another by imperceptible gradations.

The first stage is that of the neuralgic pains, the optic atrophy, and the rest of the symptoms which interest us to-night.

The second stage is that of the ataxia, or rather of the fully developed affection, since the neuralgia continues into this stage also.

The third stage is that of prostration, amounting sometimes to utter helplessness, and, it may be, muscular paralysis and atrophy, and is marked by the occurrence of such signs as cystitis and bed-sores, under the influence of which the patient gradually succumbs.

The frequency with which this disease is met with is considerable. Thus, in the past five years we have had twenty-six well-marked cases in the out-patient department for diseases of the nervous system, out of a whole number of 2650, forming about one per cent. of all who applied for treatment.

The early symptoms which are especially deserving of notice are the following:—

- (1.) Neuralgia in the extremities and trunk.
- (2.) Visceral paroxysms, characterized by pain and the attendant symptoms of functional disturbance.
- (3.) Symptoms relating to the eye and other organs of special sense.
- (4.) Absence of the tendon reflexes.
- (5.) Mental disturbances.
- (6.) Alterations of sensibility of the skin.

(7.) Alterations of nutrition in the bones.

(8.) Cardiac disturbances.

Of all these early symptoms the neuralgic pains are the most common, and are likewise among those that appear the first. Out of one hundred cases observed by Erb and Buzzard they were absent but seven times. I have characterized them briefly already, and shall say but a few words more about them. They are distinguished both by the presence of their own features and by the absence of those which belong to pains of other origins, with certain well-recognized exceptions. As for the former mark, Charcot divides them into boring, lancinating, and constricting pains, and it is only the latter that are at all persistent, the former coming and going, either like a flash, or with a gradual rise and fall from zero to maximum and back. Their severity is at times such—especially when they are deeply seated, about the joints or in the heel—that I think they must equal the pain of the thumb-screw and the rack. Such similes as the “gnawing of rats,” “boring with a red-hot corkscrew,” which I quote from Dr. Buzzard, are very common. I remember well a private patient suffering for years from these pains, of such intensity that at every recurrence, though a man of great fortitude, the leg would be thrown convulsively in the air and the face contracted into grimaces of acute distress, the whole subsiding in a few seconds, and leaving no trace, except a worn expression of suffering. Their severity is by no means, however, their most characteristic feature. They may be present from the crown of the head to the sole of the foot, and each locality has its favorite modes of suffering.

Still it is in the legs that they are the most common, and if I were asked what, in the statements of my own patients, had most struck me with reference to them, I should say that it was the fact that they come and go, now here, now there, and are often felt in limited spots in the fleshy parts of the thighs, removed from any sizable nerve, which is so unusual in other forms of neuralgia. It is no doubt true that similar pains may occur in other spinal affections, especially Pott's disease and disseminated sclerosis. Still, if they only help to make us look for further differential signs, they will have served a good and usually a sufficient turn.

It is a common occurrence to hear patients speak of having had these pains for five or six years before any change of gait was observed, and this interval may even be extended to ten, fifteen, or twenty years; otherwise the disease may even be arrested at this stage, forming one of the so-called abortive forms, and yet at the autopsy the characteristic lesion be discovered.¹ One or two other points, less often insisted on, are worthy of consideration here.

It is very true, as Buzzard has pointed out, that, in face of the richness in symptoms which many of these patients are found to present, the moment the attempt is made to go into them in detail the more striking ones draw off the attention from others which, when they occur by themselves, may be of equal diagnostic value. This is true, for example, of the alterations in sensibility, which an accurate observer has discovered to be regularly present not only in the extremities, where they are usually sought for, but all over the trunk, front and back, as well.

In like manner, Buzzard finds neuralgia in the distribution of the fifth and the trigeminal nerve and the great occipital nerve to be commoner than one would

¹ Charcot, *Maladies du Système nerveux*, ii. 13. Pierret, Debove.

gather from the usual descriptions, and anæsthesia of the face is occasionally met with.

The occipital nerve is given off by the second cervical, and comes, therefore, within the limits of the spinal cord. The fifth nerve likewise, though its main origin is much higher, is known to send a root down as far as the junction of the spinal cord and the medulla, a patch of disease has actually been found in this very neighborhood.

How shall these neuralgias, which suggest so gloomy a prognosis, be distinguished from the benigner sorts, which are so very common in the regions referred to?

Buzzard lays down the following proposition, which it will be both convenient and important to remember: "Flying, so-called neuralgic pains in the head, then, when they attack both sides, and do not map out the district of one or other division of the fifth nerve, should lead to attentive examination for symptoms of tabes."

Another matter, of almost equal interest, is the differential diagnosis of locomotor ataxia and tumor of the brain. Both affections may cause intense pain in the head; and both are very apt to cause blindness, due to atrophy of the optic nerve.

Furthermore, Charcot points out that cerebral tumors are not unapt to cause flying pains in the extremities and all over the body, which might easily be mistaken for the lancinating pains of tabes. An important differential diagnostic mark — and it might happen to be the only one — is this: that, whereas the optic atrophy of tabes is, as we shall presently see, a simple atrophy, the atrophy from tumor is the result of neuritis, and usually bears the stamp of its origin in obscure disk outlines, tortuous veins, and increased connective tissue about the arteries. Charcot reports a case where, but for this, the diagnosis would have been well-nigh impossible, and Buzzard another illustration of the same point.

I say that these signs are usually sufficient to distinguish between these different varieties of atrophy. Often enough, however, as Buzzard admits, and oftener than Charcot's brilliant, but somewhat over-colored, description would suggest, the signs of neuritis clear entirely away after a time, so that the origin of the atrophy is no longer to be made out.

Equally characteristic are the visceral attacks or paroxysms, or *crises viscérales* of the French, the termination *algia* not sufficiently indicating the true nature of the seizure. When it is the stomach that is thus attacked there is atrocious abdominal pain, nausea, vomiting and retching, or sometimes vomiting without the pain, lasting for hours at a time, and off and on for days; yet, in spite of it all, the moment the attack is over the functions of the stomach are usually performed as well and regularly as if nothing had happened. One case of this kind has been in the outpatient department, one very well marked one in the wards, of the Massachusetts General Hospital, within the past year or two.

If it is the rectum about which the symptoms centre, there is usually intense tenesmus, with occasionally an involuntary discharge of feces, and the severe and sickening pain takes on a character which suggests the introduction of some huge, blunt instrument into the cavity of the organ.

If the vesical plexus of nerves is involved there is frequent and painful desire to pass water, and pain also during the act; and there is apt to be slow and imperfect

evacuation of urine, and also a sort of incontinence, which causes frequent dribbling, or probably, in reality, frequent sudden passages of small quantities of water rather than true dribbling. There is perhaps not a single one of the different species of bladder symptoms that may not occur in this connection. The pain may be referred in part to the end of the penis, and many of the symptoms may simulate strongly vesical calculus.

I recall one case that had been examined carefully, with this diagnosis in view; and another, in a woman, who had been treated — justly enough, for all I know — for uterine disease. In both, when I saw them, the signs of locomotor ataxia were unequivocal, though in the man, confined, if I remember rightly, to the presence of the typical eccentric pain in the legs and loss of the patella reflex. Hutchinson reports a case where the bladder symptoms on account of which the patient applied simulated exactly those of hypertrophy of the prostate. Or it may be the passage of a renal calculus which is thus mimicked, with all its attendant features, such as vomiting and elevation of the cremaster. (Raynaud, Dieulafoy, Lereboullet.)

This subject is justly reviewed by Dr. T. B. Curtis, in the Report on Urinary Surgery, published in the Boston Medical and Surgical Journal, for 1879 (vol. ii. p. 479), and its practical surgical importance pointed out.

The difficulties of this differential diagnosis are made no easier by the fact that not only toward the end of the disease, when purulent cystitis and sometimes pyelonephritis is said to be present, but also in the earlier stages, there is at times a vesical catarrh, due perhaps to the partial retention of the urine.

It is rarely, if ever, true, however, of the other viscera that they are the seat, under these circumstances, of organic disease, and this fact alone is usually enough to suggest the diagnosis. We have in both cases to deal with a renal or gastric colic, etc., but in locomotor ataxia the pain and functional symptoms are of central origin; in case of renal calculus or gastritis, they are of peripheral, that is, of reflex, origin.

Years may elapse, during which these symptoms, usually with others, such as the pains in the extremities, exist without any sign of motor disturbance. There are other symptoms associated with these which I have mentioned, many of which are given in the brilliant and classical descriptions of Charcot, in his *Maladies du système nerveux*. Among them is a quickening of the pulse, without fever, which throughout is apt to characterize locomotor ataxia, and counts as one of the signs of affection of the sympathetic system, to which the changes in the size of the pupil, to be referred to later, are in part due, and other symptoms as well.

Not only the abdominal, but the thoracic, viscera are liable to be similarly involved, the symptoms being those of asthma-like seizures, palpitation of the heart (certainly in connection with gastric attacks), or spasm of the larynx. (Krishaber.)

(To be continued.)

— Old gentleman (military man, guest of the squire's, conversing with smart-looking rustic): Wounded in the Crimea, were you? Badly? Rustic: The bullet hit me in the chest, here, surr, an' came out at me back! Old gentleman: The deuce! Come, come, Pat, that won't do! Why, it would have gone right through your heart, man! Rustic: Och, faix me heart was in me mouth at the thoine, surr!

THE CARE OF INSANE CRIMINALS.

BY WALTER CHANNING, M. D.¹

THE study of criminal insanity has been but little pursued in this country, and this fact accounts, in part, for the large number of insane persons who find their way to prisons and jails. It is far from being a recognized truth that crime is often a mere development of mental weakness, and hence we find judges very seldom considering the possibility of insanity in petty cases, and, as a consequence, unwittingly sentencing insane persons to prison. I doubt if we shall ever investigate the psychology of crime thoroughly until we have well-managed asylums for insane criminals; for it must still be many years before we can expect these physicians, who have the most to do with criminals, educated to the point where they will appreciate the intimate connection of crime with insanity. These words apply especially to prison-physicians, "whose chief study should be psychology," as was said by a distinguished Scotch prison-physician.

In a paper written for the conference of charities in 1879, I endeavored to show how the general class of insane criminals (which term I use both for those who committed crimes when sane and became insane after conviction, and those who were insane when the crime was committed) formed, in most ways, a distinct class of the insane by themselves. Every one will acknowledge that there is a criminal class, whose members are unfitted to associate with other members of the community, and if such persons are convicted of crime, sent to prison, and become insane, as a matter of principle no one would admit that they were any more fitted to be introduced into ordinary society. In practice, however, we do ignore this simple fitness of things, and are willing so have them sent into the same hospitals with the most pure and refined persons. As Dr. Bourdin recently said at a meeting of the British Medico-Psychological Society, "mental alienation does not suppress man as a moral and intellectual being. It disturbs and modifies him in various ways, without annihilating in him the fundamental faculties of his essentially human being. Under the cloak of insanity, one finds man with his own qualities, with his faults, his vices, and his virtues." Dr. Tuke, in commenting on these words, says, "that these observations find their best application in prisoners who have become insane, lunatic prisoners."

About the disposal of the second class of *innocent* insane criminals — if such a contradiction of terms will be excused — there must still be considerable doubt. Objection is often made to calling such persons insane criminals; but they have inflicted an injury to society which amounts to a crime, and though morally innocent, the term still applies to them. This class is largely composed of true criminals, the insanity seeming to break down the little self-control which had previously kept them from openly violating the law. Often their bad course of life led to the attack of insanity, — an assertion verified by experience. Belonging to this class there are also many weak minded persons, imbeciles, and epileptics. Mental defect comes to them as a bad heredity from dissolute or diseased parents, and generally belonging to the lower orders, they are still further unfitted to associate with

the ordinary insane. Throwing out these various subdivisions of the class under consideration, we have left a small residue of persons of upright and respectable character, who may be truly called victims to their disease. These persons are the ones to be really pitied, and their individual cases require prolonged consideration. In sending them to hospitals, reference should be made to their mental state alone. If harmless, and likely to continue so, there can be no reason for not sending them to an ordinary institution, the decision being left to the court, on proper expert testimony. Should the slightest doubt, however, still exist, these persons, in justice to the great body of the ordinary insane, should go to the criminal asylum.

In the Boston Medical and Surgical Journal of November 11th, there was an editorial referring to the defective arrangements at present existing for the care of insane criminals, more especially in Massachusetts and Vermont, and mention was made of a late message of the Governor of Vermont, in which the present method of treating this class at an ordinary institution was spoken of as a matter needing reformation. It might have been added that the same bad system prevailed throughout the whole United States, with the exception of New York. This bad system has been a theme of discussion on the part of asylum authorities for the past thirty years. For many years asylum superintendents, in their annual reports and at their annual meetings, have constantly written and spoken on the difficulties and dangers arising from treating the ordinary with the criminally insane. As long ago as 1873 the following resolution in reference to the Care of Insane Criminals was passed by the Association of Asylum Superintendents: "*Resolved*, That neither the cells of penitentiaries, nor the wards of ordinary hospitals for the insane, are proper places for the custody and treatment of this class of the insane." At the annual meeting of the British Medico-Psychological Society held in the same year, it was moved "that this association take steps to prevent criminal lunatics being sent to county asylums."

This resolution referred particularly to the convicted insane, for the reason that the unconvicted, or "lunatics detained at her majesty's pleasure," were already provided for at the Broadmoor Criminal Asylum, leaving, therefore, the mass of the convicted to be cared for at the county asylums. Matters have gone from bad to worse in England until, in 1879, there were over twelve hundred criminal lunatics in the county asylums.

To more fully demonstrate the evils of the treatment of insane criminals at ordinary hospitals for the insane, I desire to give extracts from an excellent letter of Dr. John W. Ward, superintendent of the New Jersey State Lunatic Asylum at Trenton, N. J., who for some time has had a large number of insane convicts under his charge, and hence is in an admirable position to pass judgment on their treatment. Dr. Ward thinks that the unconvicted can be treated with the ordinary insane; but from what I have already said it will be seen that my experience has been different. Dr. Ward's statements, in my opinion, apply very generally to the whole class of the criminal insane.

Dr. Ward writes as follows: "We at present (April 3, 1879) have thirty-four of this class (of the convicted insane) under care in this institution; and from actual experience, and not theory, I think I am justified in saying that the present system in vogue, of treating the convict class in an ordinary hospital for the insane,

¹ Read December 1, 1880, before the Boston Medico-Psychological Society.

² Vide an article by Dr. Hark Tuke in the Journal of Mental Science for July, 1879.

is most unjust and undesirable. Your first question, Are they (the convicted insane) more care than the ordinary insane? Decidedly, if treated in an ordinary hospital for the insane. The custodial care of this class, as you readily see, is a matter of much greater importance than the care of the ordinary insane. Many of these people are professional house-breakers and thieves, many of them murderers, persons most undesirable to have turned loose on society; and hence the necessity of making special provision for their detention. To do this, and introduce the fewest possible features of a state prison, we have the corridor set apart for this class double-locked, and with a double force of attendants. We have here three or four attendants, as the case may be, to two attendants on a corridor where there are no convicts. The superintendent of a hospital in this State is made amenable, should an escape occur of one of this class, to the same laws, and subject to the same penalties, as the keeper of the state prison. . . . Our hospitals are not constructed for their custody, and it is not desirable to introduce the ordinary features, even, of a prison into a hospital for the sick. They are more care, also, in their treatment apart from the mere custodial care. They are, as a rule, bad people prior to their insanity: the exceptions to this are very few. They are, according to our experience, greatly more quarrelsome, more filthy, and in every way more ungovernable, than the ordinary insane. The proportion of troublesome patients is infinitely greater among the convict class. This is not surprising. Insanity does not usually make saints of those who have led lives of vice."

It is needless to produce further testimony from hospital superintendents, as it would be of a similar tenor, and perhaps less clearly expressed. It is safe to say that the universal opinion is in favor of separate institutions for all of the *convicted*, and for a very large majority of the *unconvicted*, insane, and it is equally certain that such institutions cannot be carried on properly either in connection with asylums or prisons. If treated in a building connected with an ordinary hospital, the insane criminal may still exert a prejudicial influence on the inmates of the institution, and cannot receive the care and attention, and be given the liberty and freedom of action, that he is entitled to. He still belongs to an exceptional class, and will be treated in an exceptional manner. If treated in a special department of a prison he is even more unfortunate. He becomes doubly a prisoner, for he is watched, suspected of feigning, feared, and often maltreated. He will be kept locked in his cell, receive poor food, and may possibly be beyond recovery before his disease is recognized, and he is regarded as a sick man. Prison physicians being generally, as I have already said, men of limited education, they take a narrow, ignorant view of insanity, and leave its diagnosis to the prison-keeper, who is apt to regard every convict as a cunning sort of devil, who committed a crime largely for the purpose of getting into prison to impose on his credulity. Woe to the convict who is mildly insane! Then at the best he is only "playing it," and is subjected to just the harsh treatment that fans the flame of his disease. It has usually been my experience that convicts are not regarded as actually insane until they perform acts of violence which make them feared. The keeper, then, becoming suspicious, consults with the doctor, who agrees with the keeper that the man is dangerous, and he is shut in his cell, possibly hand-

cuffed in addition, and occasionally visited and watched through the grating of his door, like a dangerous animal. In New York the Asylum for Insane Criminals at Auburn is a *dernier resort*, and the convict, if sufficiently violent, may hope for transferral while his symptoms are acute and there is a chance for recovery. If, however, they take the form of depression, with delusions that are with difficulty drawn out, the chances are that his transferral will take place too late. It is not much to be wondered at that the convict can hope to receive so little individual attention, for in our prisons we usually find one physician to from five to fifteen hundred convicts, and then he gives only a part of his time to them. When we properly reform our prison systems of management, as a glance at some of them will show we are yet far from doing, we shall first appoint efficient medical men as prison physicians, then pay them well, and make them residents.¹ We shall then know just how many insane persons there are in our prisons, and obtain a scientific knowledge of prison diseases and criminal psychology. In all States but New York the insane convict has a gloomy and hopeless future, for if violently and dangerously insane he will be considered such a *mauvaise sujet* that he will be doubly locked in his cell and chained, and have no chance of transferral to an ordinary hospital on the score of *too dangerous*. If mildly insane the case will be nearly as bad, for he will then suffer from neglect, and, being harmless, the prison officials will say "We can keep him; he won't hurt any one."

For these reasons, then, it is obvious that we need hospitals separate from all other institutions for the exclusive use of criminals. Some persons, on superficial investigation, suppose that there are not enough insane criminals to warrant the erection of hospitals, but in 1879 I found eighty-four persons belonging to the criminal class in Massachusetts hospitals. This number could be largely added to if all the penal institutions in the State were carefully examined, and all persons whose mental condition could be improved by residence in a criminal hospital were removed to it. Different authorities would of course entertain different views on this subject, but, speaking from experience, there are many imbecile, weak-minded, or epileptic criminals, now harmless inmates of our penal institutions who would be benefited, and, in time, even made fairly useful members of society, if treated in such an institution as that at Auburn was two years ago. If our judges could send weak-minded or partially insane criminals to a criminal hospital the number of inmates would be increased, and our courts relieved of one source of anxiety. There would be a further class of dipsomaniacs who could also be advantageously placed together in one ward in such an institution. Not all dipsomaniacs, but a certain incorrigible set, who cannot be managed in an ordinary hospital for the insane, and are even more difficult to control when at large. A special law adapted to this class might then be necessary.

For large States, like Pennsylvania and Illinois, there should be hospitals large enough to accommodate two hundred patients, but in our smaller New England States so large a number could not be found in one State, and two or more States could therefore combine together and use one institution in common. Massachusetts, for instance, could provide a suitable

¹ I do not mean to say that there are no well-educated physicians connected with prisons; to this rule, as to others, there are of course exceptions.

building, of a capacity of from one hundred and fifty to two hundred patients, and receive boarders until the State required all the room. The New York institution formerly received United States insane convicts as boarders, but I think has now a sufficient number from her own State. Should a new institution be erected in Massachusetts, one wing could be at first finished and occupied, and then the remainder of the work done from year to year, chiefly by the patients, as occasion demanded.

As a site for a building, a good-sized farm, in rather an isolated part of the country, should be selected. The building should be absolutely fire-proof, and built generally in a more substantial manner than the ordinary hospital for the insane. There should be separate buildings for the sexes, and perhaps an isolated building for the working patients, and either a ward, as I have already said, or, perhaps, what would be better, a separate building, for the dipsomaniacs or insane drunkards. The building should be cut up into numerous small wards for not more than ten patients, and there should be no dormitories, as criminals abound in bad practices, which they can indulge freely in if placed together. One ward should be isolated from the rest, with rooms on one side only. These rooms should have every possible arrangement for preventing escapes, and "observation holes," through which patients could be watched. It happened with us at Auburn that there were, at various times, several feigners, and these "observation holes" were of great service in enabling us to detect imposture.

Into fuller details of construction it is at present unnecessary to go, especially as in this State the expediency of using some old building, which has outlived its usefulness, has been suggested.¹ The county receptacle at Ipswich, among others, has been mentioned as a fitting place. Combining, as it does, the jail and the insane receptacle, it might possibly be remodeled at a small expense. To start at the outset with the best plan of arrangement, it would be necessary to do away with everything suggestive of the prison; if this can be done at Ipswich, and the amount of land is sufficient, and a fair amount of seclusion attainable, it will undoubtedly be better to begin there than to wait indefinitely for a new building.

In a criminal asylum the discipline and general treatment of patients are of the first importance, — of even greater importance, I might say, than at an ordinary insane hospital. Coming, as most of the patients do, from some place of imprisonment, they are physically much reduced, and either timid and frightened, or rebellious, threatening, and suspicious of all officials. The main points of treatment will be, first, to make the patients bodily comfortable, and then to instill a spirit of confidence into them. To carry out the first point of treatment is not difficult, and the good results of thorough bathing, good food, and a soft, clean bed are really marvelous. At Auburn our patients could bathe as comfortably as in a private house, and having come from prisons, where, they said, they had never bathed, it was a revelation to them. One of our chief pleasures was to go into the wards, and visit new patients the morning after their arrival at the asylum. Instead of the gloomy, scowling, dirty convict of the previous night, we would often find a cheerful and hopeful, and always a clean patient.

The moral treatment of the insane criminal is far

more difficult than that of the ordinary insane, for in addition to the perversion of disease we have to fight against inherited depravity and acquired vice in every conceivable form. These bad traits crop out in the most unexpected places, and lead to complications unknown in the ordinary asylum. Consequently the criminal character requires extended study in order to discover the key which will enable us to make the best of what there is in it. Once having found the key and we shall find the criminal asylum almost as easy to manage as the ordinary insane hospital. Kindness, which is generally quite unknown to the ordinary convict, is highly appreciated, and will be one of the chief means used in dealing with his disease; but with this kindness there must be a discipline which, without being rigid, will be more firm than that which is necessary in the management of the ordinary hospital for the insane. To illustrate what I mean, I will briefly describe the management of the patients at the criminal asylum at Auburn. In the first place a uniform dress was worn, but of such an unobtrusive character as to be hardly noticeable. It consisted of a soldier's blue blouse, gray pantaloons, and vest, which made a very neat costume, cheaply and easily provided, and in case of an escape (a common occurrence at a criminal asylum) it served as a valuable means of identification. The convicted patients wore no beards, for being still convicts in the law, and on recovery before the end of sentence returnable to prison, it was best to make no change. No knives were used at table, as they would be used as weapons, made into saws for cutting bars, or stolen from the force of habit. With the rarest exceptions no patients went outside of the grounds, and with the exception of those who worked on the grounds none were allowed outside of the airing courts. On coming in from work patients were carefully searched, as they had a habit of smuggling in a great variety of articles. The rooms were devoid of all furniture with the exception of a bed, in the majority of cases, though from this rule we made numerous deviations. Patients rarely saw their friends alone, but usually in the presence of an attendant, or the supervisor. It should be said that we invariably deviated from these rules when the circumstances of the case allowed. We were anxious to give the patients every possible liberty, but felt our great responsibility to society in holding the worst and most dangerous classes of criminals.

The above rules applied especially to men, as out of the one hundred and twenty patients not more than twelve to fifteen were women. For these even more stringent rules were necessary, as they all belonged to the lowest of social orders, had usually led lives of immorality, and were subject to frequent outbreaks of violence.

The use of restraint under Dr. C. F. MacDonald, at Auburn, was gradually abolished, and in the year 1878 almost none was used.² Though Dr. Orange uses no restraint at Broadmoor in England, he has a less violent class to deal with than that found at Auburn; and Dr. MacDonald should certainly be congratulated on reducing restraint from about ten per cent. in 1876 to so little in 1878. He states that this arose partly from an accidental state of affairs, and though he prefers to use no restraint, yet another year he might have found it necessary. This favorable showing might have been partly accidental, but the true cause of such tranquillity among the patients arose from the conversion of the

¹ January 8th. See the governor's message of the 6th inst.

² One per cent.

asylum from a branch prison into a hospital, with its excellent moral and hygienic surroundings. Success like this should certainly encourage us to hope for the speedy establishment of a criminal insane hospital in our own State.

The Auburn asylum was built in 1859, and was placed under the charge of the New York State Prison Inspectors. This form of organization was most unfortunate, as it subjected the asylum to the baneful influence of politics. Furthermore, the inspectors were chiefly occupied with prison affairs and gave but little attention to the asylum, which they regarded as only a small branch of the neighboring immense prison. In 1876 the Board of Inspectors was abolished by constitutional amendment, and a superintendent of state prisons, supposed to be a non-partisan officer, was appointed by the governor. This officer has the same power as the old board of inspectors, but I should suppose had very little time to give to matters appertaining to the asylum. Such an institution should have an organization entirely independent of the state prison, and should be managed by a board of trustees, as is common in our ordinary insane hospitals. A board of five would be sufficiently large. Of these it would be well to have one or two appointed from the board of commissioners of prisons, and the rest should be men who had had experience in hospital supervision. With a mixed board of this kind an active interest and inquiry into prison affairs would be engendered, and at the same time there would be no danger of making the hospital into anything but an institution for the treatment of disease.

I give below several extracts from the laws of New York bearing on the subject of insane criminals, as being of interest and importance in the discussion of the question of suitable provision for this class.

First, the Commitment of the Insane by Criminal Process, article second, title first, chapter 446. Laws of 1874:—

"Section 22. If any person in confinement under indictment for the crime of arson or murder, or attempt at murder, shall appear to be insane, the county judge of the county where he is confined shall institute a careful investigation, call two or more respectable physicians and other credible witnesses, invite the district attorney to aid in the examination, and, if it be deemed necessary, call a jury, and for that purpose is fully empowered to compel the attendance of witnesses and jurors; and if it is satisfactorily proved that such person is insane, said judge may discharge such person from imprisonment, and order his safe custody and removal to one of the state lunatic asylums, or to the State Lunatic Asylum for Insane Criminals, at the discretion of such judge, where such person shall remain until restored to his right mind, and then if the said judge shall have so directed, the superintendent of said asylum shall inform the said judge and the district attorney of the county thereof, so that the person so confined may, within sixty days thereafter, be remanded to prison, and criminal proceedings be resumed, or otherwise discharged.

"Section 24. Any person who is now, or shall be hereafter, confined in any penitentiary, and who shall appear to be insane, may, on application of the superintendent thereof, be transferred to the State Lunatic Asylum for Insane Criminals at Auburn, under an order of any justice of the supreme court, or the county judge of the county in which such penitentiary is located, upon satisfactory evidence that such person is insane; and the judge shall thereupon order his removal forthwith to said asylum, where he shall remain until recovered, or otherwise discharged according to law.

"Section 25. The penitentiary from which such convict shall have been transferred shall be liable for the expenses of his care and maintenance during the time he shall remain in said asylum, provided that he is removed therefrom before the expiration of his sentence. If he shall continue insane after the expiration of the time for which he was sentenced, then the county from which he was sent to said penitentiary shall pay his expenses, as is hereinbefore provided in section twenty-two."

The following are extracts from the laws concerning admission and discharge of convict patients from the state prisons. Section 6 *et seq.*, title viii., chapter 594. Laws 1875:—

"Section 10.¹ Whenever the physicians of either of the state prisons of this State shall certify to the board of inspectors, or to the inspector in charge, that any convict therein is insane, it shall be the duty of such board or of such inspector in charge to make immediately a full examination into the condition of such convict, and if satisfied that he is insane the said board of inspectors, or the inspector in charge, shall order the agent or warden of the prison where such convict is confined forthwith to convey said convict to the State Asylum for Insane Criminals, and to deliver him to the superintendent thereof, who is hereby required to receive him into the said asylum, and retain him there until legally discharged.

"Section 12. In case the insanity of any convict shall continue after the expiration of his sentence, he shall be retained in said asylum until adjudged a fit subject to be discharged by the state commissioner in lunacy.

"Section 13. Whenever any convict, who shall have been confined in the said asylum as a lunatic, shall have become restored to reason, and the medical superintendent of said asylum shall so certify in writing, he shall be forthwith transferred to the Auburn State Prison, and the agent and warden of said prison shall receive said convict into the said prison, and shall in all respects treat such convict as if he had been originally sentenced to imprisonment in said prison, though said convict may have been conveyed to the said asylum from either of the other prisons of the State, but any convict received from a penitentiary shall be returned to the same."

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. LYMAN.

REPORTED BY DR. JOHNSON, HOUSE OFFICER.

CASE IV. VESICO-VAGINAL FISTULA.

MARY R., thirty-three years of age, entered hospital December 14, 1880, with following history: Was married in Scotland seventeen years ago, and in nine months had her first child, after a labor of three days terminated by the forceps. At the end of three weeks the urine began to dribble away involuntarily. She then entered the hospital at Greenock and remained eighteen months, during which time the fistula was twice operated upon without success, and she was discharged, as she says, incurable. Since that time she has been delivered at full term six times, and once, the last time, of a six months' fetus, making altogether eight pregnancies. During this long period she has suffered the usual distress and inconvenience incident to the constant dribbling of urine. In June last she was in the City Hospital for a short time with a pelvic effusion, originating in a fall, from which she soon recovered after removal by aspiration of sixteen ounces of fluid by Dr. Blake. Since that time she has undergone another operation in this city for the fistula, which also proved unsuccessful, and for some reason, which she does not explain, probably her own fault, the sutures were never removed. She now enters on account of headache, backache, and slight febrile symptoms, and desiring to have the sutures removed, as they naturally are not agreeable to her husband. Quite recently, two months after the last operation, she miscarried at six months. She declines any further inter-

¹ Section 10 is simplified at the present time. Under the inspection it was sometimes necessary to wait weeks for the signature of one of the board. Now the power of transfer is practically in the hands of the physician and warden.

ference, as the leakage "never ceased for a single day" after the previous operations.

December 16th. Upon examination, four deep wire sutures placed transversely near the cervix, presenting a *chevaux de frise* were found and removed. The fistula high up on the right anterior vaginal reflection from the cervix allowed a free flow of urine.

December 22d. Having finally determined to submit to one more attempt she was etherized and the edges freely denuded longitudinally. Resting upon the mucous membrane of the bladder, crossing the fistulous track, was a piece of wire suture five eighths of an inch in length, which had been left from the previous operation. Four sutures were now carefully introduced, lengthwise of the cervix, effectually closing the orifice.

December 29th. The sutures removed and catheter discontinued. She was directed to evacuate the bladder every four hours.

January 7th. Discharged well.

The case is interesting only from the fact that she had seven successive pregnancies, notwithstanding the foul secretions from the constant presence of urine in the vagina; from an operation at the fourth month without miscarriage; from the accidental presence of a foreign body preventing union, and from the birth of a six months' child without any disturbance of the unremoved sutures close to the cervix.

CASE V. EPITHELIOMA OF CERVIX UTERI.

M. B., aged twenty-five, entered hospital September 28, 1880, married,—one child two and a half years ago,—gives a history of pain, and irregular menstruation for past two years, and more or less metrorrhagia. Has had steady "heavy" pain for past three months. For a year has had a watery discharge from the vagina, and for past four months this has been offensive. Now suffers from dysuria and diarrhoea. Examination revealed a large mass of cauliflower excrescence attached to cervix, the greater portion of which was easily removed with the finger. This was followed by hamorrhage, and so much exhaustion as to require the application of solution of subsulphate of iron, and the removal of the rest was not attempted.

October 2d. Greatly relieved by the operation, the pain and discharge being much diminished.

October 5th. The operation was repeated and the surfaces were scraped with the curette.

October 6th. Expresses herself as feeling all well. Was ordered generous diet, hot carbolized douches, and morphia, with injections of chloral at night.

October 19th. Has offensive discharges, and has suffered a good deal from pain.

October 24th. Has less pain, though she suffers from dysuria, and on the 27th was discharged at her own request.

CASE VI. EPITHELIOMA OF CERVIX UTERI.

L. I. E., a stout, healthy looking woman, aged fifty-one and married, entered hospital as private patient November 13, 1880. Has had two children. A year ago she had a slight attack of flowing which lasted three days, in January had a second hamorrhage, flowing profusely for three days. Since that time has had but little pain, but a thin watery discharge has continued from the vagina. In May the discharge became offensive for a time, but has now been free from it for four months. The bowels are constipated

and defecation difficult. Is troubled most by pressure upon the bladder and difficult micturition. Examination revealed a mass of epithelioma, as large as a hen's egg, attached to anterior lip of cervix and pressing hard upon the bladder. This was removed with the *écraseur*, when it was found that the disease extended well up to the uterine cavity. The whole was carefully enucleated away with Simon's spoon, and the surfaces packed with pledgets of cotton soaked in solution of subsulphate of iron. The following day the temperature rose to 103.5° F. Quinine in five grain doses was given and the tampons removed.

Nov. 15th. Much relieved; no dysuria; to have hot carbolized douches.

Nov. 19th. Discharged at her own request entirely relieved of pain and dysuria, with directions as to frequent examinations for removal of new growths.

CASE VII. LACERATION OF CERVIX UTERI AND PERINEUM.

J. W., thirty-eight, married, entered hospital October 21, 1880. Had a miscarriage five months after marriage, and five living children since, the last, four years old, after an easy labor of six hours. Catamenia always irregular. Has lost much flesh and strength, has a cough, night-sweats, headache, and much leucorrhoea, with pain in back and bearing down. Nothing positive discovered in lungs on auscultation. Has been confined to bed for past month from debility. Upon examination the cervix was found to be lacerated bilaterally, with the mucous membrane swollen and everted, and the perineum torn down to the sphincter. Uncertain as to which labor caused these injuries. She was ordered tonics, generous diet, rest in bed, carbolized douches, and laxatives as required. A month of this treatment relieved the cough and debility, and December 10th the lacerated cervix was denuded and drawn together with six wire sutures. On the 17th four sutures were removed, and the next day the remaining two.

October 28th. Cervix found to be perfectly united. Patient much improved in every respect, and advised to delay interference with the perineum until after a period of recuperation outside the hospital.

CASE VIII. LACERATED CERVIX UTERI AND PERINEUM.

H. B., thirty-six years of age and married twelve years, entered hospital November 6, 1880, for the third time. She has suffered from retroversion, dysmenorrhoea, dysuria, and the usual symptoms of pelvic congestion for some years, from which she gets no relief by general measures, and desires a more radical treatment. She has had three miscarriages and six living children, the last now four years of age. Dates her troubles from this last labor, though it was not a severe one. Was last unwell three weeks ago.

November 8th. Upon examination there was found bilateral laceration of cervix, the cervical mucous membrane congested, relaxed, and everted. Uterus measured three inches. Perineum ruptured to the sphincter, with tendency to rectocele and cystocele.

November 22d. After a fortnight's preparatory treatment by hot douches, laxatives, etc., she was etherized, the cicatricial tissue thoroughly removed from both lips, and the surfaces drawn together by half a dozen wire sutures.

November 30th. Has had carbolized douches and an enema daily. One suture removed from each angle.

December 5d. Four remaining sutures removed.

December 8th. Union perfect. Was sent out for ten days, preparatory to repair of perineum.

December 18th. Reports that she was taken unwell the day after leaving hospital, and that the flowing and pain were much less than before the operation. Has less pain in back, but still some dysuria. After a few days of rest and douching, on the 22d, the perineum was cleared of cicatricial tissue and closed in the usual way with wire sutures.

December 29th. Sutures removed. Perineal body well restored, but some gaping of the integuments to be restored by granulation.

January 15th. Discharged well, and directed to return later for a pessary should the retroversion recur.

A CASE OF SEVERE LARYNGEAL SPASM IN AN INFANT.¹

BY F. GORDON MORRILL, M. D.

THAT pressure upon the recurrent laryngeal nerve may produce severe and even fatal laryngeal spasm is a fact which has been repeatedly verified by autopsies. This pressure is generally due either to the presence of a malignant growth or an aneurism, and is of course far more likely to occur in adults than in children. Writers on children's diseases refer to spasmodic affections of the larynx as occurring in one of two forms: laryngismus stridulus (thymic asthma), or that far commoner form of spasm which so frequently accompanies ordinary catarrhal laryngitis. Neither Bouchut, Meigs and Pepper, J. Lewis Smith, West, or Steiner (in his *Compendium of Children's Diseases*) make any mention of enlarged cervical glands as a factor in the production of laryngeal dyspnoea, except to doubt their having any connection with laryngismus stridulus — called also child crowing or thymic asthma. The following case bears directly upon this point, as it proves the direct connection of pressure by enlarged glands with spasm of the glottis in its severest form.

January 24, 1880. I was asked to see an infant of nine months, whose previous history is as follows: —

From birth (although of fairly healthy parentage to all appearances) she has suffered the train of evils usually attributed to scrofula, including ulcerations of the cornea, ozæna, aphthous stomatitis, and enlarged cervical glands; and in spite of healthful surroundings and assiduous care her existence had thus far proved a struggle which seemed likely at any time to end unfavorably. During the four days preceding the date of this visit her symptoms had been those of catarrhal laryngitis — certainly nothing more.

I found the child's attendants in a state of terror and confusion, which her condition certainly appeared to warrant. She lay in her mother's arms, with her head thrown back, livid, and seemingly moribund. The respiration at times ceased entirely, and then recommenced with convulsive gasps, ending in a deep breath, drawn evidently with the greatest difficulty. The symptoms were far more intense than anything I had ever seen. The pulse could not be felt, and as the intervals between the respirations grew longer and the breaths themselves shorter the situation became ex-

treinely unpleasant. On each side of the neck there were swellings composed of groups of enlarged glands, which had existed some days, but had given no evidence of fluctuation, and were still perfectly firm to the touch. Having no bistoury with me, I hastily made quite a deep incision in the more prominent swelling (that on the left side) with a pen-knife, but was disappointed in seeing nothing but blood, and that in considerable quantity, flow from the cut. After a little probing with a hair-pin, however, a discharge of pus ensued, which may have amounted to a teaspoonful, and was followed immediately by a marked change for the better in the child's symptoms, — the respiration at once becoming regular, and the patient going quietly to sleep after taking a little rum in milk. Two days later the same performance was repeated, and opening the swelling in the opposite side of the neck had an equally good effect. Since that time no enlarged glands have been discovered, and the child has had no respiratory trouble of any kind.

I think under the circumstances we are justified in regarding pressure by the enlarged glands upon the recurrent laryngeal nerve as the immediate cause of the spasm; and I see no reason why pressure of this kind should differ in its effects from that caused by malignant growths or aneurisms, both admitted factors in the production of fatal laryngeal dyspnoea. In an adult the same degree of spasm would have probably occasioned much less trouble, as the soft and fibrous texture of the infantile larynx renders atmospheric pressure an important factor in narrowing the opening of the glottis during inspiration, whenever spasm of the tensors is present to hinder the free entrance of air. The child's immediate recovery in both instances from symptoms which I feel sure would have speedily led to death proves (at least to my mind) that the case was one of spasmodic contraction of the tensors, from interference with the filaments of the recurrent nerve which supply these muscles, and not one of paralysis. If the latter had been present, atmospheric pressure would have speedily closed the glottis, and nothing short of tracheotomy would have afforded relief. In adults, on the other hand, the presence of paralysis (unless of both abductors only) would still have admitted of respiration being performed, owing to the cadaveric position assumed by the affected muscles, the wider aperture of the glottis, and its firmer texture offering the necessary resistance to atmospheric pressure. The only case I have been able to find record of in which enlarged cervical glands play an important part in causing laryngeal troubles is given in Morell Mackenzie's work (London, 1880). Here a case is related in which there was complete anesthesia of the interior of the larynx and paralysis of the thyro-epiglottic, ary-epiglottic, and crico-thyroid muscles, causing the epiglottis to maintain the erect position, and rendering the cords lax when adducted. Here the trouble was due to a mass of enlarged glands pressing upon the superior laryngeal nerve on one side, and pressure upon the corresponding nerve of the opposite side by a post-pharyngeal abscess besides enlarged glands. In a short time the abscess discharged, the glandular enlargement subsided, and all symptoms promptly vanished. The case which forms the subject of this paper, occurring in so young a child and being so plainly due to the pressure caused by enlarged glands, is unique, so far as I have been able to discover by tolerably careful reference to the literature of the subject.

¹ Read before the Boston Society for Medical Observation.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

FEBRUARY 14, 1881. DR. T. B. CURTIS in the chair.

DR. JAMES J. PUTNAM read a paper on the Diagnosis of Locomotor Ataxia in the Early Stages.¹

DR. WEBBER said he was very much interested in Dr. Putnam's excellent paper. He agreed with the author as to the necessity for the strict cross-questioning of patients when there is any suspicion of locomotor ataxia. The earlier symptoms are usually looked upon as unimportant by the patient, and, being more or less remittent, their value is not appreciated, also many times the patient's memory is at fault, so it is well to ask a question, then turn to other points in the history, and return again to the original question.

Dr. Putnam seemed to give rather more prominence to the pains about the head than Dr. Webber's experience would justify; these are very rare, quite exceptional. It needs, also, to be remembered that the various visceral pains, the crises, so called, are rare. They are, undoubtedly, of the same nature with the pains in the legs and elsewhere. Physicians do well to bear in mind that it is only by studying the combination of symptoms that a diagnosis can be made, often only by exclusion. No one symptom is pathognomonic; any may be wanting in a given case. In two cases seen by Dr. Webber the pains were wanting; one of these developed into well-marked ataxia, the other, after the appearance of the first symptoms referable to sensational anesthesia, advanced rapidly to ataxia. It is not unlikely the disease had existed in a latent form in the cord, giving rise to no suspicious symptoms during several years. The patient had been married many years, a dozen or more, and had indulged in coitus, as a rule, every night during that time. He had no pains; dying from other causes the cord was examined, and showed the characteristic changes of locomotor ataxia. In another case with optic atrophy and severe pains with other symptoms tendon reflex was not lost. This patient has done well under treatment, and the disease seems to be at a stand-still. It would be interesting to inquire in other cases whether retained tendon reflex can be looked upon as giving grounds for comparatively a favorable prognosis.

As to treatment, nitrate of silver has been of service in Dr. Webber's practice several times, the pain being diminished, and in some cases there being apparent improvement in the gait. Galvanization of the spine has also been of value. It is not easy, however, to judge of the value of remedies in a disease which so frequently has remissions.

DR. MINOT had been called to give an opinion in the case of a patient who had lately noticed a good deal of irritability of the bladder, followed by difficulty in walking in the dark or even in the twilight, so that he did not dare to go out of the house after sunset, for fear of stumbling. These symptoms had been noticed only a short time before the beginning of the disease for which advice was sought—a rapidly developed pulmonary consumption, which proved fatal shortly

afterwards. No doubt if the patient had lived the spinal disease would have developed itself afterwards. In another case, which was under observation for several years, there were deformities in both shoulders, elbows, and wrists, the joints being nearly dislocated. From time to time there would be an attack of pain in the part, followed by much swelling; this would partially subside, leaving the deformity a little worse than before.

DR. WADSWORTH said: Within the last year or two a number of cases have been reported in which the diagnosis of locomotor ataxia has been made from the symptoms of optic nerve atrophy and absence of patella tendon reflex alone, and in a recent paper Hughlings Jackson believed himself justified to make a positive diagnosis of locomotor ataxia from a paralysis of some of the ocular muscles supplied by the third nerve, and absence of the tendon reflex, the patient presenting no other symptom of the disease.

There is a possibility, however, that one may go too far in this direction. I say this not to depreciate the value of the absence of the tendon reflex as a symptom, on the contrary I regard it as an extremely valuable one, but in some cases, unless very great care and caution are exercised the reflex may seem to be absent when it is not. This is a mistake which I have made once myself, and which I have seen made by others. So, also, the proportion of cases of simple atrophy of the optic nerve in which evidences of locomotor ataxia developed later has been shown in the last ten years to be much greater than was formerly believed. In one of my patients, referred to by Dr. Putnam, I found optic nerve atrophy, in 1873, and symptoms of it had existed a year or two earlier, but it is only within about a year that other symptoms of locomotor ataxia have shown themselves. Gowers observed a case in which optic nerve atrophy preceded by twenty years the other symptoms.

I think Dr. Putnam is in error in stating that the idea of an atrophy of the optic nerve from the abuse of alcohol and tobacco is not generally received by ophthalmologists. There are many who do not go so far as Hutchinson in believing that the abuse of tobacco alone is the cause in so large a proportion of cases, but that abuse of tobacco or alcohol, or of both together, not very infrequently produces atrophy of the optic nerve is generally accepted. There are, however, some clinical differences between the course of this affection and that of progressive atrophy from tabes dorsalis. In the atrophy from abuse contraction of the field of vision does not, as a rule, occur so early, and there is generally a partial central scotoma, which may be detected only by central absence of perception of colors, especially green and rose.

DR. WEBBER said, when we consider the causes of the disease—excessive exercise, excess in venery, exposure of feet and legs to wet and cold, etc., and the necessity that patients with the earlier symptoms should avoid all such causes, it may be the physician's duty to tell the patient frankly from what disease he is probably suffering, and so give him to understand the great importance that he should assist by avoiding all such injurious influences. A patient who has been thus warned will be much more likely to follow the directions.

DR. ELLIS inquired whether the earlier symptoms of ataxia can be recognized with enough certainty to render it advisable to make a definite diagnosis. He also mentioned a case seen by him in 1878 with Dr. Curtis,

¹ Vide page 169 of this JOURNAL.

where there was urinary difficulty and pain but no ataxia, and where, in the spring of 1880, marked symptoms of ataxia appeared.

DR. T. B. CURTIS remarked that, according to Vulpian, gastric paroxysms were occasionally met with in which only fits of vomiting occurred, with little or no gastric pain. Another form of the "visceral crises," first described by Dr. Maurice Raynaud, of Paris, consists in paroxysms of renal pain, simulating kidney-colic of calculous origin. With regard to the palliation of the acute and distressing paroxysmal neuralgic of tabes, a very simple and harmless means of relief, first adopted by Professor Potain, of Paris, and eulogized by Vulpian and by Dieulafoy, consists in subcutaneous injections of pure water, of which eight or ten drops are injected rather deeply *in loco dolenti*. This unobjectionable remedy is said to be often efficacious against other kinds of pain, such as that attending rheumatic arthritis, myalgia, or the idiopathic neuralgia.

Dr. Curtis remembered well the case alluded to by Dr. Ellis. Paroxysms of vesical pain, with tenesmus and incontinence of urine, were the symptoms chiefly complained of by the patient. A careful exploration showed the absence of stone, as also of stricture and of any organic disease accounting for the functional disturbances. There was a slight catarrh of the bladder, insufficient, however, to cause the acute suffering occasionally experienced. On cross-examination of the patient with reference to his past history and other symptoms, he was found to have suffered for upwards of five years from typical lightning pains, boring and lancinating, which first affected the heel; vertigo had existed for three years; he had also suffered from attacks of *proctalgia*, or rectal pain and tenesmus. A characteristic tottering gait has lately confirmed the diagnosis made three years ago.

One last point Dr. Curtis wished to touch upon: venereal excesses figure prominently in the accepted ætiology of tabes, being a common antecedent of the characteristic and conspicuous locomotor disturbances; he would, however, inquire of Dr. Putnam whether sexual excitement was not one of the early symptoms of tabes, and whether sexual excesses ought not to be considered rather a result than a cause of the disease?

RUPTURE OF BLADDER BY EXTERNAL VIOLENCE.

DR. F. W. DRAPER presented the pelvic organs from the body of a woman, aged twenty-eight, who, five days before her death, had fallen down stairs while intoxicated. Her symptoms after the accident had been great pain in the abdomen, retention of urine, frequent desire to micturate, hæmaturia, vomiting, extreme prostration.

The autopsy disclosed a rupture of the bladder, the rent being crescent-shaped, situated in the posterior wall to the right of the middle line and measuring two inches in length; its edges were quite symmetrical; its direction was from below upward, its upper end being near the fundus; it involved the entire thickness of the posterior wall, the fissure being of equal length externally and internally. Through this opening the urine had escaped freely into the adjacent tissues in all directions, infiltrating the connective tissue in front as far as the umbilicus, behind as far as the diaphragm, and downward into the deepest parts of the pelvis; the infiltrated tissues were shreddy, gangrenous, and of a strong urinous odor. There was no peritonitis, the escaping urine having invaded the subperitoneal regions

only. The mucous membrane of the bladder presented many patches and small points, slightly raised, having a bright red base and a slaty-gray exudation at their summit (diphtheritic cystitis).

MUMPS; ORCHITIS.

DR. MINOT reported a case of orchitis following an attack of mumps in a delicate man thirty years of age. The patient had had mumps before. He was confined to the house for a few days with this attack of mumps, and then began to have a feeling of uneasiness in the testicle which, in a few days became swollen, but was not tender.

DR. HODGES remarked that the swelled testicle following mumps was always a much lighter affair than that occurring in gonorrhœa.

MEASLES.

DR. J. AYER reported a case of measles, unlike any which had ever occurred in his experience before.

In January he was called to the elder of two little sisters, eight years old, having well marked symptoms of measles, namely, catarrhal fever, cough, and eruption on face and chest.

Twelve days later he visited same patient again. In the interval the younger sister, six years old, had passed through a smart attack of measles, and had almost recovered. This patient (the elder girl) was feverish. Thermometer 103° F., nausea and cough, the next day all the early symptoms of measles were apparent. The eruption was perfect and the affection ran its usual course, confining the patient for three or four days. Both children made a slow recovery, with abundant desquamation.

In Ziemssen the name relapsing measles is applied to this class of cases.

Van Diesen reports a girl three years old attacked by measles in February, 1848, and recovering; again attacked March 4th with preliminary symptoms and exanthemata; had another attack with all the symptoms, April 12th. The three attacks were succeeded by branny desquamation.

DR. GOSS spoke of a case of measles where there was an undoubted recurrence of the disease within three weeks after the first attack.

DR. WHITE reported a case where it occurred twice in eight days.

DR. WADSWORTH one which recurred in three weeks.

DR. WEBBER reported a case of German measles where the enlarged glands appeared six or seven days before the eruption. The incubation in this case was estimated to be from seven to ten days.

DR. F. C. SHATTUCK asked why Dr. Webber applied the term *German* measles to his case. There is at present an epidemic of genuine measles in this city, an epidemic which is remarkable in this particular, namely, its mildness and the frequency with which both adults and young people who have already had the disease once are again attacked. Cases of measles vary greatly in severity and in the completeness with which the symptoms and complications are represented, just as do cases of scarlet fever or any other disease. During the prevalence of an epidemic of measles it would seem safer to be very guarded in the use of the term *German* measles, by which is denoted an affection resembling measles, and yet, according to Thomas, the writer of the article *Rötheln* in Ziemssen's *Cyclopædia*, and others, entirely distinct from it.

PROCEEDINGS OF THE BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

MEETING OF NOVEMBER, 1880. DR. J. B. AYER read a paper on

ALCOHOLIC MANIA IN CONNECTION WITH ACUTE DISEASE,

of which the following is a synopsis:—

According to Dr. Greenfield, the translator of Magnan's work on Alcoholism, there are few medical subjects upon which less has been written than upon acute and chronic alcoholism. The very frequency of the alcoholic element in disease has caused the subject to be neglected.

Verneuil's paper Upon the Prognosis of Injuries and Surgical Operations in Drunkards, in December, 1870, awakened much interest among the profession. He stated that the deplorable state of the system engendered by alcohol was as important a cause of failure in surgery as exposure to morbid germs. He proved that habitual drinkers who had previously never seemed the worse for liquor often developed the most serious complications, after receiving insignificant wounds.

He urged that alcoholism, as it so frequently complicates disease, should be studied by the physician no less than by the surgeon.

According to Magnan the habitual drinker ceases to enjoy immunity as soon as the physiological equilibrium is destroyed by the blow of an intercurrent disease.

The following is a summary of a case cited in illustration:—

The patient, fifty-one years of age, had for the past thirty years stimulated freely without apparent injury to himself, as he always seemed to enjoy the best of health.

The day following more than usual indulgence he was attacked with a catarrhal cold and severe lumbal-abdominal neuralgia. There was nothing unusual about the case until the sixth day, when the fever, pain, and jaundice having disappeared he suddenly developed hallucinations of sight and hearing, and became very suspicious. At first he said little regarding the hallucinations, but as they increased he began to mention them freely, and argued that the pigmies and insects which he saw, and the voices which he heard, were all real, and insinuated that those who did not agree with him were stupid folk.

Muscular tremor, copious perspiration, insomnia, and loss of appetite were prominent symptoms.

On the third night after the disappearance of the catarrhal symptoms he was greatly excited fighting with his imaginary foes. But when he was at the worst he would answer a question correctly, his mind instantly reverting, however, to the old delusions.

On the fourth day, after consultation with Dr. Jelly, it was decided that full treatment must be carried out. He was accordingly removed to another room. Four doses of chloral and bromide of potash were given at intervals of about an hour up to seventy grains of chloral and eighty-seven grains of bromide, by which time the patient was well under the influence of treatment. Strong beef tea and egg-nogg were insisted upon. This treatment was not carried out without a great deal of urging.

After a two hour's nap the patient awoke with fewer

hallucinations. During the following twenty-four hours they gradually lost their hold upon him, and he slept a great portion of the time without further sedative treatment.

He was given ferro-phosphorated elixir of calisaya and the stimulant was gradually diminished to a little sherry wine and a glass of ale daily with his meals. Although he made a perfect recovery it was over three weeks before he could give close attention to business without bringing on headache.

While the insomnia, trembling, and free perspiration, in connection with the peculiarities of the hallucinations and the possibility of diverting the patient's attention from his delusions, pointed strongly to the alcoholic character of the delirium, yet a *positive* diagnosis could not at first be made.

A case was cited, which had been under the reader's care, of a young lady recovering from an attack of peritoneal cellulitis, who developed hallucinations about bugs, snakes, and Chinese pigmies, and in most respects resembled the previous case. The excitement, however, was not connected with alcoholism. She grew worse and was removed to the South Boston Lunatic Hospital, from which she was discharged well at the end of five months.

The reader advised caution in giving a prognosis in cases of alcoholism, agreeing with Lawson that "the intense furor accompanying alcoholic brain disorder may disappear under treatment in a single night, yet under precisely the same appreciable conditions the excitement in another case may continue for weeks, the delirium lasting as long as the deterioration of nutrition and the instability of nerve centres combine to maintain it."

Regarding treatment, bromide of potash and chloral, together with strong beef tea, broths, and (generally) egg-noggs, were advised. Balfour's treatment by forty grains of chloral every hour for three doses (for an adult), combined, if heart is feeble, with one half to one ounce of infusion of digitalis, was commended.

In the discussion which followed, DR. WEBBER said that it seemed to him, from the account of the case given by the reader, that the patient was really suffering from delirium tremens, not that it was a case of mania induced by an acute disease in a person addicted to hard drinking. The fact that the patient had been a very hard drinker, and had taken nothing for four or five days, and then was attacked with tremor, sleeplessness, hallucinations of sight and hearing, the objects seen being such as were described, resembling those seen in delirium tremens, renders it probable that that was the disease. The acute disease may, perhaps, have been one element in causing the attack, though the abstinence from alcohol was probably the more influential.

In comparatively mild cases of delirium tremens chloride and bromide of potassium are certainly beneficial. Small doses of these drugs, however, do no good; twenty, thirty, and even forty grains of chloral with thirty to sixty grains of bromide of potassium are more likely to be efficacious in procuring sleep and restoring the patient to sound mind than the smaller doses of ten to fifteen grains, which are sometimes given. The larger doses may be repeated hourly if necessary. One disadvantage of small doses is that the patient seems to be more excited after taking them, and finally a larger quantity of medicine is required.

In severe cases, where the pulse is rapid and feeble

120 or more), and where there is great excitement accompanied with hallucinations of sight and hearing. Dr. Webber stated that he had found digitalis the best remedy. He uses the tincture in very severe cases in doses of half an ounce, which may be repeated at the end of four hours if necessary. Many times one dose is sufficient to secure quiet; he has known patients who were greatly excited to fall asleep within half an hour after taking the drug. He would not advise the frequent repetition of these doses. In using digitalis it is all important to observe the pulse: where that is very rapid and feeble in uncomplicated cases large doses can be given; where the pulse is only moderately increased in frequency the larger doses are not called for, one or two drachms being sufficient. Where delirium tremens is complicated with other diseases which have either preceded the mania-a-potu or have occurred at the same time with it, as pneumonia or bronchitis following exposure while the patient was drunk, the treatment must be modified according to circumstances.

Delirium tremens usually occurs in old toppers or persons who have been addicted to the so-called moderate use, and have at length been on a spree of several days or weeks' duration. Besides the ingestion of alcohol there is usually also abstinence from food, the patients declaring that they have eaten scarcely any food for one or two weeks, or even longer. There is also usually insomnia, for a longer or a shorter time, and these elements undoubtedly play a part in the delirium tremens.

He said that during the war, in the latter part of 1862, he was stationed on board the receiving-ship Ohio as assistant surgeon; many men were enlisted in the navy who were received on board partially intoxicated, or who had but lately been drinking heavily for a long time; in several instances these men were taken down with delirium tremens after some days of enforced abstinence on board ship. This would show that, contrary to the opinion of some, the sudden breaking off of drinking may be one factor in causing the disease. Most of the patients, however, who are received into the hospital continue to drink up to the time of the attack.

In regard to treatment where there is vomiting, the tincture of capsicum in doses of half a drachm or a drachm is of value, and may be given in combination with the chloral and bromide. After the severity of the attack has passed off, while the patient is still weak and tremulous, three to five grains of quinine seems to be of use to restore the natural tone of the system.

Dr. GEORGE W. GAY then said, this affection is so common in the surgical department of this hospital that we are constantly on the watch for the tremulous tongue and hand, and any undue nervousness in our recent casualty cases. I have also noticed that the wounds of patients threatened with delirium tremens are sensitive out of all proportion to their severity.

Steady drinkers brought here on account of an injury are very apt to show signs of the horrors of delirium tremens, however slight the injury may be. The disease is usually developed in three or four days, and lasts from one to three days, sometimes longer; occasionally it terminates in chronic mania.

The most common treatment here is beef tea well seasoned with red pepper, given as freely as the patient can take it; chloral (fifteen to twenty grains), bromide of potash ammonia (thirty to forty grains), ev-

ery two or three hours; tincture digitalis in half-ounce doses where the heart is weak. I often preface the treatment with five grains of calomel and fifteen grains bicarbonate of soda. The great majority of cases recover.

Dr. ROWE referred to the well-known fact that patients who had previously received traumatic injuries to the head were peculiarly susceptible to much smaller quantities of alcohol than the ordinary patient. He cited within his knowledge several patients of this class at the Boston Lunatic Hospital who, by very moderate quantities of stimulants, had been made maniacal for varying periods. One case of delusional insanity, having a history of previous head injury, was made excited, sometimes, requiring seclusion, by so mild a stimulant as new cider, sometimes served at the social parties given to patients.

Dr. Ray has written a monograph on this feature of brain disease, which can be found in his Contributions to Mental Pathology.

Dr. ROWE, while physician at the House of Correction at South Boston, had tried nearly all reputed remedies in alcoholism, but found in the majority of cases that nothing served so well as moderately large doses of chloral and bromides. His experience with hyoscinamine had been of no avail, but deemed the particular samples used by him as not true hyoscinamine.

Dr. BANCROFT said: In reference to the aetiology of an attack of delirium tremens, two cases occurred under my observation at the City Hospital which seemed to show that the attack did not occur immediately after a prolonged spree, nor after the withdrawal of the daily quantum of liquor; but upon the indulgence in a single glass of whiskey after a total abstinence of four or five days. The patients were doing well, but after partaking of four or five ounces of liquor surreptitiously introduced by their relatives, they immediately developed violent attacks of delirium tremens, of which one of them died.

Dr. Bancroft described the case of a young man aged twenty-five, who has recently died at the New Hampshire Insane Asylum. The facts in brief are these: in the year 1877 he suddenly shot a man, without having given much evidence of approaching mental disturbance at that time. Was committed to jail, and during his first day's residence there broke out into a wild mania. His insanity being unquestionable, he was at once removed to the asylum. From the date of his committal, May 24, 1877, until October 12, 1880, he did not utter a single intelligible, connected sentence. He was in almost constant motion, tearing his clothes, filthy in the extreme, and requiring the continuous attention of the attendant. The incoherency of his speech was simply indescribable; one thought had scarcely any connection with another.

For three years he remained in this state. On the 12th of October, after a period of unusually wild excitement, the attendant entered his room and bade him "Good morning;" the patient turned about suddenly and said: "I want to die. I feel ready to die. I have suffered for three long years, and I want to go where I can rest." These were literally the first intelligent words the patient had uttered for three years. He repeated these words a number of times during the next few hours. But he seemed gradually sinking. Occasionally he rallied, and there seemed to be something on his mind that he wished to say. He did speak, among other things, of his wife and of trouble he had had

with her, and his daughter, giving the name and age of the latter.

When the attendant went out of the patient's room the latter would call him back, and say there was something he wanted to tell him, but he did not seem able to express himself.

He gradually failed, and died the following day.

MEETING OF DECEMBER, 1880. DR. CHANNING read a paper on

THE CARE OF INSANE CRIMINALS,

which is published in this number of the JOURNAL.

DR. T. W. FISHER spoke as follows: He agreed with most of the opinions and recommendations of the paper, and remarked that his acquaintance with the criminal insane at the House of Correction, at Deer Island, and elsewhere had been considerable. He had noticed a general reluctance on the part of all officials dealing with criminals to admit the existence of insanity except in marked cases. One reason was, he thought, that the criminal class generally showed characteristics which allied it closely with the insane class, and actual insanity was less conspicuous than in a perfectly sane community. Very many prisoners are deficient mentally and morally. Many are epileptic, and each one is under one delusion, namely, that of his own innocence of the crime for which he was committed. Impulsive outbreaks of unreasonable violence are common also to prisoners and to the insane. The habit of self-abuse is common to both, and also hallucinations of hearing due to chronic alcoholism. If an asylum for the criminal insane existed in this State, judges would feel less hesitancy in committing criminals suspected of insanity to it. Insane homicides are sometimes sent to prison for fear of an easy escape or discharge. Facilities for classifying the insane in asylums of different grades and of differing character are much needed in this State.

Recent Literature.

Clinical Lectures on the Physiological Pathology and Treatment of Syphilis, together with a fasciculus of class-room lessons, covering the initiatory period. By FESSENDEN S. OTIS, M. D., etc. New York: G. P. Putnam's Sons, 182 Fifth Avenue, 1881.

Some ten years ago the attention of the medical profession was first invited to Dr. Otis's views upon the "physiology of syphilitic infection," and they were noticed in this Journal of the date of May 30, 1872. Since that time Dr. Otis has published a series of papers upon this subject, which he now collates under the form of eight lectures, to which are added six class-room lessons, in a handsome, clearly printed volume of 116 pages, octavo, which we cordially recommend to every physician who regards medicine as a science rather than a trade. The reasoning is necessarily inferential, but also inductive; the arguments are based upon acknowledged features of syphilis in connection with the latest doctrines of the best pathological teachers; the evidences adduced are in favor of such views of syphilitic disease as are based upon purely scientific grounds, and tend to legitimately explain every phase of syphilis under its varied aspects, in complete accordance with known physiological and

pathological laws. Histology, the results of microscopical research, furnishes the groundwork of this volume, and several excellent illustrations are given from the works of various writers, together with a page of excerpts, embodying the views of recognized modern authorities concerning some of the properties and powers of embryonal or white blood cells.

Dr. Otis, as is well known, claims, with Bäumler,¹ that all the lesions of active syphilis have for their basis "cellular infiltration proceeding from the blood-vessels," and transmitted through the lymphatic system, and he now extends the same views over the later stages of syphilis, in accordance with the most recent advances in medical science. His treatment of the disease, in its different stages, is consequently considered in its relation to and based upon the rational or physiological view of the morbid processes involved. The first lecture treats of Beale's discovery of the living animal disease germ in various contagious diseases; of Biesiadecki's and Vernon's microscopic examinations of the initial lesion of syphilis, with their confirmation of Beale's views, and the arguments to show the probability of infection by such germs; of the reasons for supposing that such germs become incorporated with the white blood corpuscle; of the "necrobiosis" resulting from abnormal cell accumulation, which also accounts for "incubation" and the enlargement of glands. The second lecture substitutes the term "initiatory period" for "incubation" (so called), and shows that variations as to time and amount of induration are due to more or less superficial distribution of lymphatic vessels at the point of inoculation; that the disease germ affects only the white blood corpuscle; why the infection progresses slowly, and the propriety of including primary and secondary incubation under the initiatory period of syphilis. The third lecture considers the termination of the initiatory period, and the entrance of the degraded corpuscles — "carriers of the contagium" — into the general blood current, with roseola, coppery staining, "syphilitic fever," and general gland enlargement. The fourth explains inflammation of tonsils as resulting from their connection with the lymphatic system; so also a fourth variety of the initial lesion, papules, alopecia, mucous patches, syphilitic iritis, and the "gummy tumor of the iris," which is really a syphilitic papule, secondary pains in bones, nodes, and all eruptions, without exception, are shown to be dependent solely upon localized cell accumulation. The fifth regards all open lesions of syphilis as containing the contagious element, the contagious property not being a virus; the contagious property as ceasing with the active period of the disease; the late lesions as mere sequelæ, the "gummy material" consisting simply of normal germinal elements; fatty degeneration as due merely to pressure; late syphilis as the result of previous damage to lymphatic channels, and all forms of tertiary or quaternary lesions of syphilis as dependent upon a deposit of "gummy material" not due to the local action of a virus, but to the mechanical obstruction of lymphatic channels. The sixth holds that atrophy is from cicatricial contraction; gummy exudation the basis of cicatricial material, the deposit being identical with that due to ordinary pathological causes; fatty degeneration of brain tissue from accumulation of gummy material in the coats of arteries, as shown in Professor

¹ Ziemssen's Cyclopædia, vol. iii., pages 112 and 131, American edition.

Edes' case, and confirmed by Huebner's microscopical researches.

Lectures seven and eight are devoted to treatment. The virus of syphilis being an influence, and not a material substance, antidotes, as such, are merely the natural product of the supernatural view of syphilis. Mercury is the drug to be used, because its action is to disencumber the tissues from superfluous cell material, the product of a specific inflammation; not as an antidote to a hypothetical virus, but for the distinct scientific purpose of effecting the disintegration and elimination of the imperfectly organized cell elements which have been recognized as the cause of trouble, and tissue metamorphosis is essential to a cure. Every agent as yet proved beneficial in the treatment of syphilis is one which hastens this metamorphosis. Iodide of potassium is inferior to mercury. Iron must always be given, for mercury is not a tonic but a destructive agent, acting as a solvent of diseased material, and the highest type of treatment is to administer just that amount of mercury sufficient to destroy the diseased material without affecting the healthy cell and tissue elements. [Where possible, therefore, use direct local applications.—*Rer.*] Where mercury is not well borne use potassic iodide, which has but little curative influence in early syphilis, and insignificant power to prevent later lesions, but in the cure of the late lesions is of inestimable value, for the iodine compounds are potent agents in inducing fatty degeneration, the only method of removal of late lesions, just as mercury is the most potent agent in removing neoplastic growths. Combine the two, therefore, in the treatment of all the late lesions.

E. W.

A Text Book of the Physiological Chemistry of the Animal Body. By ARTHUR GAMGEE, M. D., F. R. S. London: Macmillan & Co. 1880.

In a recent lecture before the British Medical Association, Foster described the labor of the physiologist as a striving after an "understanding of the broader laws of that conflict of atoms which is going on in every tissue; that perpetual building up and breaking down; that molecular strife which appears now as the piling up of material in growth, now as the rush of a secretion, or the shock of a muscular spasm, or the thrill of a nervous impulse." The immensity of the field of labor thus indicated, the overwhelming details which beset it, and withal the intense fascination which illuminates every step of progress, may be surmised by a study of Dr. Gamgee's book, which we have just had the pleasure of reading.

This book deals only with the chemical characteristics of the elementary tissues, such as the connective, contractile, epithelial, and nervous tissues, including also the blood, lymph, and chyle. Nearly half the book is devoted to the blood in health and disease, and is evidently based upon original work as well as upon the best literature of the subject. Indeed, the author assures us that he has, "so far as possible, tried all the experimental processes mentioned in this work." The various stages of coagulation, and the numerous theories which have been advanced to explain that phenomenon, are presented in full detail and with greatest clearness. Chapter III. will prove, perhaps, the most interesting to the general practitioner, inasmuch as it recounts the changes of the blood in disease. In scarlet fever the author says there is primarily no al-

teration in the proportion of blood constituents. When kidney complications arise, however, there is a tendency to the accumulation of urea in the blood, and to a diminution of the proteids. The great increase of fibrine during diseases of the lungs and associate membranes may be seen from the following table:—

	1000 parts of blood yield	Fibrine. 2.5 grms.
In health,		
" bronchitis	" " " "	4.8 "
" acute pleurisy	" " " "	6.1 "
" " pneumonia	" " " "	7.4 "

The reason for this increase is hard to state, since we are ignorant of the origin of fibrinogen. In the proliferation of cellular elements which accompanies inflammation we have, however, an increase of the colorless cells and of serum-globulin, and according to Schmidt's theory these are the important factors in the manufacture of fibrine.

Chapter IV., with its elaborate description of methods, and bountiful illustration of instruments for analysis of blood, is a standing protest against the attempt to accumulate such valueless statistics as have been recently solicited by a circular, emanating from Washington, in reference to the condition of the blood in rheumatism. The circular named asks if rheumatic troubles are caused by an acid in the blood, and if this acid is uric. Without actual and laborious analysis of blood it would seem that any inferences regarding these points from merely "professional experience" would hardly be called "valuable" statistics. Dr. Gamgee distinctly asserts that rheumatism and so-called rheumatic gout are distinguished from true gout by the absence of any tendency toward the accumulation of uric acid in the blood.

Dr. Gamgee's book meets a want long felt in English medical literature, and should receive a warm welcome from the general practitioner as well as from the special student. It will well repay the time spent in reading it, and we are pleased to announce that the author promises us a second volume, within a year, which shall treat of processes characteristic of the more complex organs of the body.

G. M. G.

February 15, 1881.

A Treatise on Diphtheria. By A. JACOBI, M. D., etc. New York: William Wood & Co. 1880.

The present book is given by the author to the public as an augmented edition of his monograph on the same subject which appeared in the second volume of Gerhardt's *Handbuch der Kinderkrankheiten*, 1877, with this exception, that it contains less literature and more therapeutics. His aim has been to give a condensed but tolerably extensive report on the present state of what is known about diphtheria, with his personal views on its pathology and treatment.

Dr. Jacobi considers the bacteria doctrine of diphtheria or the parasitic nature of the diphtheritic poison as not proven, and heartily embraces the results of the experiments of Drs. Wood and Formad on the effects of inoculating the lower animals with diphtheritic exudation, published in Supplement No. 7 of the National Board of Health Bulletin, as finally settling the mooted question of the essentiality of bacteria in regard to the nature and definition of diphtheria.

He thinks that the anatomical and clinical facts indicate that the contagious material of diphtheria is really of the nature of a septic poison, which is also locally very irritant to the mucous membrane, so that

when brought in contact with the mouth and nose it produces an intense inflammation without absorption by a local action. Whilst absorption is not necessary for the production of the angina, it is very possible that the poison may act locally after absorption by being carried in the blood to the mucous membrane. Further, under this theory it is possible that the poison of diphtheria may cause an angina which will remain a purely local disorder, no absorption occurring; or a simply local tracheitis produced by exposure to cold, or some other non-specific cause, may produce the septic material, when absorption will cause blood poisoning, the case ending as one of adynamic diphtheria.

We have reproduced this expression of the view, which the author is tempted to adopt, as bearing both upon the important and vexed questions of the identity and non-identity of croup and diphtheria, and upon the value of local treatment, such value depending largely upon whether the angina has or has not been preceded by absorption.

In the matter of treatment the author is opposed to the removal or destruction of local membranes, and lifts up a warning voice against the use of large doses of chlorate of potassium, the indiscriminate administration of which he believes to be responsible for grave renal complications, leading not seldom to death, the cause of which in such cases he thinks has been rarely suspected. Whether in regard to aetiology or treatment the book may be consulted by practitioners with advantage.

Photographic Illustrations of Cutaneous Syphilis. By GEORGE HENRY FOX, A. M., M. D., etc. Forty-Eight Plates from Life, colored by Hand. Complete in Twelve Numbers. New York: E. B. Treat, No. 757 Broadway. Nos. 4, 5, 6. Price \$2.00 per number.

We have received the fourth, fifth, and sixth fasciculi of Dr. Fox's excellent atlas of the syphilodermata of the skin. These colored artotypes not only hold their own, but are an improvement in several respects as to execution over those of previous numbers. In number four, for instance, we find two representations of papulo-pustular and pustular syphiloderms which are more natural than those in preceding fasciculi; another, quite life-like, of the corymbiform variety of pustular syphilis, and one of syphilitic onychia, showing well how the debilitating influence of the disease has interfered with the process of nutrition. The fifth number comprises a capital plate of plaques muqueuses or condylomata lata of the genital region (*S. papulosum humidorum*); two plates, each of two hands, of papulo-squamous syphilis upon the palms, the peripheral desquamation being admirably rendered; and, for purposes of differential diagnosis, one plate of Hydra [*pemphigus iris*], non-syphilitic, which will support our opinion that this fasciculus is, perhaps, the best one as yet issued of the series. Number six is composed of a squamous eczema of the palms for differential diagnosis, which is very well done; still too many plates for this purpose are hardly in place in an atlas devoted to representations of *syphilis*, since they are supplied by other atlases devoted to non-syphilitic diseases of the skin. Two circinate and one gyrate form of squamous, and one of ulcerative tuberculous, syphilis are well given, and will help to clear up many cases of very dubious diagnosis occurring in hospital wards. The final plate, *syph. tuberculosum*, is a clean cut picture of the mal-

ady in *stadio floritionis*. Two pages of text are added to each plate, speaking numerically, but the text is not explanatory in any way, and merely furnishes its quota towards completing the ranks, or chapters, of a volume upon syphilis in general.

Klein and Smith's Atlas of Histology. Part XIII. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1880.

The closing number of this excellent work has reached us. It is worthy of its predecessors, and reflects great credit on all concerned in its production. It treats of the ear, the mucous membrane of the nose, the spleen and other so called ductless glands, and concludes with a very interesting chapter on the indirect division of the nucleus in epithelial cells. The direct division is the form generally known in which the nucleus is divided into two or more without undergoing any preliminary changes. In the indirect division remarkable changes in the intra-cellular fibrils occur, which we cannot discuss here.

We are now able to speak of the work as a whole. The illustrations are admirable, the text is good, and makes a symmetrical treatise of much value. There are two defects to which we believe we have already alluded, but we mention them once more in the hope that they may be removed from a future edition. The first is, that though the views of a great many abscesses are referred to we are not told where to find them. If abbreviated titles were printed in small type, this could be remedied without greatly increasing the size of the book. The other defect is a want of information as to the details of the methods by which such beautiful views were obtained. We do not ask for a treatise on technique, but for brief hints that would help those who are familiar with microscopical work. The book is so satisfactory as it is that we trust the authors will labor to make the next edition as nearly perfect as may be. T. D.

Differential Diagnosis. A Manual of the Comparative Semeiology of the More Important Diseases. By F. DE HAVILAND HALL, M. D., assistant physician to the Westminster Hospital, London. Second American edition. Extensive Additions. Edited by Frank Woodbury, M. D. Philadelphia: D. G. Brinton. 1881.

This book is founded upon Dr. Hall's synopsis of the disease of the larynx, lungs, and heart, the plan therein adopted being extended to embrace all the more frequent and important diseases. As in the previous edition preference has been properly given in most cases to American over European authorities. Dr. Frank Woodbury, the editor of the present edition, has revised the work thoroughly and added to it not a little. This revision has been carefully and judiciously performed. The book will be found handy and convenient for reference, whether by student or practitioner. For the student and young practitioner, unless possessed of unusual discrimination, we think synopses compressed into comparative tables of the clinical histories and leading phenomena of diseases are quite as apt to prove dangerous as useful. This is well illustrated in the table setting forth the differences between membranous croup and diphtheria. The statement that the contagion of measles is almost exclusively limited to children is in contrast with the late unusual experience with that disease in Boston.

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REVACCINATION: A REPLY TO "DELTOID."

OUR readers have seen in the last number of the JOURNAL a communication signed "Deltoid,"—couched, let us remark, by the way, in unusually vigorous and athletic, not to say pugilistic, language, to which the writer's pseudonym seems not wholly inappropriate. Protest is therein made against certain statements contained in our recent editorial on small-pox and revaccination.¹ Deltoid refers to (what he is pleased to call) our "dogmatic statements concerning either prevention or cure, which rest on no more certain basis than the hobbies of their author." He then goes on to propound a series of questions touching the prevention of small-pox. These we will answer to the best of our ability, carefully dotting our i's, so as to try to preclude the possibility of any misunderstanding of our meaning.

We must, in the first place, admit that the necessity of repeated revaccinations is not *universally* recognized,—though unequivocally affirmed by Curschmann,²—nor was it our intention to advocate an indiscriminate or frequent repetition of thoroughly successful revaccinations. Deltoid's criticism of our statement touching this point is well founded, and we find ourselves constrained to recognize that he has, so to speak, "got in a blow on our nob," in fact, to carry out the metaphor irresistibly suggested by his spirited attack, we must grant him "first blood." It was not, however, any "hobby," but simply a perhaps somewhat unruly editorial pen, which, at this point, for a moment, got away with us. Fortunately, our error, or, rather, our over-statement, in regard to this accessory detail, is not likely to involve serious consequences if acted upon by any of our readers, for it errs, if at all, wholly on the side of safety and of superfluous precaution. To specify precisely the extent to which the practice of revaccination ought, in our opinion, to be carried, we cannot do better than to reproduce the precepts laid down by Seaton, which inculcate what may be said to be the minimum degree of prophylaxis consistent with safety: "From these considerations we draw the important practical rule that every person should take care to be revaccinated

about, or soon after, the period of puberty. Under ordinary circumstances, about fifteen years of age is the best time for it to be done, and it should not be left much beyond this, for the age of most danger from post-vaccinal small-pox is from fifteen to twenty-five. On the other hand, where there is any unusual risk of small-pox, as in localities in which the disease is prevailing, it would be imprudent to wait so long, and the revaccination may be done at any period after twelve years of age, or, in individual cases, even earlier than this. In girls, especially, in whom the changes connected with puberty manifest themselves early, revaccination may be performed correspondingly early. The degree, however, in which vaccinated persons, when they are grown up, stand in need of revaccination, is, I repeat, very different. Those who have imperfect marks need it much more than those whose marks are characteristic; those who have but one or two good marks much more than those with three or four. Small, indeed, as the risk of contracting the variolous infection in any form is to those who have been thoroughly vaccinated, who have four good marks of their vaccination, and infinitely small as is to them the risk of having it severely, it is a risk not worth the running, and as no individual can tell whether he is one of the wholly protected majority or one of the partially protected minority, it is the part of wisdom even for the best vaccinated to seek the additional security of a revaccination."³

In answer to Deltoid's inquiry for statistical evidence bearing upon the utility of revaccination, the following statements and facts may be cited from the authority already quoted. Seaton says that "after effectual *revaccination*, small-pox, even in its most modified form, is found very rarely, or scarcely ever, to occur. Thus, Heim found that in five years there occurred among 14,384 revaccinated soldiers in Württemberg only one instance of varioloid, and among 30,000 revaccinated persons in civil practice only two cases of varioloid, though during these years small-pox had prevailed in 344 localities, producing 1674 cases of modified or unmodified small-pox among the not revaccinated, and in part not vaccinated, population of 383,298 persons in those places in which it had prevailed. In the Prussian army, since the introduction of systematic revaccination of all, the annual deaths from small-pox, (which at one time were 104) have not averaged more than two; and on analysis of 40 fatal cases that occurred in twenty years, it appeared that only four were in persons who were said to have been successfully revaccinated. Other national experience might be referred to, but it will be better to have recourse once more to Mr. Marson's very precise statements. In the thirty-two years and upwards, that he has been connected with the small-pox hospital, no nurse or servant has taken small-pox, he having taken care always to revaccinate them on their coming to live in the hospital; and at a time when a large number of work-people were employed for several months about the hospital, most of whom consented to be revaccinated,

¹ See the JOURNAL, February 10, 1881.

² Curschman says: "In general, the duration of immunity may be stated at from eight to ten or twelve years. In order to maintain a state of perfect immunity after this period a revaccination is required, and this should then be repeated at every expiration of the above-mentioned period throughout the remainder of life." Ziemssen's Cyclopædia of Medicine. American Translation, New York, 1875, vol. ii., p. 406.

³ A handbook of vaccination, by E. C. Seaton, London, 1868, page 274.

two only were attacked by small-pox, and these two were amongst the few who were not revaccinated."¹

Deltoid inquires how the *Lancet* can know that "an effective revaccination is a better protection than small-pox itself." The superiority of the protection afforded by vaccination — and, *a fortiori*, by revaccination — over that accruing from antecedent small-pox is made manifest by the experience of the London Small-pox Hospital, based upon nearly five thousand "post-vaccinal" cases among others. Marson showed that, whereas the average mortality of post-vaccinal small-pox was five or six per cent., that of second attacks of small-pox was as high as nineteen per cent. Marson's statistical table² is so curious and instructive that we are tempted to take this opportunity to lay it before our readers:—

Classification of Patients affected with Small-pox.	Number of Deaths per cent. in each class respectively.
1. Unvaccinated	35
2. Stated to have been vaccinated, but having no cicatrix	23.57
3. Vaccinated:—	
a. Having one vaccine cicatrix	7.73
b. Having two vaccine cicatrices	4.70
c. Having three vaccine cicatrices	1.95
d. Having four or more vaccine cicatrices	0.55
e. Having well-marked cicatrices	2.52
f. Having badly-marked cicatrices	8.82
4. Having previously had small-pox	19

Deltoid says ironically: "You seemed filled with holy horror at the ignorance and inertness of those who do not share your apprehensions." Our holy horror—we consent so to call it—was excited not so much by the merely intellectual shortcomings alluded to, as by the many unnecessary and *preventable* deaths of grown-up persons—close upon five hundred individuals aged fifteen years and over having died of small-pox in Boston in 1872—shown by the vital statistics of the city to have taken place in the last epidemic.

One last point, not touched upon by Deltoid, seems to call for a few remarks. Many practitioners, although recognizing the utility of at least one revaccination, nevertheless advise their patients to postpone having recourse to this valuable means of prevention *until small-pox is already among us*. Seaton, however, who is the acknowledged authority on everything connected with the practice of vaccination, says explicitly, and shows, that "the performance of revaccination should not be left to periods when small-pox is epidemic." He says that "revaccination should always be done by preference when it can be done leisurely, and as part of the ordinary work of vaccination, and not under the alarm and influence of panic. . . . Under these circumstances, the demand for revaccination often becomes so great that it is difficult to find lymph to meet it. I have known revaccination-lymph used under these circumstances for performing other revaccinations, and very bad arms resulting."³

Such are the views we would advocate touching the practice of revaccination. In conclusion, we must

thank Deltoid for having afforded us an opportunity to define more precisely to our readers what we consider the *indispensable* exigencies of successful prophylaxis against small-pox; and we will also tender him our apologies for having, unwittingly, so disturbed his equanimity. And now, we trust that, divesting himself of his boxing-gloves, which, by the way, have seemed to us a little in want of *stuffing*, he will consent to go out of training, and to take the rest he has so well earned.

THE ACCURACY OF CLINICAL THERMOMETERS.

As long ago as 1754 the use of the thermometer, as an accurate measure of the temperature of the body in disease, was taught in Vienna by Antonius de Haen. It has, however, become indispensable to every medical man only within a few years. It is now a part of the armamentarium of every physician, and one of the earliest clinical lessons of the medical student relates to its proper use. It is as necessary in the proper appreciation of temperature as the watch in the account of the rapidity of the heart beat.

An article of such importance should be truly an "instrument of precision;" that it is not always so every one who has had occasion to compare different thermometers well knows, and to obtain accurate instruments physicians have been desirous of procuring thermometers of well-known English makers, as offering greater assurance of reliability than those of other less-known manufacturers. Much of the reliability of English thermometers has been due to the influence of the Kew Observatory, whose principal work, for the last quarter of a century, has been to furnish accurate comparisons of thermometers sent there by scientific men and instrument-makers. But even the best of thermometers are liable to change with the lapse of time, and to properly test them has been a matter of difficulty in this country. To meet this want, the Winchester Observatory of Yale College has established a Thermometric Bureau, which has been previously noticed in this and other journals. The habit of precise thermometric observation and record is so important that it has seemed expedient to the officials of the observatory to again call the attention of the profession to the errors to which clinical thermometers are liable, and the great difficulty of detecting them except with the appliances of an observatory devoted to this work.

The records of the observatory show that the clinical thermometers in common use cannot be relied upon within half a degree, and among those sent for comparison many vary more than this; a few have been received with an error of an even five degrees. Some of these inaccuracies are unavoidable; some are due to too great a desire to economize time, material, and skilled labor. Among the causes of error are enumerated the following:—

"(1.) The graduation is sometimes started from one point of the scale, near the normal, and the size of the capillary tube is guessed at. No upper point

¹ Beynold's System of Medicine, Philadelphia, 1879, vol. i, p. 175.

² Seaton's Handbook of Vaccination, page 216.

³ Beynold's System of Medicine, vol. i, p. 175.

being fixed by the maker, the higher graduations may be erroneous to the extent of several degrees. (2.) Too much air separating the index from the column of mercury causes the index to rise with a jerky motion; air above the index forces the index down when the thermometer is taken away from the body. In some thermometers, errors from this cause amount to two degrees at high temperatures. (3.) New thermometers increase their readings rapidly during the first months after manufacture, so that instruments which were right when made may change their indications as much as two degrees within a year.

"It will be seen that these errors are not such as the dealer can readily detect. Even in those cases where a dealer is provided with a standard thermometer with which comparisons could be made, it is a difficult matter to determine the errors of the standard itself, and the unsupported representations of dealers and druggists therefore, though made in perfectly good faith, cannot, from the nature of the case, afford the physician satisfactory evidence that any thermometer he may buy is not affected with errors, which in many instances under our observation have amounted to several degrees."

There is no desire on the part of the astronomer in charge to do injustice in these representations to the makers, who are generally willing to take advantage of the opportunities offered. Mr. Waldo expressly stated some time since that more accurate instruments were already being made under the encouragement of the observatory. It is, however, desirable to disseminate as widely as possible a knowledge of the work undertaken at New Haven, and of its necessity.

In commenting upon the matter, Mr. Casella, so widely known in connection with the thermometers which bear his name, says, "I am most glad to find that our American friends are adopting the Kew method of verifying thermometers for public use. This is clearly a step in the right direction, and well accords with the ability and devotion I have invariably found amongst scientific men of their country." Undoubtedly, the market will soon be supplied with thermometers with the Yale certificates. Physicians can at any time have their own thermometers tested for a small fee, and returned to them after three days with a certificate of their exact errors.

MEDICAL NOTES.

—The congressional appropriation committee have allowed but \$10,000 in the Sundry Civil Service Bill to print Volumes III. and IV. of the Index Catalogue. As it cost \$9000 for composition and stereotyping of Volume I. alone, it is evident that we must either do without Volumes III and IV., or else a more suitable appropriation must be made.

—Of the boys who were applicants for enlistment as apprentices in the United States navy during the year 1879, twenty per thousand were rejected on account of venereal diseases, twelve of these being syphilitics.

—As an instructive and somewhat amusing illus-

tration of the lay frame of mind concerning small-pox in the country, which has given us Jenner and vaccination, we reproduce the following:—

"The vaccination officer of Bethnal Green has asked his Board of Guardians for assistance to make a house-to-house visitation of his district, small-pox being still on the increase there. One member thought the request much too serious to settle off-hand, and that it should be referred to the dispensary committee. Another thought that this talk about small-pox was 'sheer nonsense.' The disease was 'simply nature righting herself.' A third thought twenty assistants would be needed to do the work thoroughly, which the vaccination officer wanted to be done (not seeing that the statement was a confession of the backward state of vaccination in the parish). A fourth thought that it would be unwise to employ such a large staff without due consideration.' So (the Local Government Board's advice, notwithstanding) the Board of Guardians will pause to consider a question which ought to have been 'considered' months ago, while small-pox steadily gains ground."

—In consequence of the recent fatal football accident in Southampton, the mayor of that town has issued a notice prohibiting the pastime on the public lands as long as it is played according to the Association or Rugby rules, and he calls on the heads of families and schools to support him in his endeavor to modify the practice of the game.

Apropos of this accident the *Lancet* gives expression to some sentiments, from which we quote, as of interest to the athlete at large:—

"There are many pastimes infinitely more ruinous to health than those we have enumerated. Dancing night after night in crowded, non-ventilated rooms is among the most unwholesome and dangerous practices of modern life, and kills infinitely more persons (though more indirectly) than either the 'Rugby' or the Association rules. The men who are killed by sitting in public houses, or (what is very much the same thing) in club houses, playing billiards or cards till the small hours, and drinking 'B. and S.' are not held up as warnings, while their fellows who happen to be killed while engaged in some sport which has in it a dash of nobility and pluck are spoken of as 'frightful examples' of the evils of this or that amusement. If by undue roughness or by unfairness one man kills another at a game, the ordinary law is sufficient to deal with him. This is enough protection, and we very much object to a return to anything approaching the sumptuary laws of a bygone age.

"The science of medicine has lately had its liberty seriously curtailed by sentimentalists. We shall very soon be restricted in our choice of diet by the followers of Sir Wilfrid Lawson. Only last session an absurd bill about acrobats met with a certain amount of favor in the House of Commons, and if a stand be not made our imperial vestryman, whose watchword—save the mark!—is 'liberty,' may be asked to regulate the method to be pursued in kicking a football, and impose a limit on the growing prowess of the rising generation."

— The following note we clip from the "trivial" columns of a daily contemporary : —

Anti-Vaccination societies will certainly preserve among their records the fate of the troupe of Esquimaux which Herr Hagenbeck has been conducting through Germany and France for the entertainment of the public. The poor creatures were very successful in Berlin, where Professor Virchow and others made them the subject of scientific examination. Thence they went to Darmstadt, where the most attractive member of the company died. In Westphalia two others died — a woman and a child, the latter of small-pox. From Crefeld they were taken to France, and at length the survivors, only five in number, reached Paris. There the sanitary authorities forbade Herr Hagenbeck to give a performance until the members of the troupe had been vaccinated. To make safety doubly sure the terrified Esquimaux were operated upon twice ; but, in spite of this extra precaution, they all fell sick and died of the small-pox within a few hours. This fact, of course, does not prove anything ; but those who are over-anxious to be convinced never require " confirmations strong as proofs of holy writ."

— In the *Annus Medicus* of the *Lancet* for December 25, 1880, under the section on therapeutics, we find the following : Not the least noticeable therapeutical communication of the year is that by Dr. Roderick Kennedy, of Kingston, Canada, on the use of large doses of olive oil for softening and causing the easy expulsion of biliary calculi ! In the review of surgery it is confessed that Chian turpentine has not realized the bright hopes at first held out. The writer yields himself somewhat prudently to a candid appreciation of litholapaxy, and says : In the surgery of the genito-urinary organs the year just closing has seen Bigelow's operation for stone in the bladder more firmly established. Increased experience has proved the truth of the chief of Bigelow's maxims, though most English surgeons have preferred not to follow their American *confrère* in his entire contention. The evidence now before the profession appears conclusive that lithotripsy with evacuation is far preferable to the older method of Civiale, although whether Bigelow has extended the limits within which the crushing operation is advisable is at present uncertain, such an astute surgeon as Cudge being of the opinion that he has not.

— We copy the following interesting note, The Antiquity of the Drainage-Tube, from the *British Medical Journal* : —

SIR, — The following passage from the Memoirs of Captain Creighton may be of interest to some of your readers. These memoirs were compiled by Dean Swift, from the manuscripts and oral relations of Creighton, who had been a " remarkable cavalier " in the reigns of Charles II. and James II., and were published in autobiographical form in the year 1731. In the skirmish at Ayrmoos, which took place in the year 1680 or 1681 (the old soldier is, unfortunately, somewhat careless about his dates), Creighton received a broadsword wound in the umbilical region, of which

he tells the subsequent history with some minuteness. I give his own, or rather the dean's, words, but abridge considerably : —

" My surgeon having neglected to tie a string to the tent of green cloth which he used for the wound, the tent slipped into my body, where it lay under my navel seven months and five days. When the tent was first missing, neither the surgeon nor anybody else ever imagined that it was lodged in my body, but supposed it to have slipped out of the wound while I slept. While I continued at Edinburgh, I ordered some pipes of lead to be made in a mould, through which the thin corruption which continually issued out of the wound might be conveyed as through a faucet. These pipes I cut shorter by degrees, in proportion as I imagined the wound was healing up at the bottom. When I was in Ireland, I made a coarse pipe myself. This pipe, after the wound was washed with brandy, always remained in my body till the next dressing ; but being made without art, and somewhat jagged at the end, it happened one morning, when the pipe was drawn out as usual in order to have the wound washed, the tent followed."

Are the rough-and-ready " pipes " of the shrewd old cavalier the first recorded instance of the drainage-tube ? Whether or not, he deserves credit for his ingenuity. I am, sir, your obedient servant,

CONOLLY NORMAN, F. R. C. S. I.

DISTRICT ASYLUM, MONAGHAN, IRELAND, December 15, 1880.

Miscellany.

A DISLOCATED KIDNEY WITH CYSTIC DEGENERATION.

MR. EDITOR, — The following case may prove of interest to your readers : R. S., a man about forty years of age, has been for some years past from time to time a patient of mine. I have attended him through several febrile attacks. Convalescence has been uniformly slow and tedious, he has complained much of a general malaise and has not had strength to perform manual labor, although a poor man dependent on his labor. It has seemed to me for years that some internal organ must be diseased, and yet there was no one group of symptoms by which I could satisfy myself as to the diagnosis. A year ago he had an attack of fever of about twenty-one days' duration. I discovered a hard bunch in the region of the stomach, which I thought, as did several physicians, would prove a schirrous stomach, though he lacked the general symptoms of that complaint. He recovered partially, but was feeble all summer. A short time since he died. At the post-mortem we found a tumor in the place of the stomach. There was no kidney on the left side. On the right side there was a tumor much resembling the other, only not as large. The liver and heart were somewhat enlarged. I weighed both kidneys, the one that occupied the place of the stomach weighed a little over two and one half pounds, and the one we found in place of the right kidney one and one half pounds. There was in both a mass of cartilaginous hardness, and a large number of small cysts, holding half an ounce of fluid which

looked like strong coffee or chocolate. I examined the urine frequently for the past two months, it was almost like clear water, some six or eight pints were passed daily, and the specific gravity at no time when I examined it was over 1005. There was not a trace of albumen or sugar, and it was deficient in the normal salts to a great extent. He had not complained to any extent of his kidneys, and did not suffer much from pain in any locality, though having a general discomfort. Very respectfully,

R. K. CLARK, M. D.
GEORGIA, VT.

RE-VACCINATION.

MR. EDITOR, — When a third-year medical student, in the winter of 1869-70, I visited a small-pox ward connected with the City Hospital. On, I think, two successive days I made the medical visit, and examined the patients in company with Dr. Webber, the attending physician. The four or five other students who made the visit at the same time were revaccinated immediately after. I carelessly neglected to take this precaution, relying upon the protection of a vaccination soon after birth and again in early childhood, leaving an interval of nearly twenty years since the revaccination. In due course of time I was taken down with a severe attack of varioloid, which kept me a prisoner for several weeks, and an ulcer of the cornea, developed during the progress of the disease, confined me to a dark room for several weeks after.

The inmates of my house were all revaccinated, and all escaped the disease, as did all my fellow students who had been exposed at the same time.

This is, to be sure, but a single case; but it was sufficient to convince me of the value of revaccination, as I feel sure I should have escaped had I taken equal precautions with my friends.

I shall be glad if it has any weight in influencing any one to take the same view as myself.

JAMES R. CHADWICK.

UTERINE DISEASES.

MR. EDITOR. — It is now perhaps two years since in your journal I read an account of *Viburnum prunifolium* being employed by some Boston physician in uterine diseases.¹ As many cases of diseases of women occurring in connection with nervous diseases are annually treated here, I desire to call attention to my own investigations with this comparatively new medicine. It appears to me to act directly and specifically upon the special nerves of the uterus as a true nerve sedative. I have had several very violent cases of congestive and neuralgic forms of dysmenorrhœa, in one case the dysmenorrhœa being accompanied by epileptiform convulsions of a very severe type, and in each and every case I have seen almost magical relief following the use of the fluid extract of *Viburnum prunifolium*. The case referred to, which was so severe that the intensity of the pain had worn out the unhappy sufferer and induced the epileptiform attacks, was completely cured in a few weeks by the combined use of the *Viburnum prunifolium* and the use of the constant current of electricity, the positive pole being applied to the hypogastric region, and the negative pole, to which was

attached a cup-shaped electrode, directly to the uterus. The galvanic current has a very powerful influence in suspending contractions of the uterus, and also is very efficacious, when used locally over the ovaries, in controlling ovarian neuralgia. Previous to my using the *Viburnum prunifolium* I had been accustomed to rely on valerianate of zinc and fluid extract of gelsemium with the constant current of electricity, but since my first experience with the former drug I have used nothing else. Although I have not had occasion to use it in cases of threatened abortion, I should deem it worthy of use from its action on the ganglionic nerves of the uterus. I have failed to perceive any action on the general system, the whole force of the medicine appearing to be directed to the uterus and its system of nerves. When the pulse has been high from nervous excitement, and the temperature centres in the brain have been temporarily paralyzed, allowing sudden rise in temperature, from nervous excitement, both pulse and temperature have fallen to the normal as the uterine pain has been relieved. It must be remembered, also, that my cases have been aggravated ones, many of my cases having been sent to Sunnyside on the verge of insanity. My conclusions, therefore, are, that in *Viburnum prunifolium* we have a uterine sedative more powerful than any other in controlling dysmenorrhœa and uterine contractions, and that it probably acts by passing from the blood to the nerve centres, and is special in its effect upon the ganglionic nerves of the uterus. Yours very respectfully,

EDWARD C. MANN, M. D.

SUNNYSIDE MEDICAL RETREAT,
TARRYTOWN-ON-THE-HUDSON, February 7, 1881.

"GEORGE ELIOT."

WITHOUT doubt, anything pertaining to the final illness of George Eliot will be of interest to our readers. We condense from the *London Lancet* the following account: —

On December 18th, "George Eliot" was present at an afternoon concert, which she much enjoyed. In the course of it her husband, Mr. John Cross, noticing that the place was somewhat draughty, proposed to throw her shawl over her shoulders: but she declined the attention, with the remark that it was very hot. On Sunday afternoon she felt a little chilly, but was well enough to receive and entertain Mr. Herbert Spencer and other friends. On Monday morning she was ill, and Mr. George Welland Mackenzie, summoned to see her, found her in a somewhat feverish condition, with symptoms of laryngeal catarrh. On Tuesday morning the laryngeal trouble had almost disappeared, but she complained of pain in the right lumbar and iliac regions, though not so severely as she had often felt it before. On Tuesday evening, although both laryngeal catarrh and lumbar pain were almost gone, her breathing was frequent, and she was restless and uneasy. The temperature, however, was not above 100° F., and a careful examination revealed no signs of fresh local mischief. On Wednesday morning there was considerable prostration; the breathing was hurried; the face was gray and anxious; and there was general uneasiness. Again Mr. Mackenzie made a careful examination without discovering any fresh local complication, which he was anticipating from the increasing gravity of the symptoms. On that evening,

¹ Vol. xlix., p. 634, 1878.

at six o'clock, Dr. Andrew Clark visited the patient with Mr. Mackenzie. A somewhat sudden and serious change had occurred in the course of the afternoon. The patient lay on her back, with the shoulders raised. The eyes were closed; the face was of an ashen-gray color; the lips were slightly livid; the arms lay extended on the coverlet; the breathing was extremely hurried, but quiet, and, on feeling the pulse, which was frequent, small, and irregular, the hand was found to be cold and clammy. On placing the stethoscope upon the chest, a loud to-and-fro friction was heard throughout the whole cardiac region. Death was evidently near at hand, and the heart rapidly failing; there was complete unconsciousness, and she ceased to live about ten o'clock.

Although the death of this illustrious woman appears to have been thus painfully sudden, it was not so in reality; preparation was being made for it during the last eight years. In 1873, on account of the cessation of a uric-acid deposit, and of attacks of pain in the right side and groin, Dr. Clark inferred the presence of a uric-acid calculus in the kidney. From that time until near the close of life there had been several attacks of pain, sometimes with and sometimes without hæmaturia. In the course of the year 1880 the urine had steadily fallen in density, and contained sometimes albumen, sometimes pus. In October last she was found to be suffering from symptoms of slight calculus pyelitis.

During the last few years, therefore, "George Eliot's" general health had been visibly failing. She was less capable of sustained work, and liable to sudden illnesses from small causes. The organism, well enough for the ordinary round of a quiet life, was unequal to any extra demand; and thus it was that a sudden chill brought it, unhappily, to a speedy end.

PILGRIMS AT MECCA.

According to the report of the Turco-Egyptian Sanitary Commissioners at Mecca, the number of Mohammedan pilgrims collected in and about the holy city (Mecca) during the pilgrimage just ended amounted, between the 3d and 16th November, to two hundred thousand persons; composed of natives of Turkey, India, Egypt, Morocco, Arabia, Syria, Persia, Java, etc. The greatest mortality amongst them after their first arrival in Mecca, about November 4th, was twenty-one daily. During the sacrifices on Mount Arafat the maximum mortality reached thirty-one daily, and in Mecca, after their sojourn on Mount Arafat it reached thirty-seven daily; the total deaths from November 4th to 19th being set down at two hundred and ninety-six.

The number of animals — sheep, camels, and other beasts of burden — collected in the neighborhood of the pilgrim encampment is estimated at a figure far exceeding the number of the pilgrims; and when we remember that this enormous host of people and animals are collected together in one vast encampment without any organized sanitary police to compel compliance with the orders of the sanitary authorities, the number of deaths is not surprising.

The same report states that during four days no less than a hundred thousand sheep were slaughtered in the valley of Mouna, and that, notwithstanding the establishment of thirteen slaughter-houses, fourteen

reaches for the interment of the carcasses of the slaughtered animals and the *débris*, five hundred and five public latrines, the sanitary authorities found themselves utterly unable to enforce their use for want of a proper sanitary police. — *Lancet*.

WANTON CRUELTY UNDER THE GUISE OF SPORT.

Is there any superfluous energy which is not worked off by associations like those for the Obstruction of Scientific Inquiry by the Suppression of Vivisection? If this is not the formal title of the organization it expresses the idea. A field admirably adapted for the exercise of pity and effective interference offers itself in connection with the monstrous pastime of pigeon-shooting. We have again and again called attention to these atrocities, committed under the pretence of "sport," and bringing unmerited contumely on the legitimate enterprise of the true sportsman, who would no more be guilty of pigeon-shooting *à la mode* than he would of chasing cats or flying cockchafers with pieces of cotton attached to their legs. There is a wondrous combination of brutality and imbecility in the slaughter of tame pigeons which makes the "amusement" difficult to describe. It has been asked whether a substitute could not be devised. A flight of toy boomerangs, or feathered tops, of the Lowther Arcade pattern, would afford fully as much diversion as the doomed consignment of pigeons sent to be slaughtered for the afternoon's entertainment of the women in satins and sealskins who frequent the places where this hideous cruelty is practiced. The only objection to substituting inanimate objects for the present victims would be that inasmuch as the feathered top and the toy boomerang would move, which the dazed and exhausted pigeons often refuse to do, the gallant sportsmen might find it difficult to make a decent score! There are, doubtless, devices by which a fair proportion of hits could be secured, but this we leave to the initiated. Suffice it, in the interests of humanity, as well of the suppression of cruelty to animals, to enter another protest against a practice which is nothing more or less than a wanton burlesque of sport. — *Lancet*.

ACCIDENT TRAPS.

WE referred last winter to one of the street dangers of which the gauntlet has to be run by pedestrians in frosty weather, namely, those horrible, shiny, intensely slippery, iron covers to the openings of street coal-cellers. Either in damp weather, or lightly covered with snow, these deceitful contrivances are a certain cause of accident to the unwary. A hundred times worse than a simple slide, they first cause the body to glide onward rapidly, and then, the foot arriving at the side, it is brought sharply up with a jerk, on the violence of which depends the amount of injury sustained by the unfortunate passenger. These slippery contrivances have during the past week been the cause of many broken limbs, and once more we protest against their use being any longer permitted. It is easy enough to substitute a roughened substance for the material they consist of — a measure imperatively called for in the interest of public safety. — *Medical Press and Circular*.

SUFFOLK DISTRICT MEDICAL SOCIETY.—A regular meeting will be held at the hall, 19 Boylston Place, on Saturday evening, February 26th, at seven and a half o'clock. The following papers will be presented: Dr. A. N. Blodgett, The Colloid Treatment of Strains and Sprains. Dr. B. O. Kinnear

will open the discussion. Dr. J. J. Putnam, A Case of Stretching of the Facial Nerve. Dr. S. G. Webber will open the discussion. Dr. E. W. Cushing will report Two Cases of Trephining. Supper at nine o'clock. All members of the Massachusetts Medical Society are invited to be present, and join in the discussion.
H. C. HAVEN, M. D., Secretary.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 12, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	709	274	21.02	19.75	8.04	5.64	.85
Philadelphia.....	846,984	407	122	21.87	5.16	3.19	3.19	12.04
Brooklyn.....	566,689	248	105	27.42	18.15	15.32	6.85	—
Chicago.....	503,304	218	108	29.82	11.93	12.84	2.29	4.13
Boston.....	362,535	177	71	19.21	12.99	11.30	.56	—
St. Louis.....	350,522	150	56	12.67	16.00	2.67	—	—
Baltimore.....	332,190	150	51	17.33	6.00	8.00	4.67	—
Cincinnati.....	255,708	109	43	9.17	18.34	2.75	2.75	—
New Orleans.....	216,140	118	36	15.97	16.10	4.25	1.70	—
Pittsburgh.....	156,381	57	26	28.07	19.30	7.02	10.53	—
Buffalo.....	155,137	—	—	—	—	—	—	—
Distriet of Columbia.....	177,638	76	22	10.53	28.95	2.63	1.32	—
Milwaukee.....	115,578	44	18	18.18	13.64	6.82	6.82	—
Providence.....	104,850	37	12	24.32	8.12	8.12	8.12	—
New Haven.....	62,882	27	—	11.11	22.22	7.41	—	—
Charleston.....	49,999	34	6	5.88	5.88	—	—	—
Nashville.....	43,461	11	3	9.09	9.09	—	9.09	—
Lowell.....	59,485	32	12	12.50	25.00	3.13	—	—
Worcester.....	58,295	19	8	21.05	17.89	—	10.53	—
Cambridge.....	52,740	17	9	11.77	35.30	5.88	—	—
Fall River.....	49,006	18	7	16.67	—	11.11	—	—
Lawrence.....	39,178	12	6	41.67	8.33	—	—	—
Lynn.....	38,284	8	5	37.50	12.50	25.00	—	—
Springfield.....	33,340	6	1	16.67	16.67	—	16.67	—
Salem.....	27,598	11	2	—	36.36	—	—	—
New Bedford.....	26,875	10	5	10.00	10.00	10.00	—	—
Somerville.....	24,985	7	3	42.86	—	42.86	—	—
Holyoke.....	21,851	10	2	10.00	10.00	—	—	—
Chelsea.....	21,785	12	6	25.00	—	—	—	—
Taunton.....	21,213	11	2	—	36.36	—	—	—
Gloucester.....	19,329	5	1	40.00	20.00	20.00	—	—
Haverhill.....	18,475	5	1	40.00	—	20.00	—	—
Newton.....	16,995	14	4	35.71	35.71	21.43	—	—
Newburyport.....	13,537	9	1	—	11.11	—	—	—
Fitchburg.....	12,405	1	0	—	—	—	—	—
Twenty-four Massachusetts towns.....	201,047	66	16	18.18	15.15	10.61	—	—

Deaths reported 2845 (no return from Buffalo); 1044 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 577, lung diseases 424, consumption 403, diphtheria and croup 216, scarlet fever 105, small-pox 64, diarrhoeal diseases 38, typhoid fever 29, erysipelas 28, cerebro-spinal meningitis 26, measles 23, malarial fevers 22, whooping-cough 19, puerperal fever seven. From *diarrhoeal diseases*, New York nine, New Orleans eight, Chicago six, District of Columbia four, Baltimore three, Philadelphia and Boston two, Brooklyn, St. Louis, Cincinnati, and Providence one. From *typhoid fever*, Philadelphia four, New York, Chicago, Boston, and Pittsburgh three, St. Louis two, Baltimore, Cincinnati, New Orleans, Milwaukee, Charleston, Lowell, Lynn, Holyoke, Gloucester, Haverhill, and Attleborough one. From *erysipelas*, Brooklyn six, Chicago five, New York and Philadelphia four, St. Louis and Cincinnati two, Baltimore, District of Columbia, Providence, Lowell, and Worcester one. From *cerebro-spinal meningitis*, New York, Chicago, and Lawrence five, St. Louis three, Philadelphia and New Orleans two, Charleston, Worcester, Fall River, and Brockton one. From *measles*, New York eight, Boston five, Chelsea three, Pittsburgh and Spencer two, St. Louis, Cambridge, and Newton one. From *malarial fevers*, New York 10, Brooklyn five, Chicago two, Boston, St. Louis, New Orleans, Milwaukee, and New Haven one. From *whooping-cough*, New York seven, Chicago, Boston, and Baltimore two,

Philadelphia, Brooklyn, St. Louis, Pittsburgh, Providence, and Lowell one. From *puerperal fever*, St. Louis four, Philadelphia, Newton, and Plymouth one.

Nineteen cases of small-pox were reported in Brooklyn; 14 in Chicago: diphtheria 38, scarlet fever four in Boston; varicella one, in Baltimore; small-pox four, in Pittsburgh; scarlet fever 43, diphtheria eight, in Milwaukee; measles 45, in Providence; diphtheria four, scarlet fever two, in Somerville.

In 43 cities and towns of Massachusetts, with a population of 1,118,958 (population of the State 1,783,086), the total death-rate for the week was 20.97 against 23.39, and 21.02 for the previous two weeks.

For the week ending January 22d, in 150 German cities and towns, with an estimated population of 7,806,891, the death-rate was 27.8. Deaths reported 4174; 1964 under five: pulmonary consumption 567, acute diseases of the respiratory organs 427, diphtheria and croup 197, scarlet fever 86, typhoid fever 67, whooping-cough 59, measles and röteln 38, puerperal fever 17, small-pox (Königsberg) four, typhus fever (Thorn, Frankfort-on-Oder) two. The death-rates ranged from 14.6 in Mannheim to 38.1 in Krefeld; Königsberg 33.6; Breslau 34.1; Munich 29.1; Dresden 24.1; Berlin 26.7; Leipzig 22; Hanburg 27.8; Hannover 18.7; Bremen 17.6; Cologne 24.8; Frankfurt 19; Strasburg 33.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																			
Feb. 6	30.704	27	36	18	70	42	53	55	NW	NE	W	13	6	8	C	C	C	—	—
" 7	30.757	29	41	19	56	38	56	50	NW	E	SW	11	1	6	C	C	C	—	—
" 8	30.585	35	47	22	61	21	61	48	W	S	S	1	5	7	O	F	O	—	—
" 9	30.347	44	53	33	79	54	84	72	S	S	S	1	7	2	O	F	O	—	—
" 10	30.013	49	55	40	100	86	93	93	S	S	S	1	15	12	G	O	R	—	.20
" 11	30.119	44	54	39	91	52	58	67	SW	SW	W	11	16	3	C	C	C	—	—
" 12	29.635	39	44	34	80	100	100	93	E	E	W	13	26	12	O	R	R	—	1.90
Week.	30.309	38	55	18				68										17.68	2 10

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., smoky; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 11, 1881, TO FEBRUARY 19, 1881.

BAILY, E. I., lieutenant-colonel and surgeon. The leave of absence granted him December 30, 1880, from A. G. O., extended one month. S. O. 35, A. G. O., February 11, 1881.

GIBSON, J. R., major and surgeon. To accompany Battery A (light) and Battery D, Second Artillery, from Fort McHenry, Md., to the U. S. Barracks, Washington, D. C., for temporary duty thereat. S. O. 26, Department of the East, February 11, 1881.

LIPPINCOTT, H., captain and assistant surgeon. Upon expiration of present leave of absence to report in person to commanding general, Department of the Platte, for assignment to duty. S. O. 34, A. G. O., February 10, 1881.

ELBREY, F. W., captain and assistant surgeon. Relieved from duty at Fort Bayard, N. M., and assigned to duty at Fort Union, N. M., relieving Assistant Surgeon Kane. S. O. 31, Department of the Missouri, February 12, 1881.

BYRNE, C. B., captain and assistant surgeon. To accompany Battery C, Second Artillery, from Fort Johnston, N. C., — abandoned, — to Washington, D. C., and then proceed to Fort Barrancas, Fla., and report to the commanding officer of that post for duty. S. O. 11, Department of the South, February 11, 1881.

HOFF, J. V. R., captain and assistant surgeon. To accompany the four batteries of artillery from Fort Monroe, Va., as medical officer, to Washington, D. C. S. O. 27, Department of the East, February 11, 1881.

FINLEY, J. A., captain and assistant surgeon. To accompany the battalion, Third Artillery, from New York harbor, as medical officer, to the U. S. Barracks, Washington, D. C. S. O. 27, Department of the East, February 11, 1881.

GARDNER, J. de B. W., captain and assistant surgeon. Relieved from duty in Department of Arizona, to proceed to Baltimore, Md., and on arrival report by letter to the surgeon-general. S. O. 34, C. S., A. G. O.

KANE, J. J., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon Elbrey to proceed to, and report for duty at, Fort Bayard, N. M. S. O. 31, C. S., Department of Missouri.

CORRECTION.

MR. EDITOR, — I hasten to correct a most strange error that has occurred in the report of the late councilors' meeting. I never said or thought that the "committee on membership" of the Massachusetts Medical Society had a right "to expel a man from the society." The society alone can "expel a man."

Yours truly, HENRY I. BOWDITCH.

Boston, February 17, 1881.

GYNECOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the society will be held at Medical Library Rooms, on the first Thursday of March, at 10:30 A. M. Subject, Pelvic

Hæmatoecle, introduced by a paper by H. B. Stoddard, M. D. Profession invited. HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Columnæ Adiposæ. A Newly-Described Structure of the Cutis Vera, with its Pathological Significance in Caruncle and other Affections. By J. Collins Warren, M. D. Cambridge: Riverside Press. 1881.

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Lectures.

PERNICIOUS INTERMITTENTS.¹

DELIVERED IN CHICAGO MEDICAL COLLEGE, DECEMBER, 1880.

BY N. S. DAVIS, M. D.

Professor of Practice of Medicine.

GENTLEMEN, — We will talk to-day about the pathology and treatment of what is called pernicious, or malignant, chills; that form of periodical fever which assumes a dangerous character. Perhaps there is no one disease named in the catalogue that illustrates the necessity of studying the pathological conditions as a guide to our therapeutics, instead of mere names of diseases, better than this. For if we look at the various authors we find them describing quite a variety of cases under this head, differing widely from each other; and if we turn our attention to the ordinary practitioners in the profession who allude to them, it is quite common for them to say such a patient had a malignant or a congestive chill, and speak of him as having congestive chills five or six times. These are usually of that class who always magnify whatever ailment comes under their care, apparently for the purpose of getting more credit for the cure.

Malignant or truly pernicious malarial chills occur not very frequently in our country, but in the most intensely malarial districts cases are seen almost every year. Dr. Drake tells us they are found most frequent between the parallels of thirty-one and thirty-three degrees, which includes that belt in the southern states comprising the rice fields, the cane brakes, and the borders of streams and bayous opening into the Gulf of Mexico. According to Dr. Drake the next most common place to find them is along the Red River region of Louisiana, and the southern border of Lake Michigan, from Chicago around to St. Joseph. In the early settlement of the country they were quite common in the latter region, but with increase of population and its consequences they have become rare.

In Europe they have long been familiar with this variety of malarious fever, in some portions of Holland, Turkey, and Austria, and also on the western coast of Africa. These are the regions where this variety of malarious fever most frequently occurs, and consequently where its peculiarities are most familiar to the profession.

You will remember that in speaking of the *modus operandi* of malaria on the human system, I deviated from the opinions most commonly expressed on this subject, which are, that malaria, whether organic or inorganic, produces its primary impression upon the nervous structures through the medium of the blood. Instead of this, I claimed that its presence in the blood produced a primary and direct effect on the elementary properties common to all the tissues; namely, susceptibility and vital affinity; and that the nervous disturbance was only a part of this more general action. I further explained that it primarily caused an increase of the general susceptibility or excitability, coincident with a decided diminution of the vital affinity by which the tonicity of the tissues and the atomic movements are controlled. In speaking yesterday of the sympto-

matology of periodical fevers, I explained that the difference between the ordinary and the pernicious paroxysm was the more profound depression of the vital affinity in the latter. Owing either to the intensity of the exciting cause (malaria) or some peculiarity of the individual, the depression of that property is so great as to endanger an actual arrest of capillary circulation and molecular changes as they occur in the processes of secretion, nutrition, and disintegration; and hence the extreme danger of actual suspension of life in the paroxysm. Or, if reaction does not take place, it is liable to be incomplete, leaving the circulation, molecular changes, and temperature of some of the parts still depressed, even through the intermission. The essential pathology of the pernicious chill therefore is, that the play of vital affinity is so far overcome as to make the restoration of the natural atomic or molecular relations between the constituents of the blood in the capillaries and the organized tissues, extremely difficult. This being the essential feature of the disease, it is necessarily dangerous, because whenever the properties of the tissues become so involved that they lose their inherent power to attract new atoms from the blood and return old ones, as in the natural processes of secretion, nutrition, etc., there is not only imminent danger of the cessation of life, but there is also great difficulty in obtaining any effect from the administration of remedies.

In some cases in which reaction takes place it is not complete or uniform in all parts of the body and extremities. The parts most frequently left pale and cold after the general reaction, are the finger, toes, tip of the nose, and lobe of the ear. Such failure in any part, however limited, should be regarded as indicating the return of another and still more dangerous paroxysm.

Owing to the different degrees of intensity in the action of the malarious poison, or to the difference in the susceptibility of the several groups of organs, or to both, the cases classed as pernicious present considerable diversity in their symptoms and progress. For clinical purposes they may all be arranged in five groups, namely, the comatose, the spasmodic, the pulmonary, the choleraic, and the algid. This number might be reduced by uniting the first two groups in one, calling it the cerebro-spinal. In the first group here mentioned, the force of the morbid impression falls upon the brain, or more particularly upon the cerebral hemispheres, and so far suspends their function as to render the patient unconscious or comatose from the very beginning of the paroxysm. As these cases progress the coma may become hourly more profound, the face pale, the temperature low, pulse feeble, respiration irregular, and pupils dilated, until death supervenes. Dr. Hertz, in Ziemssen's Cyclopadia, speaks of cases that are not only perfectly unconscious, but have reached a stage of apparent suspension of the functions of life so as to appear dead. He speaks of a man who was actually supposed to be dead, and taken to the morgue for examination; but some signs of life being discovered he was returned to his bed, where subsequent reaction took place and he recovered. Such cases of apparent death are rare. In some of the cases in which a comatose condition presents itself a partial reaction soon takes place in which the face becomes deeply suffused, the head and trunk hot, pulse more full, and respiration hurried. In some of these cases the coma gives place to wild delirium, which may end

¹ Specially reported for the Boston Medical and Surgical Journal.

either in the supervention of sleep and an intermission, or the return of coma, general paralysis, and death.

For practical or therapeutical purposes it is important to distinguish these cases in which, at least, partial reaction occurs, from those just previously described. The one is accompanied by febrile reaction, with fullness of the cerebral vessels, while the other remains cold, the pulse weak, vacillating, and irregular, yet both are comatose. In the second group of cases, which I called *spasmodic*, the force of the disease appears to fall upon the spinal cord and medulla oblongata. In these, the paroxysm is ushered in, not with coma, but with severe muscular contractions, either continuous as in tetanus, or paroxysmal, as in convulsions.

In a previous lecture, when giving the general symptomatology of periodical fevers, I described to you some cases in which a prominent feature of the paroxysm was such a rigidity of the muscles of the neck as to keep the head drawn strongly backward or to one side, and others characterized by clonic spasms or convulsions. The latter are seldom seen in the adult, but are much more frequent in children under ten years of age. In all these spasmodic cases there is much danger that the muscles of respiration will become so involved as to fatally interfere with the functions of respiration and circulation.

In the third group of cases the force of the disease, instead of falling upon the brain or spinal cord, is manifested chiefly in the respiratory organs, and the patient, on going into the paroxysm or chill with its general phenomena of depression, feels great oppression across the chest; the breathing becomes laborious, the finger-nails blue, the lips leaden, and the pulse frequent and feeble, with impairment of circulation in the cutaneous surface. While the mind remains clear, though often inclined to drowsiness, the stagnation in the pulmonary capillaries and consequent dyspnea increases rapidly. At first there is a universal mixture of moist and dry râles passing rapidly into the submucous and mucous rhonchi, all over the chest from the clavicles to the diaphragm, posteriorly and anteriorly.

The accumulation in the lungs is sometimes so rapid that the air cells become literally overwhelmed by compression and oedematous infiltration in three or four hours, shutting the air off so completely that the patient dies directly from suffocation. One case of this kind came under my observation many years ago that terminated fatally in about eight hours. More recently, in consultation with another physician, I saw a case almost equally rapid in its progress, but which was arrested, and recovery took place.

In the fourth or choleraic group of cases, the force of the disease seems to fall more directly upon the digestive organs, causing in addition to the general depression and coldness, great epigastric distress and restlessness, with frequent turns of vomiting and purging, intense thirst, dryness of the mouth and fauces, coldness and blueness of the surface and extremities, and weakness of voice, constituting a group of symptoms so closely resembling a severe attack of epidemic cholera that the case would be readily classed as such if the latter disease should happen to be prevailing in the community at the same time. Generally, however, there are less muscular cramps, and the discharges less like rice water in appearance than in cholera. In some of this group of cases, especially in warm climates, and when the pernicious character manifests itself

after one or more paroxysms of a milder grade, more or less hæmorrhage accompanies the stage of exhaustion.

I recollect an instance occurring outside of the city limits, twenty years ago, in the latter part of the summer, where a man, past the middle period of life, had a periodical fever for four or five days, accompanied by looseness of the bowels, and which ended in a paroxysm of extreme depression, during which he had three or four copious discharges of dark grumous blood, and in less than five hours he was in a state of complete collapse, and soon died, apparently from the direct effects of the hæmorrhage.

Hæmorrhage in these cases may take place from the gums, from the mouth, and from the nasal passages, the renal organs, or into the subcutaneous tissues, just as we see sometimes in malignant cases of the eruptive fevers. I saw, not two weeks since, a case of measles where the disease manifested itself in this malignant form. A general hæmorrhagic tendency was developed so early that on the second day of the eruption there was more or less extravasation into the tissues, and an oozing of blood into the mouth, and the patient died within twenty-four hours from the time I saw her, which was on the evening of the third day of eruption. It was a young woman in the vigorous period of adult life.

A similar pathological condition is occasionally seen in the more malignant cases of all the varieties of idiopathic fever.

I have now described briefly the comatose and the spasmodic cases, which involve prominently the cerebro-spinal nervous centres, the pulmonary, or such as endanger life from suspension of the respiratory function, and the choleraic, involving most prominently the digestive organs. The last cases described, accompanied by hæmorrhage, are by most writers placed in a separate group called the hæmorrhagic. There is another variety still, that is known as preëminently the cold or algid group. Primarily all are more or less cold, but there is a class of cases where the patient becomes almost at once cold and blue, and ultimately his organic functions cease without any specific determination to one important organ more than another, unless it be to the cutaneous surface in the form of copious cold sweating. And even the post-mortem examination in these cases reveals nothing more than a paler and drier state of the tissues than natural. When death has taken place in the comatose groups of cases, the post-mortem examination reveals more fullness of the vessels of the brain, with more or less oedematous infiltration into the cerebral substance. In the spasmodic or convulsive group similar appearances are found in the spinal cord or medulla oblongata or both. In the pulmonary group the predominant post-mortem appearances are passive engorgement of the vessels and oedema of the tissue of the lungs. True hepatization or other inflammatory changes are very seldom seen. In the choleraic groups of cases the chief post-mortem changes are increased fullness of the vessels with softening of portions of the mucous membrane of the alimentary canal, with a similar condition of the spleen, and, less notably, of the liver.

All these post-mortem changes point directly to certain pathological conditions, such as general impairment of tonicity in the tissues, including especially the coats of the blood-vessels, and ready passive exudations wherever local determinations take place. These

are shown by the copious sweating from the skin, the still more copious serous and hemorrhagic discharges from the internal surfaces, the vascular fullness with œdema of the brain and lungs, and the actual reduction of temperature. In regard to the latter, Dr. Hertz mentions a case in which the clinical thermometer gave only 88° F. in the mouth, 86° F. in the anus, and 84° F. in the axilla. Such reduction of temperature, as well as the whole assemblage of changes I have described, clearly indicate a great impairment of tonicity, including muscular contractility, and of molecular changes, and innervation.

If these views, sustained alike by clinical observation and post-mortem examinations, are correct they furnish two leading and important indications for treatment. First, to bring about general and uniform reaction by the prompt use of such means as will most efficiently increase the tonicity of the tissues, the molecular changes, and the vaso-motor sensibility. If we succeed in this, and thereby conduct the patient safely to the commencement of a period of remission or intermission, the second indication is to bring him, as speedily as possible, so fully under the influence of some anti-periodic as to prevent the supervention of another paroxysm.

In endeavoring to fulfill the first indication, it has been, from the earliest period in the history of the disease, a common practice to endeavor to establish reaction and warmth by administering large doses of hot stimulating remedies internally and applying all kinds of heating and irritant applications externally. Hot whisky or brandy punch, with or without the addition of pepper, has been given most liberally, with external frictions, sinapisms, hot bricks, hot corn, bottles of hot water, and hot baths, and yet without the slightest beneficial effect on the patient.

Dr. Daniel Drake, in his valuable work on the Topography and Diseases of the Interior Valley of the Continent, states that he has seen the skin made *red* by hot frictions without the slightest effect on the temperature. In one case he saw the patient immersed in a hot bath containing a liberal quantity of salt, mustard, and whiskey; and in another the patient was enveloped in cloths or sheets wet with an infusion of Peruvian bark as hot as could be borne, and covered with oiled silk to prevent evaporation, but in neither was there any improvement in the circulation or the temperature. And he states as the result of his extensive personal investigations that both external heat and the internal use of what are called alcoholic stimulants are absolutely useless in the depression of a true pernicious paroxysm of malarious fever. From what we now know of the effects of alcohol as an anæsthetic to nerve sensibility, and direct retarder of molecular changes and capillary circulation, we should not only expect no benefit but positive harm from its use in these cases. Under the theory of internal congestion, especially of the portal system of vessels, bleeding, large doses of calomel, and various kinds of emetics have been tried, but with no encouraging results, except in a few cases when an emetic of salt and mustard appeared to aid in establishing reaction.

Dr. Milne Edwards many years ago demonstrated very clearly, by an ample series of experiments upon the living animal, that heat diminishes the general tonicity and relaxes the contractile tissues of the body, and that cold increases both by bringing the atoms closer together and strengthening the play of vital affinity.

The results obtained by Dr. Edwards have been fully confirmed by later observations; and whether you agree with me that malaria acts directly upon the elementary properties common to all living tissues, or indirectly through a primary paralyzing influence on the vaso-motor nervous system, as suggested by most writers, they point directly to the sudden and temporary application of cold as the most rational and efficient means we possess for arousing nerve sensibility, capillary circulation, molecular movements, and, as a result, an increase of temperature. I have repeatedly seen this power efficiently displayed in the treatment of cases of opium poisoning. In the case of a little child to whom the mother had given an overdose of laudanum by mistake, I was called in the middle of the night, and as I entered the room the child appeared to be breathing out its last gasp. I immediately caught a cup of cold water and suddenly dashed a part of it on the child's face and chest, which aroused two or three quick and full inspirations, followed by shorter and shorter ones, until another apparent stop; another dash of cold water renewed them, and for more than three hours I sat by the child repeating the dash as often as the respiratory movements failed, during which the poison was so far eliminated and the nervous sensibility restored that it was safe to leave the patient.

In using the dash of cold water for the purpose of establishing general reaction from the cold stage of pernicious fever, the patient should be stripped, and several gallons of cold water suddenly dashed over the head and trunk of the body, then quickly rolled up in warm dry flannel blankets for thirty minutes. If there is not a decided improvement in the pulse and temperature at the end of that time, unwrap him and repeat the dash, following it by the warm blankets as before. This process may be repeated three or four times, if necessary, but in most of the instances in which it has been tried one or two repetitions have been sufficient. I do not recommend to you this method of treating the pernicious chill on mere theoretical grounds, for it has had the sanction of direct clinical experience. So early as 1830, Dr. Fearn, of Huntsville, Alabama, one of the most eminent and successful practitioners in the Southern States at that time, adopted the practice with such success as to attract much attention and to win many followers in the South. He was residing in the belt of country most favorable for the development of this variety of malarious fever, and at a period of time when it was much more prevalent than it has been in later years. Only two cases have come directly under my observation in which the practice was adopted, and in both the result was favorable. One of these occurred more than twenty years since. The patient was a young woman in a family of hydropathic faith, and when they were told by the attending physician, and myself in consultation, that the patient might not live until morning, they took the case into their own hands, wrapped her in cold wet sheets for a pack nearly half an hour, then changed to warm dry blankets, from which time she began to improve, and in less than eight hours she had safely entered the stage of intermission.

While I have no doubt but that the sudden and alternate application of the dash of cold water and dry warmth constitutes one of the most efficient methods of establishing reaction, there are other remedies of real value, especially in some of the groups of cases I have

described, and which may be used either alone or in conjunction with the process just indicated. For instance, in those cases of the comatose variety where a partial reaction has taken place and the face is deeply flushed and the head hot, apply an ice cap to the head and back of the neck. In other cases, where they are equally comatose but pale and cool, instead of the ice cap bring the patient's head over a tub, and with a pitcher filled with tepid water pour a douche of two or three quarts of water over the occiput, repeating it once in from half an hour to an hour, and it will constitute one of the most efficacious means of relief. The same means are applicable to the neck and spine, in the group of cases described as spasmodic or convulsive, and to the chest in those cases where the lungs are involved. In the choleraic cases, accompanied by great restlessness, frequent vomiting and purging, with cold sweat, much collateral advantage may be gained by the judicious use of morphia and atropia hypodermically. If the heart's action is very feeble the injection of morphia and atropia may be alternated with suitable doses of strychnia. In the purely algid cases, as I have described them, in addition to the efficient application alternately of cold water and dry warmth, the prompt administration, either by the stomach or hypodermically, of strychnia and atropia, without morphia, will constitute the best treatment you can adopt.

Atropia is one of the most reliable remedies we have for checking excessive perspiration and increasing the blood in the peripheral capillaries, while strychnia is equally efficient in increasing muscular contractility, and thus strengthening the heart.

If by the foregoing means, or any other, the reaction is established and the patient approaches the period of remission or intermission, how shall we fulfill the second indication and most certainly prevent another paroxysm? I answer, bring your patient as rapidly as possible under the full anti-periodic influence of quinine, which is more reliable than any other remedy we possess. Give twenty grains by the mouth or ten grains by hypodermic injection on the decline of the paroxysm, or as soon as reaction is fairly established, and repeat the same at such intervals that three doses will be taken before the time for the next paroxysm to begin. A less quantity might be sufficient in many cases, but it is so important to make sure of preventing another paroxysm that it is better to err in giving a larger quantity than is strictly necessary than in not giving enough.

Half the quantities just indicated will be sufficient for the next day, and still less the next, after which the case should be treated with tonics, rest, and nutritious food, as in the convalescence from other severe attacks of malarious fever. The patient should be particularly cautioned against resuming active labor, either physical or mental, until his strength is well restored.

—The Imperial Sanitary Bureau of Germany is reported to be organizing a comprehensive plan for reporting all cases of infectious and contagious diseases occurring throughout the empire. Special post-cards are to be distributed among the chief medical officers and authorities of districts, who will send in weekly reports for inscription in the central register; and thus the progress of an epidemic will at all times be observable.

Original Articles.

THE DIAGNOSIS OF LOCOMOTOR ATAXIA IN THE EARLY STAGES.¹

BY JAMES J. PUTNAM, M. D.

THE next symptom to which I would ask your attention is the *absence of the so-called patella reflex*, to which notice was called for the first time in this connection less than four years ago by Professor Westphal, of Berlin.

The method of making the test is familiar enough. Every boy knows that if he crosses his right leg over his left, and raps it sharply just below the knee, the foot will fly out with a jerk. What he does not know is that this is a spinal reflex, and one of the quickest of its family, taking place in health in the course of one six hundredth to three hundredth of a second, as has been proved by careful measurement both in Europe and in the physiological laboratory of our college. It is considered not unlikely that through the stretching of each other's tendons, antagonistic sets of muscles thus help, each, to keep the other in a state of relative tension. But leaving aside the physiological discussion of the phenomenon, which has already a voluminous literature of its own, we may come to the clinical fact that in certain diseases of the spinal cord, those, speaking in a general way, in which the muscles of the lower extremities are habitually in a state of slight rigidity or spasm, as in certain forms of chronic myelitis, this reflex is exaggerated, while in others, in which, as a rule, the muscles are more or less relaxed, it is absent. To this latter group belongs locomotor ataxia.

This statement is not, to be sure, strictly correct. For, in the first place, the patella reflex is often present in the first stages of locomotor ataxia, and, in the second place, it is occasionally present even in advanced stages. This fact has been confirmed by numerous observers. Thus, among others, Berger found it preserved in two cases out of eighty-two (that is, in two and four tenths per cent.), a high degree of ataxia being present in both of them. Out of fifty cases observed by Erb it was present but once.

On the other hand, Berger found it absent in early stages of the disease in seventeen cases out of nineteen, and in three cases it was absent at a stage where no further sign of the affection except pains in the legs was to be seen. In two of these cases the diagnosis was subsequently verified by the appearance of other symptoms, optic atrophy and vesical disorders. Plenty of other testimony to the same effect could be quoted.

It is impossible, as yet, to say exactly where in the spinal cord the lesion must be situated that is to give rise to this symptom. It may, indeed, be assumed, with Westphal, that the lumbar enlargement must be affected, and that in the cases where the reflex is still present this part of the cord has escaped, or at any rate has not been involved in the usual degree and manner. Physiological experiments have, indeed, proved that section of the lumbar enlargement at a certain level will destroy the continuity of the reflex loop through which the excitation, coming from the patella tendon, must travel before it reaches the quadriceps extensor muscle. (Tschirjew.)

Of course, also, serious disease of the posterior nerve roots, through which all centripetal impressions must pass before entering the cord, would necessarily

¹ Concluded from page 171.

injure the afferent portion of this reflex loop. In this case, however, it might be expected that the sensibility of the skin supplied by these nerves would be impaired or lost. It is, however, by no means always the case that this conjunction of symptoms is observed. On the contrary, the patella reflex may be lost without either the cutaneous sensibility being diminished or neuralgic pains being present (see, for example, Erb in Ziemssen's *Encyclopædia*), and Senator has recently ascertained that, in dogs and rabbits, the posterior columns, and even the posterior cornua of gray matter, may be thoroughly destroyed without this reflex being abolished.

Senator further discovered that the simple section of the outer half of the *lateral* columns at the level of the fifth to sixth lumbar vertebra would destroy the reflex in question, and that, too, without necessarily interfering materially with voluntary motion. He believes that the tendon reflexes are intimately associated with the tonic condition of the normal muscle, as was hinted above, though it may sometimes seem, owing to the grossness of our tests, as if the reflexes were lost while the tone of the muscle is preserved, because a slight loss of tone is not easily recognized. The relaxed state of the muscles of tabetic patients has repeatedly been commented on, and I have long been in the habit of pointing out to students that when such a patient crosses his legs the leg which is uppermost usually drops down so limp that the angle at the knee becomes almost a right angle. This is at times so striking that it would almost of itself suggest the diagnosis. The same thing is of course often enough to be seen with persons in health if they are tall and thin.

Positive anatomical evidence is as yet wanting that the lesion which in man causes the early disappearance of the patella reflex lies in that part of the cord indicated in these experiments of Senator's, but we may fairly expect something of the kind in the future, allowance being made, of course, for the difference in structure between the spinal cord of the rabbit and that of man.

It is a singular fact that this symptom, depending as it evidently does, on disease in a circumscribed portion of the lumbar enlargement, should often be present as one of the very earliest signs of locomotor ataxia, in conjunction with disease of very distant structures, such as atrophy of the optic nerves, alone.

This circumstance certainly seems to add strength to Leyden's view that the cerebro-spinal axis may be affected very early in its whole length, yet not severely enough to call out the usual array of classical symptoms. In other words, the longitudinal extension of the disease may be at or near its maximum long before the lateral extension or the intensity at any given point is complete.

The only case of presumed tabes in which I have personally found the patella reflex preserved is one that is of much interest, though in several respects peculiar and in need of further study. It is distinguished mainly by the presence of a strongly ataxic gait, which is closely like that of many tabetic patients, though it is not to be denied that it also suggests in a measure the "reel" of cerebellar disease. This has grown but very little worse since its first development, fifteen years ago. There has never been much pain till within the past year or so, and even this has not been perfectly characteristic of tabes.

The patient has complained much for some time

past of "numbness" of the skin over the back of one or both thighs, but loss of sensibility is not at all marked. Closure of the eyes materially increases his incoördination. The patella reflex is preserved on both sides. Other symptoms are wanting, including those which would especially suggest the presence of disseminated sclerosis or other forms of chronic myelitis.

The diagnostic value of this sign is not greatly lessened by the fact, of which there is no question, that the patella reflex is occasionally absent in health: for it would happen but very rarely that we should not have one or another additional symptom to guide us even in cases of beginning tabes. As a matter of fact, it is wanting in about one and one half per cent. of presumably healthy persons, as is shown by the statistics of Berger, who, with the assistance of Köbner and Kroner, examined 1409 individuals, among whom were 900 soldiers, with regard to this point.

Simple *diminution* of the reflex is not a sign to which much importance can be attached, and indeed, as Berger says, the contraction is often so little marked that it can only be recognized when care is taken to strip the leg bare, to see that the quadriceps muscle and tendon are stretched, yet not held rigid, and to strike a clean blow with a percussor hammer.

Other observers have found it absent in a larger proportion of healthy cases, but none of their observations have, I think, embraced so large a number of persons as Berger's.

I forbear to speak of the gastrocnemius reflex, partly because its absence is a sign of subordinate clinical value, and partly because there is some doubt (Gowers) whether its physiological significance is the same with that of the patella reflex. It is also much oftener absent in healthy persons.

I cannot close this subject without mentioning another observation of Berger's: that in one case, in which, under the use of nitrate of silver and baths, some improvement had taken place, the patella reflex, which had been lost, was found to have reappeared, when, after a lapse of five years, the patient presented himself again for examination.

The *early ocular symptoms* of tabes relating both to the motion of the globe, the iris, and the lens, and to the function of vision are full of interest.

To begin with the latter, it is well agreed that loss of vision, with optic-nerve atrophy, beginning, Charcot thinks, at the peripheral extremity of the nerve and working backwards, is a frequent precursor of the classical symptoms of tabes, and that it may precede the motor disorders by even five, ten, fifteen years and upwards, though it rarely exists long without one at least of the other signs, chief among which are the pains either in the head or the extremities and absence of the patella reflex. Charcot seems inclined to maintain that optic atrophy, when not due to neuritis, to diabetes, syphilis, or embolism of the retina, indicates either disseminated sclerosis, general paralysis of the insane, or locomotor ataxia. Of these conditions the two latter are closely allied, and the former generally presents symptoms by which it can be known. He states it as an opinion founded on long and careful study, for which as physician to the great hospital for incurables in Paris he has had exceptional opportunities, that a majority of the women admitted into the wards (of the Salpêtrière) with loss of vision show sooner or later more or less well-marked signs of locomotor ataxia. This is a strong

statement, but important enough even if only partially accurate. It seems at least to be certain that, taking cases of uncomplicated atrophy of the optic nerve as they run, the patella tendon reflex is oftener absent in them than it is in healthy persons, and it is also certain that optic atrophy is not infrequently met with where no cause whatever other than *tabes* can be found to explain it. Poisoning by tobacco, alcohol, and lead is of course always to be thought of, though all ophthalmologists do not agree (Allbutt) in attaching the same aetiological importance to tobacco poisoning that is accorded it by Hutchinson and other English surgeons. Moreover, there are special signs (central scotoma, etc.) by which atrophy from these causes can usually be distinguished. In the absence of such signs, we must look often and patiently for other indications of *tabes*. Dr. Wadsworth will recall the case of a young woman, twenty or twenty-five years of age, the servant of a friend, in perfect health, who became afflicted with progressive optic atrophy of the most typical kind, coming on absolutely without known cause. For some years she remained without further symptoms, and was then lost sight of.

Dr. F. P. Sprague was kind enough to refer to me, two years ago, a patient in middle life, in excellent health, a railroad conductor, where this same condition was present, associated with absence of the patella reflex, but with no other symptoms whatever of *tabes*.

I shall hope, at a future meeting, to present the subsequent history of these two cases to the society.

Scores of like instances could be quoted where the diagnosis was ultimately verified.

The point is worth insisting on, even to exaggeration, because for those not fully armed with suspicion it is difficult to keep their diagnosis so many years in suspense, or to believe in the existence of the unseen loop that connects groups of symptoms so removed from each other in character and in time of appearance.

Another case of great interest, which occurred in Dr. Wadsworth's practice, and which he kindly allows me to describe, must serve to illustrate not only this point, but also the fact that *tabes dorsalis* is related to mental disturbances, — both to those which constitute the typical dementia paralytica, and also, it would seem, to functional disorders, which may be of only temporary duration.

The patient is a man of middle age, and his history previous to 1871 offers nothing, I think, of special importance. At about that period his mind became temporarily impaired, and it would seem that his vision must also have begun to fail, since, not long after, his color sense had become so imperfect that he could not tell the green of the grass. Between 1871 and 1879 he was several times insane, and obliged to enter the McLean, and afterwards the Worcester, Asylum. Yet his condition was neither one of dementia, nor was it incurable, since for some time past he has been, so far as is known, quite well, and for nine months previous to his visit to the Massachusetts General Hospital in 1880 he had been employed regularly in doing some kind of manual labor at the University Press.

In 1873, while at the McLean Asylum, he was first seen by Dr. Wadsworth, and found to have atrophy of the optic nerves, with impaired vision.

On his coming to the hospital last year it was learned that for ten years past he had had characteristic pains in his legs (thighs, shins, knees, latterly heels). The pupils were found to be small, and not to

respond perceptibly to light, though they did act with efforts of accommodation. The patella reflex was absent on both sides. The gait was pretty good, except that he walked as if feeling for the floor with his feet, and he could stand with his feet together and his eyes closed, though it required an effort. It is now more than ten years since his symptoms first attracted attention.

Of course it is not necessary that absence of the patella reflex should be associated with optic atrophy to make the latter a significant symptom.

Among other observers, Dr. Wadsworth tells me that he has seen a case where characteristic pains had been present for four years, urinary symptoms, and impairment of vision, due to atrophy, for three months or more, and where there was marked incoördination; yet these reflexes were preserved, and there was but little or no alteration of sensibility.

This is the proper place to mention, without dwelling on the matter, that disorders of the special senses of hearing and of smell are occasionally met with as early signs. It is largely to Pierret, again, that we are indebted for what we know on this point.

In the auditory cases the symptoms closely resemble, or, more strictly, consist in, those of typical Ménière's disease, tinnitus with aural vertigo.

We may now hasten to consider briefly the symptoms relating to the muscles within and around the globe of the eye, which are well known to be often affected in the earliest stages of locomotor ataxia.

Every variety of strabismus may be met with; besides ptosis, and pre-hyopia from impaired accommodative power, as well. These paralyzes, or pareses, are all referable to slight changes, probably at the medullary centres of the third, fourth, and sixth and sympathetic nerves, and there is perhaps nothing that is especially characteristic about them, unless the fact that they are usually transitory.

It is not at all necessary for all the muscles supplied by any one nerve to be involved together, but this is not truer of the paralyzes due to locomotor ataxia than of those due to other causes affecting the central or even the peripheral distribution of these nerves.

The pupil is usually contracted, but in the early stages it may be of normal size, and even dilated, as Vincent shows, who examined all these points with great care on a large number of patients at the Salpêtrière.

The most characteristic feature of the pupillary symptoms is, however, the fact that the sphincter of the iris, while it loses the power of responding reflexly to light, continues to act in conjunction with efforts of accommodation. This is seen in the earliest as well as in later stages of the disease.

It happens but rarely that the strabismus of the early stages persists as a prominent symptom throughout, but this and several other interesting points are well illustrated by the following case which I saw at the Massachusetts General Hospital in consultation with Dr. Wadsworth, by whom it was first observed and diagnosed, and afterwards demonstrated before this society. I quote, by permission, from his notes.

The patient was a man of middle life and of healthy appearance, though his occupation, which was that of a longshoreman, had exposed him much to wet and cold. His history, which every pains was taken to investigate thoroughly, was as follows: For three years past he had had divergent strabismus of both eyes, but especially of the right. During the past six months before the time of the first examination the divergence of

the left eye had been getting worse. He had never noticed any unsteadiness of gait until within a few weeks, though the wharfinger afterwards said that he had observed it some time before. It must, however, have been but slight, for until within three weeks he had continued, in spite of the strabismus, to wheel his barrow over a single plank between wharf and vessel. For three weeks he had had "rheumatic" pains in the back, left side, and left thigh.

On examination there was found to be complete paralysis of both third nerves, including the branches to the iris and ciliary muscle, but not including the branches to the levatores palpebrarum. The fundus was normal; the patella reflex absent on both sides; and there were marked and characteristic alterations of sensibility over certain portions of the trunk, and the legs.

Once developed, the pains and the ataxia increased with great rapidity; urinary disorders set in; and within a few months after his first visit to the hospital the patient had become almost a prisoner in his room, because unable to get up and down the stairs without aid.

The objective disturbances of sensibility which are met with in the early, and still more the later, stages of tabes have long been made the subject of profound study, and in their gross features are too well recognized to need more than passing notice.

As with the neuralgic symptoms, so also with regard to these sensory disorders, it may almost be said that a disregard of rule and type, combined with occasional simulation of all types, is their most striking characteristic.

Still, there are certain groups of symptoms of this order which are more common than others, and indeed almost pathognomonic.

It is in tabes that we so often find the sensitiveness to pricking and pinching, and still more to deep pressure, much impaired, while the sense of contact and that of temperature are relatively well preserved. Sometimes such alterations of sensibility as these are found over one patch of skin, of greater or less extent, while the sensibility of a neighboring patch is relatively intact; or it may be, as Berger has pointed out, that as the case progresses the sensibility of one part, impaired at first, will improve, while that of other parts will become impaired in its turn.

Another observer has recently maintained that the reaction of the sensitive nerves of the skin to electrical stimulation may be widely different from that toward other equally powerful excitations.

Remak has repeatedly found that if the skin be exposed to a constant, minimal excitation by electricity the sensation called forth, instead of being persistent and uniform, comes and goes, swelling gradually to a maximum, then gradually disappearing again.

It is not only in the lower extremities that such disorders of sensibility are present; they are often found, even at an early stage, over various parts of the trunk as well, especially about the chest and between the shoulders.

A gross but convenient way to demonstrate the loss of the sense of pressure in the lower extremities, which is usually present to such a marked degree, is to make use of an ordinary spring balance, fastening to the hook at the lower end a sort of trapeze or stirrup made of a few inches of doweling, and a bit of string. When the foot, for example, resting on the ground, is

inclosed in this little trapeze, and a steady pull upwards is exerted on the upper end of the balance in the direction of the axis of the leg, while the knee is held firmly down from above, it is not uncommon to see the indicator of the balance mark twenty, thirty, even forty pounds, before the patient admits that he feels any increase in the pressure of the stirrup against the sole of the foot.

A well-known form of disturbance of sensibility consists in the delay shown in the conduction of impressions, and especially, strong impressions, which may amount to several seconds. Thus the patient, if pricked with a pin, may give one exclamation for the initial touch, and another a second or two later, and perhaps accompanied with a jerk of the leg, for the pain. Or a single prick may give rise to a series of sensations, slightly separated from each other in point of either space or time.

On the contrary, there may be hyperæsthesia instead of anæsthesia of the skin, especially over limited spots during the attacks of neuralgia.

Complete and wide-spread anæsthesia is somewhat rare, but I have seen one very interesting case where it was present over the entire lower extremities, part of the trunk, and (almost complete) over the upper extremities. A consideration of these cases or those where there is anæsthesia of one side of the face would, however, lead us too far astray from the symptoms characteristic of the early stages of the disease.

Neither shall I attempt to speak of the loss of the sense of the position of the limbs, important as it is to a complete picture of the affection, of the various mental symptoms with which tabes may be complicated, of the cardiac disorders, nor of the trophic changes in the seminal fluid (Buch), the teeth and jaws (Vallin, Bouehard), the joints and the bones. Of these latter affections, which though rare are sometimes met with in early stages, we have in the museum of the college some excellent models in plaster, cast, with Professor Charcot's permission, from the original specimens from which the plates in his book were photographed.

I will say, in conclusion, but a single word with regard to one relatively new point in the ætiology and one in the treatment of the disease.

It may be known that various writers, and of late especially Erb, have called attention to the great frequency with which a syphilitic history could be obtained from tabetic patients, and have drawn the conclusion that this disease probably plays an important part among the causes of tabes.

Very recently, however, Westphal, than whom no one is more reliable or accurate, has analyzed with great care both his own cases and those reported by others, and concludes that this supposed fact and the inferences from it are still without solid foundation, and that we cannot without further light on the subject reckon syphilis even among the predisposing causes of tabes.

The point in treatment is this: that within the past year, in as many as four cases of locomotor ataxia, the great nerve trunks of the upper or lower extremities have been forcibly stretched, originally with the view of relieving the severe pains with which in three of the cases the patients were afflicted. Not only was this result attained, however, but in all of these three the ataxic symptoms as well were conjured away. In the fourth case, in which no pains were present, this

result did not follow, and it has been stated that in one of the others there have been symptoms, after a long time, of a relapse.¹

The matter is still *sub judice*, but whether it proves of the immense therapeutic significance that it at first seemed to promise, or not, the results are of the highest scientific interest.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.²

BY F. L. KNIGHT, M. D.

BASIC CAVITY OF THE LUNG TREATED BY PARACENTESIS.

A PAPER on this subject was read at the meeting of the Royal Medical and Chirurgical Society in June last³ by Dr. R. Douglas Powell and Mr. R. W. Lyell. The case recorded was one of basic cavity following pneumonia and complicated with bronchiectasis. The operation afforded remarkable relief for some weeks, when death ensued from pleuro-pneumonia of the opposite lung. The operation was performed as follows: A medium-sized aspiration trocar was first thrust in at the eighth space, mid-scapular line, and a free incision having been made through the tissues down to the intercostal membrane, the fine trocar was withdrawn, and a full-sized hydrocele trocar inserted, which, after slightly enlarging the opening, was in its turn removed, and a large drainage tube introduced. Carbolic dressings were applied. A moderate quantity of secretion escaped from the wound (which gave rise to no serious bleeding), and discharge subsequently from the tube, although free, was never abundant. The expectoration and cough, however, at once almost entirely ceased. The wound was dressed daily under the carbolic spray, and injections of Condy's solution were used. The post-mortem examination revealed the presence of several intercommunicating cavities in the lower lobe of the right lung. The lobe was firmly adherent throughout, and a drainage tube passing through the eighth intercostal space entered a contracted cavity which was connected with the main cavity by a short dilated bronchus. Although at so high a level as the eighth space, it was only separated from the diaphragm by one eighth of an inch. It was evident that in contracting upon the tube the wall of the cavity had come in contact with and partially occluded its extremity. The rest of the lobe was densely consolidated by fibroid growth surrounding bronchiectatic cavities.

In their remarks upon the case the authors, whilst advocating the puncture of chronic basic cavities in suitable cases, deprecated interference with apex cavities, on the ground of its being rarely necessary or useful, and are averse, save in exceptional instances, to making incisions into acute basic abscesses of the lung, as the pleura would probably not be adherent. In future cases the authors would prefer to choose the centre of the cavity rather than its lowest point for puncture, where it is situated in the posterior lobe of the lung.

In the discussion, Dr. Symes Thompson said that owing to diagnostic difficulties the operation was not likely to become a common one, for cases in which a

pulmonary abscess sufficiently superficial could be diagnosed are few, but when there were grounds for believing in the existence of such a cavity, with adherent pleura and condensed lung, the question might be entertained.

Dr. Barlow, from his experience in empyema, urged the importance of a double opening, which dispenses with the necessity of injections.

Dr. C. T. Williams said it was important to discriminate the nature of the case. Cases of bronchiectatic cavities were not suitable, as they were mostly multiple. In ordinary phthisis the apex cavities, as a rule, drain themselves, so that no operation would be called for in them.

Mr. Erichsen said that from a surgical point of view the essential thing was to maintain drainage. Antiseptics were not needed, and were useless in such cases; they only excited irritation.

Dr. Powell thought it would be risky to attempt a double opening into these cavities. The immediate cessation of expectoration after the tapping was remarkable, showing that a small amount of fetid, acrid material would set up much bronchial irritation.

Mr. Lyell said it was impossible to have made a double opening.

CHEKEN IN WINTER-COUGH.

Murrell⁴ reports that he has used cheken in fifteen cases of chronic bronchitis. In all cases the patients obtained some benefit, and in most cases the relief was very marked. There was in a few days a decided improvement in the cough, expectoration was from the first easier, and soon diminished in quantity, and finally the dyspnoea was less. The fluid extract was the preparation used, two drachms in water every four hours, the dose being usually increased at the expiration of a week to half an ounce. Cheken, chekan, or chequen is an evergreen shrub closely resembling common myrtle, and grows abundantly in the central provinces of Chili. It is usually said to belong to the genus *Eugenia*, but by some it is referred to the closely-allied genus *Myrtus*. A good description of cheken, by Mr. Holmes, will be found in the *Pharmaceutical Journal* for February, 1879. It has also been highly praised by physicians in South America for its efficacy in phthisis, especially those attended by hamoptysis, and also in other diseases.

ATMOSPHERIC AND CLIMATIC INFLUENCE IN THE CAUSATION AND CURE OF PULMONARY DISEASES.

Dr. John C. Thorowgood⁵ differentiates phthisis of the lungs into two large groups: (1.) Those originating in catarrh or cold, or in some inflammatory attack in the chest produced by a cold. (2.) Those which are truly tubercular. This form comes on insidiously, often from no cold caught, from no privation of food, but simply from some inherent, often hereditary, vice in the system.

Patients of group number one often derive benefit from going to a mild climate, such as Ventnor or South Devon. When the chief agent for mischief that is to be combated is of an inflammatory nature, a mild, soothing air is the best. Where cough is severe and bronchial spasm frequent, a mild air is also suitable. In removing lingering inflammation after an acute attack on the chest, Dr. Thorowgood has seen excellent re-

¹ See Erlanmeyer, *Chl. fur. Nervenkunde*, etc., No. 21, 1880, Nov. 1. The reader is also referred, for an excellent recent sketch of locomotor ataxia, to a series of lectures by Dr. Bizzardi, in the *Lancet*, for 1880.

² Concluded from page 159.

³ *London Lancet*, vol. n., 1880, p. 12.

⁴ *London Practitioner*, xxiv, p. 321, 1880.

⁵ *London Practitioner*, xxiv, p. 161.

sults come from a sojourn at Torquay, Ventnor, and similar mild, warm health-resorts; but when the disorder has passed from the inflammatory stage to one that involves the general nutrition, and that is marked clinically by softening and breaking down of lung tissue, with night-sweats and copious purulent expectoration, he has never seen any good come of a residence in a mild, sedative climate. To cure a softening lung dryness of the air is essential. Whether a dry, cold, pure antiseptic air does really exercise its curative action by checking some septic process that is going on in the lung, or by annihilating certain morbid germs which engender tubercle, is not yet proved.

DAVOS PLATZ.

Dr. McCall Anderson visited this famous resort for consumptives during the summer of 1879, and has given us the results of his observations.¹ Davos is 5200 feet above the level of the sea, and is very prettily situated in a valley of considerable breadth, which runs N. N. W. and S. S. E., so that the sun shines upon it for many hours, even on the shortest winter day; its soil is dry, and the air is still, for, except towards the southeast, it is sheltered by high mountains in every direction, while, of course, it is highly rarefied, being nearly one fifth lighter than it is at the level of the sea. The ground is covered from November to March with snow, which is crisp and hard, and does not melt under the influence of the hottest sun, unless the Föhn, or generalized southwest wind, makes it appearance, a comparatively rare phenomenon fortunately, for it is very depressing, and apt to prove injurious to patients. The solar radiation is intense, although the air itself is cool and refreshing; this is illustrated by the fact that the temperature in the shade may be below the freezing point, while Casella's black bulb vacuum thermometer may register 130° F. in the sun, so that the snow does not melt upon the ground. In winter the solar radiation may be such that the thermometer may register even 165° F., but at night the temperature may fall very low, even some degrees below zero. Dr. Anderson gives the histories of a number of patients whom he had examined in whom pulmonary disease had been arrested by a residence at Davos. The cases, according to Dr. Anderson, which are most likely to do well there, are pretty much those which are most likely to improve elsewhere, namely, non-hereditary, uncomplicated cases of chronic phthisis, in which the extent of lung tissue involved is not excessive, with this proviso, however, that while the prognosis of phthisis with pronounced stomach-symptoms is not good at home, these are the very cases which should be sent to Davos, for there the appetite usually improves rapidly, and the digestive organs soon resume their normal vigor. It is a mistake to suppose, as some have done, that a tendency to hæmoptysis constitutes a contra-indication. Cases complicated with organic disease of the circulatory or nervous systems are unsuitable for treatment there, the place being too intensely stimulating for such persons. It is likewise contra-indicated where a very large amount of lung tissue is involved, or where the disease occurs as a complication of bronchitis, with emphysema; for in this highly rarefied atmosphere there is not a sufficiency of lung surface to aerate the blood, and such patients run the risk of being suffocated.

¹ Glasgow Medical Journal, xiii. 265.

ON THE INFLUENCE OF MOUNTAIN AIR IN THE TREATMENT OF PULMONARY CONSUMPTION.

Dr. J. Henry Bennett introduced a discussion on this subject at the annual meeting of the British Medical Association at Cork, in August, 1879.²

He said that he thought he was warranted in stating that it was now generally conceded, both at home and abroad, that the therapeutical views which reigned during the first half of this century with reference to the influence of climate on phthisis were erroneous. It was generally believed that a mild and moist, or a warm and moist, climate like that of Madeira or the West Indies, was the most calculated to arrest phthisis and to promote a recovery, when this was possible.

Dr. Bennett claimed for the late Prof. J. Hughes Bennett, and for himself, the merit of having contributed to establish the fact that tropical, or even semi-tropical, climates are inimical to the constitutional states which lie at the root of phthisis, and in most cases accelerate its progress, tending to prevent instead of to secure recoveries.

When we come to examine the therapeutics of phthisis, we find undoubted evidence that phthisical patients recover in every region of the northern and temperate climates, the regions where it has been more especially studied. We are told, however, that the highest inhabited regions of Europe — regions between five and six thousand feet high — constitute a specially desirable climate for consumptives, both in summer and winter, and offer greater chances of cure than any other locality. That cures can, and do, take place in these regions, even in winter, may be conceded to theory as well as practice if the habits of the sufferers are rendered hygienic. Many of those who have done well there, especially Germans, have consented to live in fine weather out of doors, whereas in the plains they had been, and would have been, shut up in unhealthy rooms. Much more, however, is demanded. It is asserted that there is an actual curative virtue in mountain altitudes, and that the chances of recovery are immeasurably increased by passing the summer or the winter, or both, at these elevations. This is the question to be discussed.

Within the last twenty years a considerable amount of information respecting the meteorological and health condition of high altitudes has been brought forward by French physicians who have resided and practiced on the high plains of Central America, at Mexico, on the plain of Anahuac at Santa Fe de Bogota, Quito, Potosi, and the sides of the Cordilleras Mountains generally. (Dr. Jourdanmet, Dr. Coindet, Dr. Domec.) They may be said to have established that phthisis is rare among the natives at these elevations, although common in the neighboring sea-coast towns, such as Vera Cruz and Guayaquil, and that in imported cases the progress of the disease is frequently arrested. Dr. Bennett said that he had lately been in correspondence with Dr. Domec, now a professor in the new university of Lille, who has recently passed four years at Quito, in Ecuador, a town of seventy thousand inhabitants and nearly ten thousand feet above the sea. He was one of the professors at the medical school, physician to the hospital, and engaged in active private practice. He saw only two or three cases of spontaneous phthisis among the natives during that time, and in all the cases of imported phthisis from the sea-coast that he met with the progress of the disease soon appeared to be arrested.

² British Medical Journal, July 10, 1880.

Different causes have been brought forward to account for this comparative immunity from phthisis on the healthy, bracing, but wild mountain plains of Central America, the most prominent one being the diminution of barometric pressure. The same immunity has been claimed for the mountain elevations of Europe, and the diminution of barometric pressure has been adduced as one of the chief reasons. The claim, however, proves to be an error as far as the Swiss mountains are concerned; so the explanation falls to the ground. Müller's work on the Statistics of Phthisical Mortality in Switzerland at once disposes of the argument that the diminution in barometrical pressure in the mountain elevations of Switzerland secures to their inhabitants immunity from phthisis. From Dr. Müller's tables it appears that phthisis destroys its victims at all elevations pretty nearly at the same ratio as in the plains. Thus the mortality, which in Switzerland is 10.2 per cent. at 1500 feet above the sea, is still 9.8 at an altitude from 3100 to 4100 feet for those who are engaged in industrial pursuits (laces and watches); but for those who are engaged in agricultural pursuits it is respectively 6 and 5 per cent. Above 5000 feet elevation, with an exclusively agricultural population, it is still 4 per cent., not very much below that of the agricultural population on the plains and at 4400 feet. In London, one of the centres of phthisis, the mortality is 12 per cent. In the mountain regions of Switzerland the mortality is nearly doubled for every one whose occupations are industrial or sedentary.

[While Dr. Müller's tables show that there is not an immunity from phthisis at any elevation in Switzerland, they show, also, that there are fewer deaths from phthisis in the elevated regions. For some unexplained reason the mortality appears quite high comparatively at the elevation selected by Dr. Bennett to sustain his position; but at the elevation from 2300 to 3000 feet Dr. Müller gives the mortality in the industrial class as 4.7, and in the agricultural class as 2.9 per cent. as compared with 10.2 and 6 per cent., from 200 to 1600 feet elevation. — *REV.*]

It cannot either be extreme cold that can give to mountain elevations an immunity from phthisis. The elevated plains in Central America are in the tropics; Quito is on the line; a snow level is many thousand feet higher, varying in the tropics from 11,000 to 17,000 feet, and the climate is mild, equable, and bracing, both in winter and summer. Dr. Domec states that at Quito, in a large room with doors and windows open day and night, he found the temperature to oscillate all the year round between 57° and 65° Fahrenheit. May not this free and constant ventilation in a temperate, equable climate be the cause of the freedom from phthisis, which at first sight appears so singular. In these towns of the mountain plains of tropical America there are poverty, destitution, famine, vice, and all other evils to which flesh is heir. Owing, however, to the ideal physiological climate the entire population lives in the open air. Dr. Domec states that other forms of tubercularization, such as tubercular meningitis, tubercles in the bones, or in the testicles, and acute miliary tubercularization of the lungs proved equally rare. He never met them in his medical or surgical wards, nor was pleurisy, acute or chronic, often seen; and yet various forms of scrofulous disease were so common as to impress a peculiar character on surgery. Catarrhal and inflammatory affections of

the aerial passages, of the bronchial tubes, and of the lungs were frequent and severe—a fact which he rationally attributes to the great power of the sun in a generally clear mountain atmosphere, and the sudden transition to shade temperature. This is a most important pathological fact, showing that severe inflammatory conditions of pulmonary organs do not lead to phthisis alone, *per se*.

Dr. Bennett thinks he has thus demonstrated his position. The undoubted immunity or comparative immunity from phthisis enjoyed by the inhabitants of the elevated mountain plains of tropical and subtropical America, from Mexico to the Argentine Republic, cannot be owing to mere elevation, to barometric conditions, inasmuch as phthisis reigns at all elevations, even above five thousand feet on the mountains of Switzerland; it cannot, either, be attributed to mere dry cold, as the mortality from phthisis is greater in Norway, Sweden, and Northern Russia than in London or Paris. What, then, can be the cause? In my opinion it is explained by the equable climate, ranging at Quito all the year, between 57° F. and 66° F. In such a climate the habits of the people secure constant and free ventilation night and day. The entire population lives, as it were, in the open air.

It appears that if we are guided by the laws of physiology, by those of general pathology, and by the meteorological facts brought from the mountain plains of Central or tropical America we are warranted in concluding that for Europeans the north shores of the Mediterranean offer the best attainable climates in winter. They constitute the nearest attainable approach to the American mountain plains, and admit of life being spent as there in the open air in the day, as also a free ventilation at night. Quito is a long, long way from us, or we might rationally make it a sanitarium for consumption. Mexico is easier of access, but not to be reached without great trouble and expense.

ARTIFICIAL INFLATION AS A REMEDIAL AGENT IN DISEASES OF THE LUNGS.

Dr. W. Y. Godbury, of Yazoo City, Miss., writes on this subject. It occurred to him, after reading a history of the use of condensed and rarefied air, that it was expensive and inconvenient, and the intervals were too long to accomplish the desired effect. He then sought for an instrument which could be used at the discretion of the patient, and one that would be in reach of the poorer classes. One was improvised by removing the spray tubes from a Richardson hand-ball and bulb atomizer, and inserting in place of the spray tubes a mouth tube. The mouth tube is inserted into the mouth with the left hand; a deep inspiration is taken; with the fingers of the same hand the lips and nostrils are closed, and the hand-ball worked rapidly with the right hand as long as the patient can bear it. In a healthy subject the operation is painless, and may be prolonged for a minute or more, but to a person with diseased lungs it is at first disagreeable, though not painful, and the patient complains that he cannot force in much air. However, practice soon enables him to pump the air freely into the lungs, and for a longer period each day. As soon as the distention becomes unpleasant or the need of an expiratory movement is felt, the instrument is withdrawn, to be replaced and reemployed in the same manner a few moments subsequently, the operation being repeated four or five times in succession. After frequent use it affords

great comfort to those who suffer from a feeling of suffocation, and have diminished capacity of these organs. A few cases are reported, in one of which a cure of consumption took place under its use. The writer, not having a large clinical field, wrote to Dr. J. Solis Cohen, of Philadelphia, to interest him in the method, and get his opinion of its value.

Dr. Cohen says it cannot be safely employed in all the cases in which insufflation of compressed air, as supplied from the apparatus of Waldenburg and others, are applicable, but it has sufficiently wide range of utility to commend it to professional attention, and in a certain class of cases it is of greater service than the bulky machines adverted to.

In patients liable to hæmoptysis or other hæmorrhages, and in certain cardiac and visceral disorders, the intrathoracic compression, if left to the patient, is apt to be too powerfully exercised, and thus to be absolutely detrimental. It is seldom safe to employ compressed air with a pressure exceeding from one sixtieth to one thirtieth of an atmosphere, and quite delicate handling of the ball-compressor is requisite to keep within this limit, while the size of the compressor prevents access of air in large volume, or at constant pressure. Thus, for general purposes, this plan, unmodified, cannot supersede the use of more complicated appliances.

Dr. Cohen calls attention, however, especially to the use of the Gadbury method as a mechanical expectorant. Time and again, he says, he has placed the little compressor in the hands of a patient with bronchioles and air cells clogged with mucus and pus, to see its use immediately followed by copious expectoration, to the great comfort of the patient. The process is repeated until it ceases to be followed by expectoration, and there is absolute or relative relief from the desire to cough, until reaccumulation indicates a renewal of the procedure at intervals of a couple of hours or longer, according to circumstances. Dr. Cohen has frequently availed himself of this method of clearing the air-passages previous to careful physical examinations, when abundance of moist râles were present, and has been better able to estimate the actual condition of the respiratory organs afterwards. Several of Dr. Cohen's phthisical patients relieved themselves by using this method morning and evening.

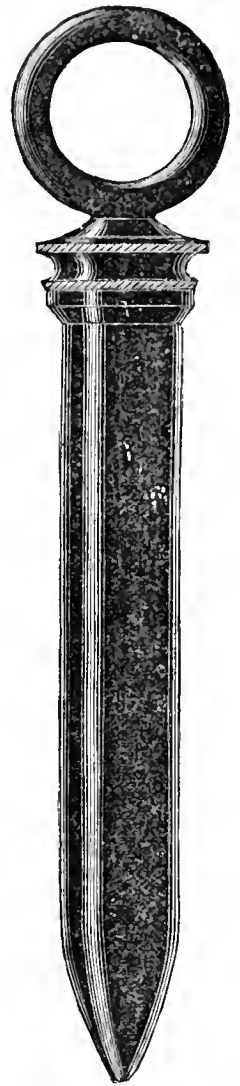
New Instruments.

A NEW URETHRAL SYRINGE AT LAST.

BY EDWARD WIGGLESWORTH, M. D.

The treatment of urethritis, from whatever cause, is by injections, and no less important than the fluid employed is the instrument used in the application of that fluid. Glass syringes break, are unequal in calibre in different parts of the cylinder, the wadding of the piston contracts in drying, and a portion of the fluid fails to be thrown out when the syringe is used a second time. The only material for syringes is hard rubber. Even more important is the *shape* of the syringe. The worst possible shape is the one which has usually been employed, namely, the syringe with a long straight nozzle, "No. 1," which reaches often past the seat of injury, the point of which scrapes and irritates the internal wall of the canal, and which is not well adapted to fully distend the meatus, nor to prevent the regurgitation of the liquid used. A few progressive physicians have used the *ear* syringes "No. 1, A" and

"No. 0," since these have shorter nozzles. The latter two, however, are of too small capacity to hold enough fluid to fully distend the urethra and obliterate the folds within which, "squat like a toad," lurks the virus. A syringe of greater capacity and even preferable nozzle is the desideratum, and that exists in the syringe of Sigmund, employed in Vienna exclusively, and largely elsewhere in Europe. This is figured in German works, but also in Bumstead and Taylor on Venereal Diseases, page 49, figure 3. A few of these have been made by Tiemann, but the price demanded [\$2.00] is too high, especially for that large class which is able to pay for the acquisition of, but not for the treatment of, its urethritides. For the last ten years I have endeavored to influence some rubber company to take the risk of putting Sigmund's syringe upon the market at a moderate price, but have only just succeeded. The Rubber Comb and Jewelry Company, 33 Mercer Street, New York, recently established under a most energetic management, has espoused the *pro bono publico* and a fair profit cause, and will hereafter furnish Sigmund's syringes to wholesale houses at a price which will enable them to retail for a dollar or even less. Its Boston wholesale agents are H. P. Emerson & Co., 33 Kingston Street. Codman and Shurtleff, Leach and Green, and others will have these syringes for sale. It is needless, I trust, to state that I have no interest in the syringe beyond the belief that it is the best as well as the cheapest. I ask all physicians, therefore, to recommend its use to their patients, its sale to their druggists. The syringe is known by the title of the "Royal" excelsior "P" syringe, which almost carries "hyperbole to a satire," but "Royal" is the trade-mark of all the syringes of the company; excelsior (if not supreme) the syringe is, and "P" is to be regarded not as a paronomasia, but as a contraction, which veils while it reveals. The accompanying "electrotype" will convey more clearly than words an idea of the exact size and shape of this new syringe, which I strongly urge upon the profession as the best syringe in existence for the treatment of a urethritis.



SOFT RUBBER VELVET-EYED TUBES FOR MAKING THE INJECTION IN GONORRHEA PAINLESS.

BY W. THORNTON PARKER, M. D.

I BEG leave to submit for the consideration of the profession the following points in the treatment of gonorrhœa:—

It is especially important to have a good syringe capable of thoroughly washing out the urethra with as little pain and irritation as possible. The syringes found in the drug stores are usually made of glass or rubber, with very small, pointed nozzles; they are apt to irritate the urethra, and are also objectionable for the following reasons: (1.) It is quite impossible to introduce the nozzle painlessly. (2.) It is difficult to compress the penis tightly about the nozzle without pain. (3.) The injection pours out at either side of the nozzle after introduction without entering the urethra far enough to be of any value. (4.) The constant use of the hard rubber, or glass, nozzle is apt to create an ulcerated spot where the point touches the lining of the urethra.

It is evidently important to avoid all these accidents to treat a case successfully. The cure of many cases is delayed, and the chances for stricture increased, because a good syringe can not be found. At least, I am sure that such has been the experience in my own practice.

It is difficult, even in the city, to find a bulb-pointed syringe, either of hard rubber or glass, of the right calibre for each case; and in small towns the ordinary glass syringe is all that can be had.

In Van Buren and Keyes' General Urinary Diseases, page 60, the practitioner is especially warned against "scratching and irritating the already inflamed mucous membrane," and also that "glass syringes should never be used."

To remove some of the difficulties encountered at present in the treatment of urethral inflammation, and to facilitate the injection of the urethra without pain, Messrs. George Tiemann and Company, of New York, have made for me some "soft rubber, velvet-eyed tubes with bulbs for making the injection painless."

The accompanying wood-cut gives a very good idea of the tubes.



They are about two and a half inches long, of three sizes, the bulbs corresponding with Nos. 13, 15, and 17, Tiemann and Company's American scale. They are made of pure rubber, soft and pliable. The movement to the right or left of the syringe in pressing out the fluid cannot cause pain because only the rubber tube beyond the attachment to the syringe is to be introduced; they are easily introduced painlessly, and compressing the penis about them to retain the injection is also painless. The bulbs have very thin walls. I find these tubes excellent in practice, and very highly appreciated by those who have been tormented with ordinary syringes. They fit easily on the nozzle of almost any syringe. The hard rubber ear syringe with the ring for self-injecting I find preferable to all others. In the "increasing stage" I recommend hot bathing of the parts night and morning (vide Van Buren and Keyes, page 60, *et seq.*), and the use, as an aperient, of Brewer's tartrate of soda, an elegant preparation, milder and better in every way than sulphate of magnesia or Scidlitz powders.

In the "stationary stage" I use the following injection, which, in the majority of cases, will give better results than any other injection, — at least such has been my experience in a large number of cases: —

Ry	Zinci sulph. carbol.	3i.	3 ip.
	Aque distil.		3 vi.
	Mucil. acacia		3 i.
	Fl. ext. opium aq.		3 i.

M. Ft. inject. S. Use night and morning.

These tubes are packed nicely in a little box, and can be obtained by mail from Messrs. Tiemann and Company, with or without the syringe.

PLYMOUTH, MASS., February 11, 1881.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

JANUARY 29, 1881, fifty-eight members present, DR. HODGES in the chair.

DR. HENRY O. MARCY read a paper on The Development of the Osseous Callus in Fractures of the Bones of Man and Animals. The paper was illustrated by numerous photographs of various specimens, showing the repair of fractures and a series of microscopic sections of the bones of the rabbit. The animals, twenty in number, had been killed at different dates, from the third day until the fourth week, and microscopic sections of the injected specimens had been very skillfully prepared by Dr. A. F. Holt, of Cambridge, under whose direction they were projected upon the screen by the aid of the oxy-hydrogen light.

At the beginning Dr. Marcy stated that his studies in this direction had been prompted by his clinical observations upon the repair of fractures under various modes of treatment, and especially from his belief that after careful adaptation and complete rest there occurred under favorable circumstances a primary union of bone, not unlike that taking place in the repair of other tissues.

After a review of the teachings upon the subject, from the time of Galen until the present, each factor which could enter into the processes of repair was analyzed in detail. From its intimate connection and bearing upon the subject, the histological processes of the normal development of bone was also presented and illustrated. The first factor of importance in the formation of the soft or provisional callus examined was the blood. The conclusion arrived at was, that it could be of little value under the most favorable circumstances, but might even be a serious obstacle to rapid repair.

The part taken by the medulla, although more important, must, to be of much value, be exercised within special limits. The medullary parts of a fractured bone must be in a somewhat close relationship, in order to be of avail in the production of the so-called internal callus.

Careful studies in detail, with many beautiful microscopic illustrations, were made, showing the part the periosteum takes in the repair of bone, and the conclusion at which Dr. Marcy arrives is quite at variance with the opinions usually accepted, as taught by Paget and Billroth.

Certain views of Beale and Ercolani he accepts as demonstrated, and believes that at the place of fracture the fibrous sheets of the bone, the superficial layer at least of the periosteum, takes no part in the repair, but undergoes a process of absorption or even necrosis; and

shows, as emphasized by Ercolani, that it is to a new periosteum covering the soft callus that importance should be attached.

This new and very vascular periosteum must be placed in close relationship with the exuded cellular elements upon which it impresses its osteo-genetic action.

A considerable number of specimens of fissures or partial fractures were shown where union had failed, or taken place only in part, and absorption instead of osseous deposit had occurred along the line of injury.

This condition after certain fractures, especially of the skull, is alluded to by no one, so far as the reader knew, except Professor Ercolani, and the lesson which it teaches on the repair of fractures is evidently of the first importance. From it several facts of great value may be deduced. First, that the periosteum at the place of injury is so impaired that it loses its osteo-genetic function, and secondly, that the canals of Havers do not enter largely into the repair processes in fractures, as taught by Billroth. The many specimens shown demonstrated that in the vicinity of the fractures the Haversian system had undergone no important change either in its blood supply or cellular exudation into the canals.

Dr. Marcy concludes, from his studies, that the most important conditions in the process of repair are first, that as early as the sixth or eighth day the exudation from the parts surrounding the fracture, so-called provisional callus, is covered in with a smooth shining membrane, the new periosteum. Second, that at the place of injury the old periosteum is destroyed, and third, that the exuded elements have an individuality peculiarly their own, and develop into osseous substance in conformity with fixed laws. The factors which enter into the repair of a fracture differ and unite in various ways to produce the final result of consolidation. Strictly speaking, there is no primary union in bone, but the conclusion is reached, which happily has been arrived at from the experimental standpoint of practice, that by careful and complete adaptation of the fractured parts, we place the various factors of repair in such relation that they must readily combine to aid in the restoration of the part, and by retaining them undisturbed for a certain period we assist in producing the most satisfactory results.

Dr. A. T. CABOT expressed his interest in the display of specimens shown by Dr. Marcy in illustration of the subject. He said that the time being short he should confine himself to the discussion of a few points in which he differed from the views advanced by the reader. First, in regard to the disappearance of the periosteum at the point of fracture, upon which much stress had been laid; Dr. Marcy considered the word periosteum to apply only to the fibrous mantle enveloping the bone, whereas the periosteum is now described as consisting of two layers, an outer layer and an inner cellular layer, and it is this inner one which provides for the growth of the bone, and supplies the bony periosteal callus in fractures. This point had been well shown in several of Dr. Marcy's sections, in which the bone had been merely cracked, without rupture of the periosteum. In these cases the proliferation of the cellular layer of the periosteum, lifting the intact fibrous layer above it, was quite evident. In these cases, where the fibrous layer was ruptured and the edges separated, a union of the divided edges took place much in the manner that the skin bridges

over a superficial wound, and beneath this restored layer the cell proliferation and final ossification went on as in the previous case. In studying the formation of a callus it should be remembered that, besides the processes of repair, we have inflammatory changes, which mask and frequently interfere with the reparative processes. It is to be regretted that the specimens shown by Dr. Marcy, to illustrate the absorption of bone about fissures, were all old and dry bones, with, in many instances, no history of the nature of the injury producing the defect. In one or two cases, where a history was obtained, the injury had been severe, by gun-shot or sabre blow, and in these the periosteum and superficial portions of the bone may well have been destroyed by the violence of the injury and the subsequent inflammation. It seems unfair, therefore, to draw from such inadequate material any conclusions as to the action of the Haversian systems or the periosteum in the formation of callus.

Dr. FITZ said that the microscopic sections seemed to clearly illustrate the process of callus formation as usually described, especially with regard to the periosteal and medullary changes. He understood the reader to insist upon the absence of injection of the Haversian canals in the specimens shown as disproving the views of Billroth, who describes a dilatation of these canals as one of the first changes in the neighborhood of a recent fracture. It seems possible, however, that Dr. Marcy's injections did not reach the ends of the fractured bones. In macerated specimens a notable porosity is observed, showing that such dilatation does occur. He agreed with Dr. Cabot in thinking the specimens shown by Dr. Marcy rather illustrative of absorption about fissures, than admissible as evidence that bone formation in the repair of fractures did not take place from the broken ends. The gaps were apparently due to inflammation and consequent destruction of the parts, rather than in any way connected with a reparative process.

The society tendered a vote of thanks to Dr. Holt, of Cambridge, for his excellent illustrations of the sections.

Recent Literature.

A Practical Treatise on Diseases of the Skin. By LOUIS A. DUHRING, M. D., etc. Second edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1881.

"Read, mark, learn, and inwardly digest, for we have here the precious life-blood of a master spirit, infinite riches in a little room."

It is now nearly two years since the first edition of Dr. Duhring's treatise, *facile princeps* among works upon dermatology in the English language, was exhausted. The present edition is virtually a new book with a good deal of original matter upon certain rare diseases. Everything has been carefully revised and the views of the author more fully elaborated, as in the chapters upon scleroderma, morphea, and atrophy of the skin; and we must also add those upon pompholyx (cheiropompholyx) and dysidrosis; hæmatidrosis ("bleeding stigmata"); hypertrophy and atrophy of the hair; syphiloderma; scrofuloderma; and carcinoma. The volume has been enlarged to the extent of about one hundred pages and the size of the type re-

duced; unnecessary words and sentences have been stricken out and others condensed, thus affording space, without materially enlarging the size of the original volume, for new articles upon uridrosis, phosphorescent sweat, urticaria pigmentosa, dermatitis circumscripta herpetiformis, impetigo herpetiformis, pityriasis maculata et circinata, dermatitis exfoliativa, d. medicamentosa, d. gangrenosa, d. papillaris capillitii, fungoid neoplasma, tuberculosis cutis, podelcoma, anidum, perforating ulcer of the foot, and myoma cutis, articles demanded by the unprecedentedly rapid forward strides of dermatology, the discoveries in which have outnumbered those of any other specialty in medicine within the last few years. The vague name dermatitis has hitherto charitably covered a multitude of diseases, and concealed much ignorance, and needed investigation. We recommend the chapter under this head to the general practitioner as sound and practical, and almost exhaustive as to facts.

A good deal of physiology of the skin has been incorporated in the volume, following closely that good and careful observer Recluz; the chapter on anatomy has been largely rewritten, and two new illustrations have been added, one of the general anatomy of the integument, the other showing very beautifully and correctly the rete and horny layer according to most recent studies; both by Dr. A. Van Harlingen. American work has been brought forward also in the text; the observations, among others, of Dr. J. C. Warren having a prominent place in the article upon subcutaneous connective tissue. The views expressed as to alopecia areata are quite different from those of the first edition; the prognosis expressed is less favorable. Morphea has passed over from the atrophies into the hypertrophies. The pathology of lupus vulgaris has been carefully worked over, and Kaposi's views are endorsed. Under scrofuloderma we note two new forms; one, the "small pustular," being entirely so. The remarks upon "fungoid diseases of the skin" are new and of much interest; so, also, the chapter upon impetigo herpetiformis, which, though short, brings forward original facts tending to lessen the former unfavorable nature of the prognosis. Dr. Duhring has seen the disease upon men; Hebra met with it only in pregnant women, and therefore described but one phase of its symptoms and but one set of lesions. We rejoice that Dr. Duhring has at last substituted lepra (leprosy) for the ponderous "elephantiasis graecorum," and for the Barbadoes leg (elephantiasis arabum) employs the simple term elephantiasis. Pediculosis is a good term, but hardly applies to phtheirus (the crab louse), still it is preferable to phtheiriasis, which applies to no louse except the "crab." Fibroma molluscum we regard as anatomically preferable to molluscum fibrosum. Nor does the author state his reasons for inverting the nomenclature of Hebra as to sudamina and miliaria. Lichen ruber's reinstatement, in place of L. plaous, we hail with joy. We should prefer to have the cheloid (chele, crab's claw) of Alibert spelled thus, rather than confounded with the keloid of Addison (kelis, a horn) now classed as morphea. Pellagra we still regard as belonging rather to the exudative erythematous than to the neoplasma, and, generally considered, we note the absence of the contagious inflammatory processes, variola and vaccinia, scarlatina, morbilli, and rubella (rubeola), which might well have been touched upon even though not considered at length. Under acne we find no allusion to the very

practical point that preparations containing sulphur preceding or following those containing mercury or lead cause a black color when the second salve is applied. We trust that Dr. Duhring may, in his next edition, adopt the international metric system of weights and measures. As we are no "mousing owl," and can find nothing else to "hawk" at, we finish as we began, namely, Dr. Duhring's treatise is the best in the English language, and, for American objects, the best in the world. E. W.

Neurological Contributions. WILLIAM A. HAMMOND, M. D., assisted by WILLIAM J. MORTON, M. D. New York: G. P. Putnam's Sons. 1881. Vol. I. No. 3.

Referring to the announcement on the last page of this publication, it will be seen that four numbers, to comprise the first volume, were promised for 1879. As the number before us is No. 3 of Volume I., it is evident that it is a little behind time for 1879. But if behind as a volume, it is neurologically well up to the present time. We say neurologically, for we think when Dr. Hammond leaves the management of nerves to criticise the management of insane asylums, he sometimes makes mistakes, as a man always will who has not had practical experience within an asylum.

Our space being limited, we shall be obliged to condense our remarks, dwelling more particularly on the portion devoted to insanity.

The entire number is made up of contributions from Dr. Hammond, Dr. Morton not having favored the subscribers with any reports of clinics. Nearly all the contributions have been read before the New York Neurological Society. No. 1 is on Thalamic Epilepsy, and has been already reviewed in the columns of this JOURNAL. No. 2 relates two cases of Neuralgia of the Testis, prefaced with a few remarks.

Case I. was in a male, of fifteen months' duration, and probably induced by excessive sexual indulgence. The pain was of a sharp, lancinating character, not confined to the testicle, but extending up the cord as high as the external abdominal ring. The cremaster muscle was, during the continuance of the paroxysms, the subject of strong spasms, which added greatly to the agony of the patient. Various methods of treatment were tried without any benefit, until, finally, pressure applied to the spermatic cord, so as to compress the nerves, was applied by the use of a little wooden test-tube holder, slightly modified, with a rubber band about it. The instrument was made to compress the cord as high up as possible. Pressure of the finger was exerted in addition. In Case II. the treatment was slightly changed by the use of an apparatus similar to a lemon-squeezer, so arranged that the blades could be brought closer together or separated by means of a screw. Both of these cases were at once relieved, with no return of the symptoms at the date of writing, six weeks afterward.

Contribution III. is entitled Myxoedema with Special Reference to its Cerebral and Nervous Symptoms. The first account of this disease was given by Sir William Gull in 1873. Subsequently Dr. Ord, Dr. Dyce Duckworth, and Dr. George H. Savage each wrote on the subject; the latter describing its nervous symptoms. These appear to be very decided. The intellect is notably weakened; the memory is imperfect; and the patient experiences lack of confidence,

both as regards mental and physical power. The special senses are more or less perverted, and there are sometimes hallucinations or delusions; the most ordinary mental condition met with is, however, a lassitude or stupidity resembling the state known as acute dementia. The writer then describes a case, which gives a very good picture of the disease, and should be read entire. The writer agrees with Dr. Savage in the opinion that the mental symptoms are the result of brain disease, probably due to the deposit of the mucoid tissue around the cells of the nervous centres.

Contribution IV. is upon The Therapeutical Use of the Magnet, and is exceedingly interesting. Dr. Hammond uses magnets of the horse-shoe form. It is better to have them all of one size, as they can then be bound together and their power greatly increased. The magnet was tried in many cases with good results. It appears to the writer that all these cases, as well as those of hysterical hemi-anesthesia, which have been reported as being cured by the magnet and other applications, by Charcot and his pupils, are instances in which, if there were any organic lesion at all, this was mainly situated in the optic thalamus.

The last paper of the volume On Obscure Abscesses of the Liver, Their Association with Hypochondria and other forms of Mental Derangement and Their Treatment, is an extension of a paper published in the *St. Louis Clinical Record* for June, 1878.

On page 61, Suggestions for Improvements in the Management of the Insane and of Hospitals for the Insane in the State of New York, are given in compliance with the request of the New York Senate Committee appointed a year ago to investigate the insane asylums of New York. We do not propose to criticise Dr. Hammond's suggestions with reference to their bearing on the New York insane asylums; but to briefly consider their practical utility as applied to all insane hospitals. Suggestion 1. says that every letter of a patient should be forwarded if addressed to a state official or other person in authority, or, if addressed to other persons, to the Commissioner in Lunacy, who should decide whether it should be sent to its destination or not. The superintendent should have no power to detain letters. We can see no advantage to be obtained by the carrying out of this suggestion, as no one can ever be so competent to pass judgment on letters written by patients as the medical officers in charge. A very large portion of letters written by insane persons are a mass of scrawls, frequently so vulgar and indecent as to be fit only for the waste-basket. It would be throwing unnecessary work on a Commissioner of Lunacy, and take away one of the moral means of treatment of the medical officer. In many cases, one of the most reliable sources of information of a patient's mental condition is in his letters; and in such cases they should be preserved with his hospital history to give a clear picture of his disease. While it is well that the patient should be able to reach the Commissioner by letters unseen by the superintendent, to deprive the latter of all power would reflect on his honesty and undermine his influence.

Suggestion II., that only a medical officer of an asylum should be allowed to order a patient placed in mechanical restraint or seclusion, is a good one; and is generally practiced in well-regulated institutions, and it is also common in most of them to keep a record of the amount of restraint used. This book, as sug-

gested, should be opened for inspection by officials in authority; but we can see no possible reason why the counsel and family physician of the patient should have access to such a book, as they are the last persons fitted to pass judgment upon how much or how little restraint is needed by him, and the chances are that such knowledge would be an injury rather than a benefit to him.

Suggestion III. recommends that forms of mechanical restraint should be designated by law or regulation. To this suggestion we cannot agree, believing, as we do, that our legislators are not the ones to lay down rules concerning such an important part of the insane patient's treatment as the use of mechanical restraint.

Suggestion IV., that forcible feeding should be done either by a medical officer, or in his presence, is a good one. In our opinion, the stomach-tube should be used only by the medical officer; and in our experience this is the plan followed in well-managed asylums.

Suggestion V., that the counsel and family physician of any lunatic should always be allowed access to him, is undesirable. There are times when these persons may, without injury, see the patient; but, as at other times he may be excited and permanently injured by such visits, some modification of this suggestion would serve a better purpose.

Suggestion VI., that no person should, against his will, be confined in a lunatic asylum unless it is distinctly stated in the affidavit that such person cannot, with safety to his own life and property, or the lives and property of others, be allowed to go at large, we regard as entirely impracticable. The treatment of the insane person at an asylum must depend solely on his mental condition, and the fact that he is, or is not, dangerous cannot be the criterion to decide the question. If we wait for some outbreak of violence we may go over the time when an acute case is most curable, and in many cases we may never know of dangerous impulses until they are betrayed by some act of violence. In most cases of insanity, patients require a change of surroundings, a removal from all the scenes of daily life which have been instrumental in leading to the disease. The question will be, To what place, or what institution, shall he be removed? Unfortunately, the number of small, well-managed retreats is so limited, and the prices charged at them are so large, that in deciding the question they cannot, in most cases, be taken into consideration. When, therefore, the important question of removal from home is to be settled, and for the patient's welfare is imperatively necessary, we have only our large insane hospitals at our disposal; and it is our experience that they are, taking all things into consideration, vastly the best places for the treatment of all but a very small proportion of cases.

Suggestion VII. recommends a board of visiting physicians, whose duty it should be, at stated periods, to visit the wards of the institution; to consult with the superintendent as to the treatment of patients; and to examine into the system of management. The object of this suggestion is to assimilate the management of the insane hospital to that of other hospitals. We hope that this suggestion, which is now being tried, may have a trial in Massachusetts; for we welcome any increased means of treatment, even if of doubtful utility. We are, however, of the opinion

that this experiment will result in failure, as it will be almost impossible to find properly qualified physicians in our large cities who will be willing to make the long journeys necessary to reach most of our insane hospitals, which are frequently situated at remote points. In order to be of much service as consultants they should make very frequent visits; as only in that way can they get much knowledge of the condition of patients. A much better system than a board of physicians making visits of long intervals would be a board of attending physicians who should daily visit patients at the hospital, and take the whole responsibility of their treatment, giving instructions to the medical internes as to treatment during the intervening time between their visits. Unfortunately, however, this system cannot be generally practiced, for the same reason of the distance of the hospitals from large cities, as referred to above.

Suggestions VIII. and IX. refer particularly to the State of New York, and need not be considered here.

Suggestion X., recommending the examination and licensing of physicians desiring to keep private institutions for the treatment of insane persons, is an excellent one, and should be adopted in all States.

The neurological portion of the work is valuable, and of interest to all persons engaged in the study of nervous diseases; but the portion treating of insanity is quite foreign to the subject, and a decided injury to the entity of the volume. Take that out, publish the book as a monograph, with strong linen covers, and it would be well worth a place on the library shelves of the progressive physician.

On the Use of the Cold Pack, followed by Massage, in the Treatment of Anæmia. By MARY P. JACOBI, M. D., and VICTORIA A. WHITE, M. D. New York: G. P. Putnam's sons. 1880.

Eleven cases of anæmic patients are reported in detail, and we cannot read this report without commending in high terms the patience and faithfulness with which the authors have recorded their observations. This carefulness allows a very thorough criticism, and the sincerity, patience, and close attention is worthy of imitation by other medical writers. We, however, cannot attempt to give even an outline of the deductions which Drs. Jacobi and White have drawn from these cases, because a fair recapitulation would occupy too much space; yet the attention of readers is necessarily arrested by the fact that four of these anæmic patients had obstinate constipation or colitis, and four had decided uterine complications; the treatment was very properly directed to the relief of these complications and not until their removal did the patients show any improvement in general health. Iron was freely administered to seven of the patients from the very outset of the treatment; yet it is fair to remark that the ferruginous tonic had been used prior to the treatment of the pack and massage without any material advantage. From a careful survey of these cases it would seem, then, as if the anæmia was not relieved merely by the hydrotherapeutic and massage treatment, but by a combination of the relief of functional disturbances, by rest, by iron, and by the excitation of cutaneous and capillary circulation, as effected by cold pack and massage; in other words, to a relief of digestive and circulatory atony and of nervous debility, by which food as-

similation and general tissue nutrition might be promoted.

The details of urea elimination as given in tabular form are not of much use, because no comparison is made of its elimination by amount of food and drink before and after treatment.

The summary of scientific information upon the variations in capillary circulation of organs and tissues which is given in this book is prolix and extremely valuable to any one who will patiently master the technical terms and wearisome verbiage.

Compendium of Microscopical Technology. By CARL SEILER, M. D. Philadelphia: D. G. Brinton. 1881.

There is a great deal of practical value in this little book. The author is well fitted for such a task and the reader feels that the directions are the result of actual experience. We will notice but a few points. Dr. Seiler thinks the following formula the best for softening bone:—

Chromic acid	1 gram.
Nitric acid (C. P.)	2 c. c.
Water	200 c. c.

He hardens large pieces of animal tissue, as, for instance, a whole brain, by a mixture of equal parts of Müller's fluid and alcohol, which is changed daily, and in course of time, varying with the size of the specimen, replaced by alcohol. The directions for injecting are very minute, but we cannot conceive the advantage of injecting an animal as large as a cat with a two-ounce syringe. The point on which we differ most decidedly from the author is in his estimate of micro-photography. He says truly enough that drawings will be "tinged more or less by the imagination of the draughtsman, and will be more or less diagrammatic in consequence." We are not inclined, however, to look on this as a disadvantage. It gives an idea to the student which the vast majority of the photographs we have seen do not. The latter may be impartial witnesses, but they are at once so confused and so reticent that little is to be learned from them. It may be, however, that micro-photography has a future. The book concludes with a tabular view of the course and minute appearances and the clinical characteristics of tumors. Though the book does not contain much that is new we can heartily commend it on account of the justice, clearness, and minuteness of the directions. T. D.

Revelations of a Boston Physician. By CHARLES WISTAR STEVENS, M. D. Boston: A. Williams & Co. 1881.

This book is composed of thirty-three chapters, giving as many sketches, intended to illustrate the miseries of the very poor, the delusions of diseased imaginations, the sham diseases of sham patients, and amusing episodes occurring during the course of real sickness. These were mostly drawn from an experience of the last twelve years, as physician to the board of overseers of the poor, and are said by the author to be true, or substantially true.

To some of the sketches the imagination, we should judge, had been allowed to add slight embellishments. The collection is intended, apparently, rather for the general public than for professional readers.

Medical and Surgical Journal.

THURSDAY, MARCH 3, 1881.

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THE NEW YORK STATE BOARD OF CHARITIES.

IN addition to its annual report for 1880, the New York State Board of Charities has presented to the legislature at Albany a special report prepared by a committee of its members appointed for the purpose, upon the matter of a resolution adopted by the Assembly of 1880, to the effect that the State Board of Charities should be requested and instructed to examine into the whole question of the appropriations for charities in New York city (amounting to the sum of \$2,600,000 annually), and the propriety and proper amount and distribution of such appropriations, and to report to the legislature the result of their investigation and their recommendations upon the subject. In the outset of their report the committee state that the fact that there is no limit beyond which the sum spent from the public funds of New York city for the support of the delinquent and dependent part of the community may not be increased makes the matter one of very great moment, while the alarming and disproportionate rate at which this sum has increased, as compared with the increase of the population, during the last thirty years, renders it imperative that the facts of the past and the present and the dangers of the future should be thoroughly understood. A table is given which shows that while from 1850 to 1880 the population increased 134 per cent., the cost for charities and correction (paid for entirely by taxation and license fees, not a cent of the amount coming from voluntary contributions) increased 539 per cent. In the same period of time Boston shows: increase of population, 165 per cent.; increase of cost, 330 per cent.; while Philadelphia shows: increase of population, 133 per cent.; increase of cost, 112 per cent.

The report then goes on to mention that there are in the city of New York eight classes of what are called "charitable institutions" receiving money from the public funds, which are enumerated as follows:—

First, those under the charge of the Commissioners of Public Charities and Correction, which, on December 31, 1879, contained 8466 inmates, and the appropriation for the support of which for the year 1880 was \$860,000. The appropriation for additional buildings was, besides, \$154,200. The Board of Estimate and Apportionment of the city have full control and authority to appropriate for these institutions such sums as seem to them necessary, and, as a rule, a sum

less than that asked for by the commissioners, and less than is really necessary is appropriated.

Second. Institutions which receive, in accordance with special acts of the legislature, a *per capita* allowance for each inmate admitted, sufficient or more than sufficient to entirely support such inmate, and pay every expense of maintenance, clothing, wages, etc., incurred by the institution in his behalf. There is no check upon the growth of these institutions (which include the Nursery and Child's Hospital, for whose benefit the annual fashionable charity ball is given), the New York Infant Asylum, the Foundling Asylum, the New York Infirmary, and various church institutions) and in this direction they combine the disadvantages of both public and private charities, the recipients of their benefits having, on the one hand, no such sense of degradation as often deters persons from seeking relief in a public institution, and the managers, on the other, having no considerations of economy to force them to scrutinize with severity the claims of each applicant. The admissions to most of these institutions depend solely on the will of the managers, and there is no power that can control them except the legislature itself. For every person admitted the *per capita* allowance is to be paid. To remedy, as far as possible, the evils pointed out in relation to this class of institutions, the committee make a number of excellent practical recommendations which it is impossible to specify here.

Third. The Children's Aid Society, the American Female Guardian Society, and the Shepherd's Fold, receiving each a fixed sum per annum, secured to them by special acts of the legislature. The report gives at length the history of the management of the Shepherd's Fold by Cowiey and his wife, and comments upon it as follows: "The points to be noticed in this recital are, first, the ease with which a man, seeking only his own benefit, and quite unfit to have charge of children, obtained the passage of laws granting him city funds for the maintenance of two separate institutions; second, the culpable carelessness of the gentlemen he persuaded to act as trustees and lend their names and influence to his objects."

Fourth. The Society for Befriending Children and Young Girls, and the Five Points House of Industry, receiving a *per capita* allowance for each inmate of one dollar per week, a sum not sufficient to support the inmates without private contributions or their own labor, and, consequently, not liable to cause an increase in the size of the institutions beyond the needs of the public. The committee regards this as the right principle upon which aid from the city should be given to charities managed by private individuals, since these latter give their time and labor, and do a great service to the community by caring for persons who might otherwise become a public charge.

Fifth. Thirteen institutions of different religious denominations which receive payment from the city (two dollars a week each) for children committed by the police and civil justices. The fact that the commitments have been made by officers presumably independent in their action has, of course, been somewhat

of a safeguard against the admission of persons having no claim on public charity, but, it seems, has not proved sufficient, and these institutions, as is shown by tables given, have increased in cost at an alarming rate. It is deemed very important by the committee that some permanent method of furnishing information to the justices in regard to all children brought before them should be devised, and the appointment of one or more officers of the grade of the truant agents of the Board of Education is suggested. Another matter of great importance in regard to children committed to institutions and supported by the city is the length of time during which the right of the parent to reclaim the child shall continue.

Sixth. The Colored Home, an institution receiving its principal support direct from the city of New York, under a special act, through the Commissioners of Public Charities and Correction, who each year ask for a special appropriation for its maintenance.

Seventh. The House of Refuge, which receives no direct aid from the city treasury, but which, under special laws, draws an income from the licensing of theatres, etc., and is thus indirectly aided by the public funds. The parents of children committed to this institution, as well as one or two others mentioned, the committee think, should be required to pay for the maintenance of their children, since the penalty for neglect of parental duties now falls mainly upon the public and the child. In Great Britain during the year 1879 £18,000 was collected from parents for support of children in reformatory schools. The saving in money is, of course, a matter of importance; but the moral saving, in the increased vigilance of parents over their children, is regarded by the committee as of undoubtedly far greater value.

Eighth. About one hundred societies, which are mainly supported by private funds, but which receive, in addition, a yearly donation from the excise fund. In this class are included a large number of hospitals, infirmaries, and dispensaries. Besides the foregoing payments by the city, a certain amount is paid each year to various state and other institutions for the board of patients suffering from special affections.

Seventy-three institutions (including those under the charge of the Commissioners of Public Charities and Correction), of which statistics are given in the report, contained during the two years ending September 30, 1880, a constant population of about 22,000, and received from the public funds more than \$4,000,000 during the same period, besides about \$2,100,000 from private sources. In concluding its exhaustive report, the committee says: "The magnitude of the interest represented by the charities of the city of New York, as exhibited in the foregoing statement, must command serious attention. The great good they accomplish, the efficiency and devotedness of those engaged in this administration are admitted, and it is not proposed in this report to cripple their efforts or to discourage their zeal. It is believed that a combination of private effort with public aid is the true principle upon which to furnish the relief those institutions ought to afford. It is, how-

ever, in the direct interest of the meritorious institutions themselves, as well as of economy to the tax payers, that the system should be revised, with a view to the prevention of abuses to which it is now subject. Parents able to maintain their children should not be permitted to make them a public charge, and with this view the method of commitments must be amended. The system of public relief should not be such as to induce selfish and unscrupulous persons embark in charity as a business, and with this end in view some restraint must be placed upon the organization of societies claiming participation in the public relief funds. The public contributions towards these institutions should be within a limit, to encourage private charity, to restrain extravagance, to promote economy, and to secure the entire application of the fund to the ostensible object."

THE MASSACHUSETTS GENERAL HOSPITAL OUT-PATIENT DEPARTMENT.

A paper on the perplexing question of the abuse of free dispensaries, by Dr. Whittemore, Superintendent of the Massachusetts General Hospital, with the discussions thereon in two of the prominent medical societies, was recently published in the JOURNAL.

From the discussions it was evident that much difference of opinion prevailed in the profession as to the amount of abuse and as to the most effective remedies.

The trustees of the Massachusetts Hospital apparently agree with the superintendent that a very serious abuse does exist, and that it is worth while to make an effort to remedy it. We understand that an officer is to be employed at a considerable salary to investigate the cases of doubtful applicants. Moreover, the trustees of the hospital have distributed a circular amongst the profession of the State, and charitably disposed persons generally, and have caused a notice to be posted at the hospital. The notice runs as follows:—

On and after April 1, 1881, the Out-Patient Medical and Surgical Service will be restricted to such sick and disabled persons as are unable to pay fees. No others will be treated. This restriction is made necessary in consequence of the large and increasing number of persons applying who are not in need of charitable treatment, and whose attendance obstructs the service for those persons who do need it.

Applications for treatment must be made to the admitting officer.

The circular which has been distributed is to the following effect:—

On and after April 1, 1881, the Out-Patient Medical and Surgical Service will be restricted to such sick and disabled poor persons as are unable to pay fees, and no others will be treated. The trustees are compelled to make this restriction in consequence of the rapidly increasing attendance in this department, which already is overcrowding the resources of the hospital, and if allowed to continue will presently become unmanageable. During the year 1880 over 37,000 visits were recorded, and at the present ratio of increase the number will in a few years exceed 100,000. A large proportion of the attendance are not needy persons, requiring charitable treatment, many of them coming from a distance, some from outside the State, at expense of time and money, and interfering with the service required by poor persons who cannot afford to pay fees or fares. The duty of the hospital is to this latter class, who cannot provide for them-

selves when sick or disabled. The trustees feel that the administration of the out-patient department, under which the attendance has so rapidly multiplied, having more than doubled during the last decade, is a vicious encouragement to thrifty and well-to-do persons to depend upon charity for their medical advice, while able to pay reasonable fees — is fatal to a proper self-respect — is unjust towards the medical profession, and at best a questionable use of the limited funds of the hospital.

Members of the medical profession and other benevolent persons who have had occasion to direct sick or disabled persons to this department and may continue to do so, are requested to keep in mind the restriction herein mentioned, and to assist the government of the hospital in correcting an abuse which is injurious to all the parties to it.

If the other dispensary and out-patient services continue their present vigilance some positive beneficial results may fairly be anticipated from this step. We hope the fears, if such exist, of those engaged in medical teaching, that a deficiency of proper material for instruction will follow this effort at reform will not be realized, and that, in any case, only the most urgent necessity will be allowed to suggest the establishment of further facilities for obtaining free medical advice.

SURGEON GEORGE A. OTIS.

DR. GEORGE A. OTIS, surgeon United States Army, died on February 23d of apoplexy. He was born in Boston, 1830. Graduated at Princeton, and received the degree of M. D. from the University of Pennsylvania in 1850. He continued his professional studies for a time in Europe, and settled as a practitioner in Richmond, Va., where, for a number of years, 1853 to 1859, he assisted in editing the *Virginia Medical and Surgical Journal*. In 1859 he settled in Springfield, Mass. At the outbreak of the rebellion he entered the service as surgeon Twenty-Seventh Massachusetts Volunteers, serving until its close. In 1866 he was appointed assistant surgeon United States Army. At the time of his death he was preparing the third volume of the surgical series of the *Medical and Surgical History of the War of the Rebellion*. The surgical section of the Army Medical Museum, so noted for its completeness and value, owes much of its development to his personal efforts and supervision.

MEDICAL NOTES.

— Physicians in Boston are warned against an instrument thief. He is a man of about thirty years of age, of good address and appearance, claiming to be a medical student from Montreal in need of assistance, and desirous of collecting physicians' accounts.

— The number of medical journals created since 1679 exceeds 2500. Annual average of births twelve and a half. Death-rate not given.

— Dr. Hastings Burroughs, of the English Dispensary, Paris, writes to the *Medical Press and Circular* on the advantages of the phosphide of zinc in the treatment of locomotor ataxia, and supports his good opinion of it by several cases in which marked amelioration of the characteristic symptoms followed its use.

— Of fifteen deaths which occurred in one week

recently in London from small-pox among children under five years of age thirteen were among the unvaccinated.

— A peculiar device to terminate the chloroform narcosis is mentioned by Schirmer in the February number of the *Centralblatt f. Augenheilkunde*. He claims to have used it in his clinic for many years, and often succeeded in producing inspiratory movements when other means failed. He also employed it to induce rapid recovery, for instance, in strabismus operations, in order to test the result. The method consists in irritating the nasal mucous membrane. It has long been known, at least to physiologists, that the fifth nerve retains its sensibility longer than any part in narcosis, and that reflexes may be induced through this nerve when other irritations fail. Schirmer uses simply a rolled piece of paper, which he turns in the nose. In dangerous cases he dips the paper into ammonia. — *Medical Press and Circular*.

— Dr. Wilm, who married a Princess of Würtemberg last year, much to the annoyance of her relatives, is said, according to a correspondent of the *London Globe*, to have made her extremely happy. Having an extensive practice at Breslau, where he is trying to obtain a professorship of medicine at the university, he is ably assisted by his accomplished wife in the care of his patients, many of whom, too poor to procure the necessary remedies, are aided by the former princess, ambitious of fulfilling her self-chosen duties. She has just been confined of a daughter, whose baptism was the occasion of quite an ovation on the part of the grateful people of Breslau. Madame Wilm is not the only German lady who relinquished her princely title for the sake of a doctor, for Madame Esmarch, the wife of the famous surgical professor at Kiel, was also born in the purple. She is aunt to the young Princess Victoria of Schleswig-Holstein, shortly to be united to Prince Wilhelm of Prussia, heir to the imperial throne of Germany.

— A correspondent of the *London Medical Journal* sends the following lines, with the hope that the sentiments therein expressed will meet with an echo in many a breast which would recoil from Mr. Tenyson's "In The Children's Hospital": —

TO A PHYSICIAN.

Oh! watched for, longed for, through the weary hours
Of pain and weakness. What a gift is thine!
What a proud science, God-like and benign!
To pour on withering life sweet mercy's showers,
And on the drooping mind's exhausted powers
Like a revivifying sunbeam shine;
For thy next smile what sleepless eyelids pine!
What sinking hearts, to which the summer flowers
Can breathe no joy! How many a day
I heard thy footsteps come and die away,
And clung unto that sound as if the earth,
With all its tones of melody and mirth,
To me had naught of interest — nothing worth
The brief bright moments of thy kindly stay.

E. M. H.

— On February 5, 1881, the *British Medical Journal* reported that "the death-rate of London rose last week to 29.8 per thousand annually, and was greater than in any of the preceding fifty weeks. Deaths from zymotic diseases are considerably below the average, but the mortality from diseases of the respiratory organs was very largely in excess."

— At the Obstetrical Society of London sixty-two calculi were recently shown by Dr. Galabin, which had been removed by vaginal lithotomy from the bladder of a woman whose uterus and bladder had been prolapsed for seventeen years. After the operation the parts were replaced, and control of the bladder was soon regained.

— The importance of a knowledge of the *cuisine* of the sick room, is becoming more appreciated daily. A course of lectures and demonstrations on the subject of cookery has been commenced in the Edinburgh School for the benefit of medical students and practitioners. The course was inaugurated in the large theatre of the Edinburgh Royal Infirmary on Saturday, January 22d, under the supervision of Professor Fraser, who introduced the teachers. In doing so he spoke of the importance of medical men thoroughly understanding the preparation of suitable food for invalids, and paid a just tribute to the Edinburgh School of Cookery for the good work it has already achieved towards other members of society. The teachers then proceeded to prepare and cook certain articles, and these, when ready, were submitted to the critical and gustatory examination of the audience. The demonstration was successful, and earned a hearty vote of thanks. The second demonstration followed on the succeeding Saturday.

— Ladies with beards will be glad to hear of a remedy. Mr. Lawson Tait reports a case where the beard fell off after the application of a galvanic pessary. — *Canada Medical and Surgical Journal*.

— Frank Buckland, the English physician and naturalist, who has been the object of numerous obituary notices in the various English medical journals, was the discoverer of the body of John Hunter in the vaults of St. Martin's Church in 1859.

— Dr. Reginald Southey, of London, will deliver the Lunnleian lectures this year. The subject will be Bright's disease.

WASHINGTON.

— On February 18th, Hon. Benjamin W. Harris, of Massachusetts, delivered a speech in the House of Representatives on the joint resolution relating to color-blindness and visual acuteness in persons employed in the navy and merchant marine. He alluded to petitions relating to the subject which had been previously presented, and which were signed by a few names representing great scientific and literary attainment, high standing and reputation in the country. Dr. B. Jay Jeffries, as the head petitioner, was heard with much satisfaction by the committee on naval affairs. He found no difficulty in satisfying the committee of the existence of color-blindness to a dangerous degree, for the committee were able to furnish him from their number two examples of decided color-blindness. The committee unanimously and promptly agreed that the subject deserved immediate and effective action on the part of Congress. In their report they quote freely from Dr. Jeffries's Manual, railroad experts, reports of the Marine Hospital Service, and the article by Lieutenant Schroeder (United

States navy) on collisions at sea, in the *United Service* for August, 1880; and in their appendix give a very useful summary of army, navy, railroad, and state legislative action. The bill in question looks to "a general law of control in the navy and merchant marine of color-blindness and visual acuteness, and the agreement by an international commission upon definite and uniform standards of testing these necessary qualifications." Mr. Harris concludes by suggesting that the several governments taking part in this international commission should not send color-blind delegates, and to "show the natural possibility of it" instances a commission appointed by the British government a few years since on lights, buoys, and beacons; there were five members: one was so color-blind that he could not distinguish a red light from a dull white one, another was abnormal in his perception of colors. An occasional clerk of the commission was once found writing with red ink, believing it to be black.

— On the final passage of the general appropriation bill for the District of Columbia in the United States Senate, February 18th, Senators Edmunds and Withers commented strongly on the large number of contributions to public charities, and the necessity for a suitable private provision of public hospitals absolutely under public control. Senator Beck was satisfied "that we ought to have a general hospital, and ought to have it as soon as possible, and that some well-selected site ought to be had, no matter what it costs, for Washington is worse provided for general hospital purposes than any city in America."

MEDICO-LEGAL.

— Supreme Court of Illinois. Bill brought by Henry Olin to restrain John Bate and Edward Osborne from using the name or title of complainant, or any name so like it as might mislead the public to his prejudice. Complainant is a physician, and has practiced his profession for many years, but gives particular attention to diseases of the ear and eye. His office is in the city of Chicago, where he has practiced since 1870. It is alleged defendants are physicians, giving attention to chronic and sexual diseases of men and women; that they advertise their business in the newspapers, and that they have published pamphlets or books that tend to corrupt public morality. It is also charged the business conducted by defendants is disreputable; and because it is believed by many people in Chicago and elsewhere that complainant is the "Dr. Olin" mentioned in the advertisements and books published by defendants, he insists his professional reputation is impaired, and that he is by the acts of defendants, under the name of "Dr. Olin," brought into disrepute as a physician. An amendment to the bill made by leave of court sets forth that in 1875 defendant Bate applied for admission as a student to "Burnette Medical College," of the faculty of which institution complainant at the time was a member, and that defendant, in consideration that complainant would consent to his admission, agreed to abandon the fictitious name of Olin, and engage only thereafter in a reputable business.

On the understanding and agreement alleged, complainant assisted in the graduation and granting to Bate a diploma, which, it is alleged, he could not have obtained without the consent of complainant. In the superior court the bill was dismissed for want of equity. The case was carried to the supreme court on appeal.

Scott, J. (*After stating the facts.*) No importance need be attached to the agreement set forth in the amended bill, that defendants would abandon the use of the fictitious name of "Olin," if complainant would consent to the admission of Bate to the medical college, and would assist in the graduation and granting to him a diploma, for the reason that a contract of the nature of this one insisted upon is of such doubtful propriety that equity will not lend its aid to enforce it. The granting of diplomas to students in colleges ought not to be made the subject of private contracts with individual members of the faculty, for personal advantage to themselves. They should only be granted on account of the moral standing of the students, and on account of their proficiency in the studies taught in such institutions. There can be no pretence that defendant Osborne ever assumed the name of "Olin." The utmost he did was to assist Bate in his professional duties, and that he did in his own name. Nor is there any proof that Bate ever assumed the full name of complainant. The proof shows that before he came to Chicago to reside he assumed the name of Andrew G. Olin, and since then has been known as "Andrew G. Olin," "A. G. Olin," and "Dr. Olin" in his profession. But that is not complainant's name, and never was. His name is "Henry Olin." Defendant has never advertised himself as "Henry Olin," and, so far as this record discloses, never represented to any that he was "Henry Olin." Their professions are totally distinct as to the diseases they profess to treat. Persons desiring treatment for diseases each profess to cure would not be likely to call upon one for the other unless grossly careless. Such mistakes would be of rare occurrence, and it would be absurd to say that the few that might occur would amount to "irreparable injury" to either party. Whether the business defendants are pursuing is disreputable or not cannot be made the ground of equitable relief in favor of complainant. Offenses against public morality, where any exist, can be more appropriately redressed in the name of the people, against the body of whom the offense is.

Complainant complains that he is subjected to embarrassment and perhaps disgrace on account of the conduct of defendant in assuming a name nearly like his own. Should that fact be conceded, but which does not appear in any proof, he has elected of his own volition to expose himself to it. Bate had assumed the name under which he chose to transact his professional business, and located in Chicago long before complainant came there to reside. No equitable considerations, therefore, arise in favor of complainant for whatever embarrassments he may be subjected to, if any come to him from his own selection of a location in which to practice his own profession. Judgment affirmed. — *The Reporter.*

Miscellany.

VACCINATION AND REVACCINATION ONCE AGAIN.

MR. EDITOR. — I have been much interested in the articles on vaccination that have appeared in the last three numbers of the JOURNAL, and have been rather surprised that your first editorial did not call forth some statement, at least, from those who have authority to speak on the subject. I refer, of course, to our Board of Health. Inasmuch, however, as the *only result* (excepting, of course, the general public excitement and the consequent rush for vaccine matter) has been the article by "Deltoid," which takes the ground that the necessity for frequent revaccination is not to be taken as a generally acknowledged and proved scientific fact, there is one point to which I should like to call your attention. I will not stop to investigate whether the existing state of affairs in Boston and the surrounding country is such as to warrant such a note of alarm as was given in your issue of the 10th inst., especially alarming from the fact that it was sounded from the editorial sanctum, and as such was reproduced immediately in a daily paper, as that is a matter on which argument is impossible. As a specimen of ingeniously twisting statistics to prove a desired point the use that is made of Marston's table in the answer to Deltoid is a most striking one. From this table it appears "that whereas the average mortality of post-vaccinal small-pox was five or six per cent., that of second attacks of small-pox was as high as nineteen per cent.," and this is advanced as proving that the protection afforded by vaccination and revaccination was greater than that accruing from antecedent small-pox. It does not, of course, prove anything of the sort, but simply shows that in cases where the disease attacks a person a second time the ratio of mortality is high. It is a perfectly supposable case that while only one person in ten thousand ever has small-pox twice, the fatality in the cases that do may be very great; in fact, it might be that every such case resulted fatally, and in accordance with the reasoning laid down, in spite of the fact that only one person in ten thousand ever had small-pox a second time, we should have to assume that the fact of having had the disease gave no immunity at all. In order to get any statistics bearing on the question, a certain number of persons who had had the disease and the same number who had been revaccinated should be exposed to the same chances of contagion, and then some valuable evidence might be obtained.

But what I do want to say is, that in such an article the omission of even a reference to the very thorough work in the way of vaccination and *revaccination* in this city in 1872-73 is inexcusable, not only as ignoring very good work started by the city government, and taken up and completed by our able Board of Health, but as omitting to speak of a very important factor in the stamping out of the epidemic of that period, and what is more to the point as failing to take advantage of one of the strongest possible arguments in proof of the correctness of some of the ideas advanced.

Your article rather takes the ground that the idea of the necessity of revaccination is a *new one*, or at least one that is not generally appreciated in this community. In 1872, when the disease acquired the proportions of an epidemic, each ward of the city was put under the charge of an alderman, who appointed two

physicians to see to the vaccination of the inhabitants. As far as I know the appointments were without exception proper ones. The men were of course drawn from the younger members of the profession, but they were all, I believe, properly educated regular practitioners. I can only speak from personal knowledge of one ward, but in that case the alderman selected men who had been recommended by physicians whose judgment he had confidence in, both of the appointees being personally entirely unknown to him. The work was certainly most thoroughly done, and on the establishment of the Board of Health it was carried on still farther, and to a certain extent the ground was gone over again. I do not mean to say that every inhabitant of the ward was examined, but I do say that in those streets occupied by the ignorant and perhaps vicious classes, of which the ward in question was by no means destitute, every house was not only visited, but every dweller in it was either seen or ordered to report at the police station in the evening, and in some way a very large proportion of them were subjected to an examination.

Naturally the greater part of this work was revaccination. The proportion of persons found who had never been vaccinated was almost infinitesimal. The exact line to be drawn as to what cases needed revaccination and those that did not varied, of course, according to the ideas of the individual physician (I mean until the Board of Health took charge of the matter), but I think it safe to say that the rules for guidance generally adopted were, to say the least, fully as stringent as those hinted at in your article. Under the Board of Health isolation was insisted upon, and in connection with it the revaccination of everybody in the house and vicinity. I have no doubt myself that it is on account of that general, thorough, and intelligent work of that time that the marked immunity of Boston since has been due. As a matter of course that immunity is not going to last forever, and if everybody has forgotten or never learned the lesson taught in 1872-73 there might be some cause to show the matter up. But with the bulk of the profession having that experience to guide them, with a Board of Health, or its most important part, at least, that began its work at that time, it does seem to me that there is no occasion for alarming the public. It is not at all with the idea of denying or combatting the statements made in your articles as to the necessity of proper revaccination that I have written what I have, but that I believe that this necessity is generally admitted and acted upon by most intelligent practitioners, and that I do not believe it advisable under the present circumstances to start a popular scare. And in conclusion I would say, with all due respect, and perhaps your adoption of the slang of the prize ring will induce you to pardon the expression, that to one who went through the epidemic of 1872-73 your editorial of the 19th inst. forcibly recalls the homely old adage of "teaching your grandmother to suck eggs." Yours truly,

G.

CASE OF PROTRACTED GESTATION.

MR. EDITOR,—The subject of this sketch is an American, a resident of Warren, Rhode Island, thirty-five years of age, and the mother of four children. She always enjoyed the average health of her sex, and nothing unusual occurred in either of her former preg-

nancies, nor in this one, except the lengthened period of gestation.

The termination of the last menstruation previous to the birth of the child was July 28, 1876. The husband left home August 1st, four days after, and did not return until November 28th, nearly four months. Symptoms of pregnancy in the mean time supervening, and quickening occurring at the usual time, she expected to be confined by the 1st of the following May, but there were no signs of labor until June 20th, when she was successfully delivered of a healthy male child, bearing as strong a resemblance to his father as you often see. The child weighed twelve and three quarters pounds, and presented the general appearance of one, two, or three months of age.

In case conception took place July 31st, the time of the last sexual intercourse prior to the husband's departure, the labor terminated on the *three hundred and twenty-fourth day of gestation*.

If there are other well-authenticated cases where the term of healthful gestation has exceeded the *nine calendar months and fifty days*, as this one did, there are none certainly with a more reliable and trustworthy record. The data are correct, and the woman's veracity and virtue are not to be called in question.

J. M. MERCHANT, M. D.

WARREN, R. I., February 24, 1881.

REVACCINATION.

MR. EDITOR,—A "vaccination point" which occurs to me, and to which I think some importance may be properly attached, is this: We know from past experience that the instant we have small-pox among us people (especially those merry and devil-may-care dogs who laugh at vaccination and "prefer small-pox and done with it") immediately roll up their sleeves and demand our attention at once. Under these circumstances the "boom" in vaccine lymph sets in, and as the demand increases we begin to obtain very peculiar results from its use. In some cases one might almost imagine that the points used had been dipped in the secretion of a hard chancre,—so obstinate and indurated are the ulcerations produced. In others our suspicions are directed towards the inoffensive mucilage bottle. I think if we proceed now to quietly vaccinate such of our patients as we think require it, we may avoid the results mentioned above (which are inevitable if the disease visits us), and obtain in many cases what we seek—an

UMBILICATED VESICLE.

ACTIONS FOR LIBEL.

BESIDES the action pending in the Court of Queen's Bench against Dr. Hoggan and the publisher of the *Medical Press*, there are two others likely to excite much interest in medical circles, which will probably be disposed of in the after-sittings of next term in Dublin, and in the County Assize of the same date for Tyrone. In the first of these actions, our contemporaries, the *British Medical Journal* and the *Cork Constitution* are to be the victims of actions for libel on the part of Mr. James Crawford, the Cork schoolmaster, whose unwarrantable attack on Dr. H. M. Jones in regard to the use of pilocarpine for the treatment of his child, who died of scarlatina in the Cork Fever Hospital, will be fresh in the minds of our readers. Our contemporaries, in common with ourselves, and

every other medical journal of any character in the United Kingdom, criticized the charges against Dr. Jones, and animadverted on Mr. Crawford's conduct, and the vindictive manner in which the attack on Dr. Jones had been pursued. Since the decision, which exonerated Dr. Jones was delivered by the governors of the Fever Hospital, Mr. Crawford, whose mental balance would seem to have been entirely upset by his family bereavements, has devoted himself to the posting of the dead walls of Cork with placards, which were none the less injurious to Dr. Jones, because they were obviously the emanations of a prejudiced mind, and now he seems to have succeeded in inducing a solicitor to take his fancied grievances into the courts of law. While the case is *sub judice* we can only express our hearty sympathy with the *British Medical Journal*, the *Cork Constitution*, and especially with Dr. Jones, in the persecution of which he is the victim. The second action is one for a libel upon Dr. Kinkead, professor of obstetrics in the Galway College, said to

have been contained in a letter addressed by Dr. Valentine Browne, surgeon to the County Infirmary, to Dr. Pye, professor of anatomy in the same college. Dr. Kinkead had, for several years, delivered clinical lectures, with consent of Dr. Browne, in the County Infirmary. Dr. Colahan had been subsequently admitted to the same function, an arrangement being come to with Dr. Browne on the subject of fees. This arrangement Dr. Browne has subsequently repudiated, and the alleged libel is contained in a letter in which he sets forth his reasons for excluding Dr. Kinkead in terms which that gentleman considers actionable, and, accordingly, he has brought his suit in order that his professional reputation may be set right. Last week the question whether such a communication, assuming it to be libellous, was privileged, was argued before the court of exchequer in Dublin, and judgment was given against Dr. Browne, so that the case will probably be heard on its merits next term.—*Medical Press and Circular*.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 19, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	683	296	24.45	23.28	10.40	7.17	.73
Philadelphia.....	846,984	411	135	21.17	5.35	7.16	1.46	11.92
Brooklyn.....	566,689	268	106	25.00	12.69	14.93	6.73	—
Chicago.....	503,304	205	92	22.44	14.15	8.29	2.44	4.39
Boston.....	362,535	187	73	18.72	16.04	10.16	.53	—
St. Louis.....	350,522	120	45	17.50	16.67	6.67	.83	—
Baltimore.....	332,190	151	48	19.87	7.28	9.94	3.31	—
Cincinnati.....	255,708	102	48	10.78	21.57	.93	1.96	—
New Orleans.....	216,140	122	31	17.21	11.48	4.10	4.10	—
District of Columbia.....	177,638	93	37	11.83	17.20	7.53	—	—
Pittsburgh.....	156,381	69	21	24.64	18.84	8.70	4.35	2.90
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	53	32	22.64	16.98	5.66	11.32	—
Providence.....	104,850	43	12	18.60	27.91	9.30	4.65	—
New Haven.....	62,882	24	4	8.33	4.17	4.17	—	—
Charleston.....	49,999	31	10	6.45	16.13	—	—	—
Nashville.....	43,461	15	5	—	6.67	—	—	—
Lowell.....	59,485	23	—	39.13	17.39	30.43	—	—
Worcester.....	58,295	31	13	25.81	16.13	6.45	6.45	—
Cambridge.....	52,740	21	8	19.05	23.81	9.52	—	—
Fall River.....	49,006	13	5	15.38	7.69	7.69	—	—
Lawrence.....	33,178	21	11	38.10	4.76	9.52	—	—
Lynn.....	38,284	10	1	10.00	—	10.00	—	—
Springfield.....	33,340	9	4	22.22	33.33	11.11	—	—
Salem.....	27,598	8	3	—	25.00	—	—	—
New Bedford.....	26,875	9	0	—	22.22	—	—	—
Somerville.....	24,985	8	3	25.00	37.50	—	—	—
Holyoke.....	21,851	6	1	—	33.33	—	—	—
Chelsea.....	21,785	8	2	37.50	—	25.00	—	—
Taunton.....	21,213	11	1	18.18	9.09	18.18	—	—
Gloucester.....	19,329	2	1	—	—	—	—	—
Haverhill.....	18,475	6	1	—	—	—	—	—
Newton.....	16,995	10	4	40.00	—	30.00	—	—
Newburyport.....	13,537	10	1	20.00	20.00	—	—	—
Fitchburg.....	12,405	4	3	75.00	—	25.00	—	—
Twenty-two Massachusetts towns..	177,937	69	17	11.59	23.19	1.45	—	—

Deaths reported 2856 (no return from Buffalo); 1074 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 595, lung diseases 445, consumption 407, diphtheria and croup 235, scarlet fever 105, small-pox 65, typhoid fever 41, erysipelas 36, diarrheal diseases 36, cerebro-spinal meningitis 22, measles 18, malarial fevers 15, whooping-cough 14, puerperal fever six, typhus fever one, chicken-pox

one. From *typhoid fever*, Philadelphia nine, Chicago, Baltimore, and Pittsburgh four, New York and Cincinnati three, Boston, District of Columbia, and Lowell two, Brooklyn, St. Louis, New Orleans, Milwaukee, Charleston, Worcester, Chicago, and Westborough one. From *erysipelas*, New York 10, Brooklyn six, Boston four, Philadelphia, Cincinnati, and Cambridge two, Chicago, Baltimore, Milwaukee, Providence, New Haven, Worcester, Fall River, Springfield, Somerville, and

Fitchburg one. From *diarrhoeal diseases*, New York 10, New Orleans eight, Philadelphia and St. Louis four, Chicago three, Baltimore, Cincinnati, Pittsburgh, Providence, Charleston, Lawrence, and Northampton one. From *cerebro-spinal meningitis*, New York six, Lawrence five, Chicago three, Philadelphia and St. Louis two, Chelsea, Fitchburg, Attleborough, and Clinton one. From *measles*, Boston eight, New York four, Baltimore, Cincinnati, Milwaukee, Worcester, Somerville, and Newton one. From *malarial fevers*, New York seven, St. Louis, New Orleans, and District of Columbia two, Brooklyn and Chicopee one. From *whooping-cough*, Chicago three, New York, Philadelphia, and Baltimore two, Brooklyn, Boston, St. Louis, Cincinnati, and Worcester one. From *puerperal fever*, St. Louis and Newburyport two, Baltimore and Pittsburgh one. From *typhus fever*, Chicago one. From *chicken-pox*, Spencer one.

Sixteen cases of small-pox were reported in Brooklyn; 13 in Chicago; nine in Pittsburgh; one in Holyoke; scarlet fever 39, diphtheria eight, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,095,848 (population of the State 1,783,086), the total death-rate for the week was 22.17, against 20.97 and 23.39 for the previous two weeks.

For the week ending January 29th, in 149 German cities and towns, with an estimated population of 7,855,534, the death-rate was 27.7. Deaths reported 4180; 1851 under five; pulmonary consumption 568, acute diseases of the respiratory organs

518, diphtheria and croup 170, scarlet fever 75, whooping-cough 67, typhoid fever 54, measles and röteln 42, puerperal fever 32, small-pox (Königsberg 5, Lübeck, Berlin) seven, typhus fever (Stargard) one. The death-rates ranged from 19.6 in Stuttgart to 42.4 in Münster; Königsberg 29.1; Breslau 31; Munich 29.8; Dresden 25.3; Berlin 25.3; Leipzig 24.4; Hamburg 28.9; Hanover 19.5; Bremen 20.4; Cologne 26.6; Frankfurt 22.8; Strasburg 30.4.

For the week ending February 5th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 28. Deaths reported 4092; acute diseases of the respiratory organs 606, whooping-cough 102, scarlet fever 70, small-pox (London) 54, measles 49, fever 41, diarrhoea 30, diphtheria 20. The death-rates ranged from 20.3 in Newcastle to 37.2 in Manchester; Sheffield 22; Birmingham 25; Leeds 28.8; Bristol 30.8; Liverpool 36.5. In Edinburgh 19; Glasgow 34; Dublin 45.7.

In the 20 chief towns in Switzerland, for the weeks ending January 29th and February 5, estimated population 522,856, there were 42 and 38 deaths from acute diseases of the respiratory organs, diphtheria and croup 18 and 14, diarrhoeal diseases 17 and seven, typhoid fever 10 and nine, whooping-cough nine and two, small-pox five and four, scarlet fever two and none, measles two and one, puerperal fever one and none.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.	Thermometer.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.		7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hours.	Amount in inches.
Feb. 13	29.476	32	40	25	73	43	66	61	SW	W	W	W	22	24	26	O	F	F	—	—
" 14	30.210	22	28	17	56	38	57	50	NW	NW	NW	NW	25	16	9	F	C	C	—	—
" 15	30.533	28	39	14	66	42	69	59	W	W	W	S	7	8	4	C	C	C	—	—
" 16	30.029	31	37	26	100	89	89	93	SE	NW	W	W	9	8	14	S	O	F	—	—
" 17	30.349	28	37	23	87	43	76	69	W	NW	W	W	9	13	10	C	F	C	—	—
" 18	30.214	30	38	17	86	61	89	79	W	S	S	11	5	8	11	O	F	S	—	—
" 19	29.966	34	41	24	100	64	67	77	W	NW	NW	NW	7	15	15	R	F	C	—	—
Week.	30.115	29	41	14					70										26.22	1.13

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 19, 1881, TO FEBRUARY 25, 1881.

MEACHAM, FRANK, captain and assistant surgeon. As soon as able to travel, to report in person at department headquarters for assignment to a station. S. O. 32, Department of the East, February 19, 1881.

GARDNER, J. DE B. W., captain and assistant surgeon. Granted leave of absence for one month, to take effect when relieved by a medical officer, with permission to apply for an extension of five months. S. O. 16, Department of Arizona, February 8, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting will be held on Monday evening next, March 7th, at eight o'clock, in the hall, 19 Boylston Place. Reader, Dr. G. W. Gay. Subject, Otis's Operation for Stricture of the Urethra. A. T. CAROT, Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Transactions of the Eleventh Annual Session of the Medical Society of Virginia, held in Danville, October, 1880.

Adulteration of Food. Report from the Committee to whom was referred the Bill authorizing it to report upon the Adulteration of Food and other Articles in the United States.

Morton's Pocket Series No. 2. Aphorisms in Fracture. By R. O. Cowling, M. D. Louisville, Ky.: John P. Morton & Co. 1881.

Annual Report of St. Mary's Hospital, Cincinnati, Ohio, under the charge of the Sisters of the Poor of St. Francis, for the Year ending December 31, 1880.

Impacted Foreign Bodies in the External Auditory Meatus. By Francis H. Brown, M. D. (Reprint.)

Erysipelas of the Larynx. By William Porter, M. D. (Reprint.)

The Strong Galvanic Current in the Treatment of Sciatica. The Results in Thirty-Two Cases. By V. P. Gibney, M. D. (Reprint.)

Lectures.

A CLINICAL LECTURE, WITH CASES, ON FOREIGN BODIES WITHIN THE EYE, AND THE ELECTRO-MAGNET AS AN AID TO THEIR DETECTION AND REMOVAL.¹

BY MACDONALD MCHARDY, F. R. C. S., ED.,

Professor of Ophthalmology and Ophthalmic Surgeon to King's College Hospital, London.

GENTLEMEN,—To-day, I wish to call your attention to the most serious class of injuries to which the eye is subject. Foreign bodies buried in or within the organ of sight, are most fruitful sources of blindness, not only to the eye originally hurt, but to its fellow, through sympathetic mischief. You may take it as an established truism that every eye whilst lodging a foreign body is threatened with destruction by its tenant. Neither the position nor the size of the foreign body negative this, though both are matters of very material importance in estimating the degree of serious gravity attaching to such a case.

Moreover, you must recollect that, as I have just hinted, the danger is not confined to the injured eye alone, the risk of blindness being shared by its fellow. Sympathetic ophthalmia, an affection indefinitely deferred, insidiously developed, obstinately progressive, and deplorably blinding, often attacks the fellow of an eye rendered useless by a penetrating foreign body, which may be located in any part of the globe.

You may judge, therefore, something of the importance attaching to the detection and removal of such foreign bodies, and the responsibility incurred by one who, undertaking to treat an injured eye, does not do his uttermost to arrive at a correct diagnosis regarding the presence or absence therein of a foreign body.

The investigation of these cases should be conducted by the aid of focal illumination, the pencil of light being thrown from every direction on to every visible surface of the globe, so that the position of any superficial indication of a wound may be fully lighted up and searched for by the aid of a magnifying glass.

For this purpose the two object glasses commonly supplied in the case with many of the hand ophthalmoscopes will answer admirably; but if, as I believe is the lot with most of you, your ophthalmoscope be one of the most excellent *multum in parvo*, practically efficient, simple, and strictly economical instruments,² which I recommended you to procure, then using the single object glass thereof for concentrating the light, you will need a second as a magnifier. This may be an ordinary pocket lens, one of twenty dioptries from the trial case, a common burning glass, or watch-maker's loupe, which I mention lest the possession of only a single object lens, with your ophthalmoscope, should be conjured into an excuse for the inefficient examination of these cases. This scrutiny, with the two lenses, of the superficial parts must be extended to the anterior chamber and surface of the iris. Here, let me remark on the importance of conducting the examination thus far, before applying any mydriatic to dilate the pupil, as it happens at times that foreign bodies which penetrate the cornea, or corneo-scleral junction, remain partially imbedded in the tract along which they passed, whilst projecting into the anterior chamber, where the

interposition of the iris may serve to screen the capsule of the crystalline lens from injury.

In other instances the foreign body may be so situated, loose in the anterior chamber of the aqueous humor, that it would be liable to fall through a dilated pupil into the posterior chamber, out of sight, behind the iris. Further, the smaller the pupil, the greater the assistance the iris may lend to the safe extraction of a foreign body projecting into or loose in the anterior chamber, as you will be able to infer from the two following cases, the narration of which will show you how similar ones may be brought to a successful issue:—

A clerk, aged thirty-three, whilst winding a spring skeleton clock, the cord of which was frayed, was struck by a fragment, eight mm. long, of the very fine brass wire composing the frayed cord, which had broken. I immediately examined the injured eye and could see one extremity and some seven mm. of the foreign body lying, perfectly straight, within the transparent cornea. One end of the wire was concealed beyond the corneal margin; the other was lying beneath the external surface of the cornea, close within the spot at which it was evident the missile had entered. It appeared that a portion of the middle of the fragment was within the aqueous chamber, whilst either end was held imbedded in corneal tissue, and this proved to be the case. Having further exposed the visible end of the wire, by a section over it, into, but not through, the cornea, I seized the hard body with iris forceps which did not grip sufficiently to assist its withdrawal by direct traction; so I attempted to turn the freed extremity of the wire forward, anterior to the corneal surface, to admit of its being gripped by dissecting forceps. But this manœuvre had to be abandoned, as the centre of the wire recoiled against the iris when the extremity was prized forward. I next made a puncture through the cornea, immediately opposite that portion of the wire which was in the aqueous chamber, about midway between the centre and margin of the cornea in its upper and inner quadrant; inserted a Tyrrell's hook through the puncture, beneath and around the wire, so that when the hook was withdrawn the portion of wire, bent like a hairpin, came with it. A small portion of iris, which was dragged through the wound between the ends of the wire, was caught in forceps and removed with scissors after sufficient had been withdrawn to obviate the risk of any remaining impacted in the corneal wound. Under the use of atropine and a compress the eye recovered, with no greater impairment of vision than resulted from the small eccentric corneal scars.

On another occasion I saw an engineer, aged twenty-two, with a large-sized grain of gunpowder lodged between the cornea and upper part of the iris, the result of an accident on the afternoon of the previous day. There was intense ocular congestion, great photophobia, and discoloration of the aqueous humor. I made a large upward section in the corneo-sclero junction, by transfixion with a Graefe's knife, taking care not to displace the foreign body by the passage of the blade. A pair of iris forceps, with points bent at right angles to the shaft, were introduced well into the anterior chamber, as widely open as the section would permit, and then withdrawn closed, so as to have in their grasp the foreign body wrapped around with a large piece of iris, which I cut off with scissors. A simple compress was applied, and nothing occurred to hinder complete recovery.

When the probability of the presence of a foreign body anterior to or in the iris has been excluded, the pupil should be dilated to its widest by the application of a solution of atropine (four grains to one ounce).

For these cases it is better to make the solution with castor oil rather than water, as patients with corneal wounds appreciate the lubrication afforded by the thick oil. The search by focal illumination has next to be carried through the wide pupil into the posterior chamber of the aqueous. Therein a foreign body may be discovered resting on the anterior capsule of the crystalline lens, in a position which was completely concealed by the iris prior to the dilatation of the pupil. Though a missile can but very rarely penetrate to such a position without piercing the capsule of the lens, and occasioning opacity thereof by the admission of the aqueous, yet

¹ Delivered January 31, 1881.

² Wecker's compounded metrical refraction ophthalmoscope, by Crété, Paris. Price forty francs, or thirty-five shillings, by Pickard and Curry, London.

it has happened. A wound of the anterior capsule of the lens does not invariably lead to either immediate or complete opacity thereof, though both are its commonest consequences. Cases are on record, and I have met with one such, in which a particular section of an injured lens became opaque whilst the remainder retained its normal transparency. Still rarer cases are those in which it is reported that foreign bodies buried actually in the substance of a transparent lens have become encapsuled and surrounded by a but limited opacity. Of these I have no personal knowledge. However, you must not be misled by the abundant reports of eyes remaining quiet for long periods whilst tenanted by a foreign body, for such come to crowd the literature of the subject, through being exceptional in the practice of ophthalmic surgeons, who, having to treat vast numbers of eyes with foreign bodies in them, would not report the great many that demand enucleation, whilst too pleased to record the few which furnish the exception needed to prove the rule. Moreover, it is noteworthy that very many of the reported cases in which eyes have quietly lodged foreign bodies for several, upwards of twenty, and in one instance twenty-seven years, have attracted attention by the mischief they have finally occasioned. Very frequently a useless, irritable eye is enucleated, and the surgeon receives no clue to the character of the original injury until a microscopic examination of the interior of the globe reveals a foreign body.

Individual experience and the statistical investigation of recorded cases alike show that foreign bodies are least tolerated when situated in or upon the ciliary processes or in contact with the choroid and retina, and are most tolerated in the vitreous or aqueous chamber. They may remain lodged in an old lens, causing complete cataract thereof, and give no further evidence of their location until discovered in the lens after its extraction. The larger a foreign body be, *ceteris paribus*, the more destruction its presence in an eye will work. Dense substances, such as chips of metal or glass, are usually less mischievous, excepting that they often penetrate more deeply than splinters of wood or thorns, which may create additional irritation by swelling with the absorption of moisture.

Every blind eye, reasonably suspected to contain a foreign body, should be promptly enucleated, whether it be or be not painful. This is more imperatively necessary with patients of the less educated class, for such will so superstitiously treasure an eye, though it be blind, that, despite every warning from the surgeon, who probably advised enucleation at the time when an accident spoilt the sight, they will seek advice and conceal the truth from a strange doctor when sympathetic mischief arises.

I had an example of this during the present month at the Royal South London Ophthalmic Hospital. Happening to be there on one of Mr. Morton's days of attendance, he called my attention to some irritation symptoms in the single organ of vision of a young child, whose opposite eye was shrunken, and suggested that it was due to sympathetic ophthalmia. The mother blandly remarked to me, "Oh, sir, you remember the child you took so much trouble with, when that eye was blinded two and a half years ago, and I ain't brought the child to you since, cos you said directly she suffered anything with either eye the blind one ought to be took out." In this case a foreign

body had penetrated the sclerotic, and occasioned bleeding into the vitreous chamber so as to frustrate any immediate search therein. When the extravasated blood became sufficiently absorbed I could see nothing of the missile, but recognized distinct evidence of its having traversed the whole width of the vitreous, and was therefore led to hope that its momentum had been sufficient to carry it, not only into and across but also out of the globe, which I was loth to enucleate prematurely in a young child, as the subsequent contraction of the parts would prevent the wearing of an artificial eye, which might be fitted if the globe were enucleated a few years later. Mr. Morton enucleated the globe; it contained a small foreign body surrounded by firm exudation material, and lying at a point behind the ciliary processes, to which it had rebounded from the inner surface of the eye.

Having recommended you to enucleate in such cases, you will be right if you infer that I hold the operation of optico-ciliary neurotomy in no favor; indeed, I believe that, unless speedily abandoned, its introduction as an alternative for enucleation must result in the destruction by sympathetic ophthalmia of many eyes which would never have been exposed to the danger thereof, but for a misplaced confidence reposed in an operation which can offer no advantages compensatory to a diminution of the almost absolute safety securable by timely enucleation.

The following case, which is recorded in the ninth volume of the Clinical Society's Transactions, will serve to direct your attention to very many of the points associated with the subject under consideration, and records the occasion which led me to first apply electro-magnets for the treatment of iron or steel bodies within the eye. It is, moreover, illustrative of the commonest cause of such injuries, and the happy issue which may attend your best efforts to avert their dire consequences.

David B., aged thirty-one, employed in a woodworking-machine shop, came under my care, at the Royal South London Ophthalmic Hospital, in consequence of an injury to his left eye, caused by a chip flying from either a steel tool or the hammer with which he was striking the tool.

I saw him first on July 4, 1877, twenty-four hours after the accident, when commencing iritis was indicated by slight ciliary congestion and moderate discoloration of the iris. An altered reflex from a portion of the cornea, below and external to the centre, indicated where the steel chip had impinged. Before dilatation of the pupil no lenticular opacity could be detected, and the ophthalmoscope revealed nothing abnormal in the vitreous. The tension was normal, there was but insignificant tenderness. He stated that the eye was far easier than it had been on the previous night, and that he did not wish to remain in the hospital. Accordingly, as he had presented himself at the hospital just before my departure, I prescribed some atropine drops, two grains to the ounce, and directed the patient to keep his eyes shaded until the next day, when he was to be seen by me again.

On July 5th, patient said that he had no pain in the eye. The congestion had diminished since the previous day. The pupil was widely dilated, vision equaled twenty fortieths; the corneal surface was almost normal. But there was a shining, sharply-defined opacity, evidently a fragment of metal, upon the anterior surface of the lens, occupying a situation downwards and inwards from its centre. The lens was perfectly transparent, except at the small area hidden by the chip, which was a narrow, flat strip, about one fourth as wide as it was long, and in length about equal to one fifth the corneal diameter. The foreign body, lying in the direction of the downward and inward meridian of the cornea, had its peripheral end nearer to the margin of the dilated pupil than its other extremity was to the centre, and thus occupied a position which explained how it had been concealed prior to the use of atropine. Reluctant to deal at all precipitately with such a case, I enjoined absolute rest for the patient, took him into the hospital, and con-

tinued the use of atropine. From the situation and shape of the chip, if left alone, it was almost certain sooner or later to gravitate down behind the iris and lead to destructive mischief in one or both eyes; hence its removal was imperative. I recognized the possibility of the lens capsule being wounded, notwithstanding the continued transparency of the lens, for possibly the chip by its very presence was plugging a laceration in the lens capsule, and thus excluding the aqueous humor. But I could not feel sure that the lens capsule was so damaged as to necessitate the formation of cataract. I was loth to subject the eye to the dangers which attend the extraction of a transparent lens by the scoop, and could not feel that such a measure would insure the removal of the foreign body.

As the effect of mydriatics diminishes as the aqueous escapes, it would have been very difficult, if indeed possible, to keep the foreign body in view during an attempt to dislodge and secure it with forceps, and if, subsequently to effecting its removal thereby, the lens had become opaque, it would have been impossible to decide whether the original injury or my manipulations had induced the cataract.

Confronted with these difficulties, it occurred to me that a magnetic spatula would meet the requirements of the case, for thereto I could attach the chip, and watch its movement, if only a needle were matched to the spatula, so that the latter would plug the puncture made by the former, and thus prevent a loss of aqueous and diminution of the pupil.

These conditions would have been equally well fulfilled either by a permanent or an electro-magnet; but with the former I foresaw this danger, that the chip, in jumping towards an approaching magnet, might, by some sharp edge, lacerate the capsule. On this ground an electro-magnet seemed preferable, as it could be applied to the chip before any attractive power was called into play; and this power could be interrupted at pleasure, during the manipulations, so that any undesirable position of the fragment, with reference to the spatula, might be altered before extraction was commenced.

Messrs. Weiss made the electro-magnetic spatula, which I exhibit, and which, when connected with a six-celled Snee's battery, seemed likely to fulfill the indications of the case.

The instrument will be seen to consist of a straight piece of soft iron wire, four mm. in diameter, having one of its ends, for a distance of 15 mm., dressed down to form a spatula of perfectly uniform stoutness, with a smooth, blunt, flat point, and having coiled upon it six layers of very fine insulated copper wire, so that the coil extends over some three cm. of the iron wire from the spot where it is reduced to the spatula gauge. This, when connected with the above-named battery, lifted, by its spatula point, a three-quarter-inch iron tack.

I related the particulars I have just mentioned to my colleague, Mr. Brudenell Carter, who then kindly saw the case with me, and suggested that, before introducing the spatula, it would be well to try what traction, if any, a powerful magnet held in front of the cornea might exert upon the chip—a suggestion so practical that I was startled to think it had not sooner occurred to me.

On July 6th, the patient being seated in a chair, I held before his cornea this powerful electro-bar magnet (one ten inches long and an inch in diameter, coiled with four layers of stout insulated wire, and connected with two pint Grove's cells), and gradually approximated one of its poles to the eye, until, when they were about four inches apart, the chip sprang from the lens to the inner surface of the cornea. Thereupon the magnet was withdrawn, the chip fell into the anterior chamber; the patient was placed upon a couch, ether was administered, and an incision was made, through which the chip was evacuated, and a small piece of iris, which prolapsed, was excised.

Immediately the chip left the surface of the lens it revealed a patch of opacity precisely of its own magnitude, and it was therefore evident that complete cataract might be anticipated. This followed, and the injured lens underwent absorption without any inflammatory reaction being produced. Atropine was applied until the absorption was completed, and the patient has normal distant vision with a lens of twelve dioptries, and reads No. 1 of Jaeger's types with a lens of fifteen dioptries.

This case aroused my desire to ascertain the fullest extent to which electro-magnets could be usefully employed under analogous circumstances, at a time when nothing but patient experiment offered any hope of deciding what form or strength of electro-magnet might be most advantageously applied, and I became convinced that it was an error to suppose that by greatly augmenting the attractive power of a strong magnet its influence on a minute particle of iron is not

increased. This hypothesis demanded contradiction on account of the frequency and confidence with which it was announced, notwithstanding that it would seem to be disproved by the single fact that, in accordance with a certain ratio the more powerful a magnet is, so much greater is the distance at which it will attract an iron filing.

Immediately after the occurrence of this last case my attention was directed to a paper by Dr. McKeown in the *Dublin Journal of Medical Science* for September, 1876, wherein he narrates how he has successfully used permanent magnets for the diagnosis and treatment of cases of steel and iron within the eye.

Seeking enlightenment on the subject of powerful electro-magnets at a large telegraph cable manufactory, I found that the employees there, when struck in the eye by a chip of iron or steel, instead of seeking the aid of a reputedly dexterous mate, were in the habit of widely separating the eyelids and approximating the injured organ to the pole of a colossal electro-magnet, with the commonest result that the chip, no matter how small, left the cornea. The *British Medical Journal* for July 17, 1880, gives the following quotation bearing date A. D. 1745: "There was one in Salisbury, who had a piece of iron or steel stuck in the iris of his eye. The person was in very great pain, and came to me. I endeavored to push the iron out with a small spatula, but could not, and then applied a loadstone to it, and immediately it jumped out." Thus, clearly, there is no novelty about the application of magnetic traction to the extraction of iron or steel chips from the eye. The Salisbury case reads as if the piece stuck through the cornea rather than in the iris. This, too, I think the more probable as it appears impossible for a foreign body to remain sticking fast in the iris alone, if you consider the character and constant action of that muscle. Whenever a case of injury to the eye presents itself with a history that suggests the possible presence of a foreign body, no time must be lost in carrying out the examination, as I have just now described, and, if necessary, supplementing that by a most rigorous ophthalmoscopic search through every exposable part of the globe's interior. For such injuries are most liable to be quickly followed by loss of transparency in the media, either through bleeding or inflammatory exudation, and then ocular evidence of the chip is forbidden. Such a condition is too often present when the case first comes under the surgeon's notice, and then if there is a possibility of the foreign body being either iron or steel, permanent, or, better still, electro-magnets may render most material assistance, both in its diagnosis and extraction. You will be able to judge of this from the notes of the case to which I briefly referred at the close of my contribution to the ninth volume of the *Clinical Society's Transactions*, as follows: "I have succeeded, by the aid alone of an electro-magnet held in front of the cornea, first in diagnosing the presence of, and then in extracting, through the track by which it entered, a fragment of steel, measuring two by five mm., which had been imbedded posterior to the iris for forty-eight hours, during which time the wound of entrance and the pupil had alike become closed with lymph."

Here is the chip in question and the electro-magnet which extracted it is the same which worked so happily in the case I have just narrated.

The patient, a blacksmith, aged fifty-three, was seen twenty-

four hours after receiving a blow on the eye by a chip, which flew from his work when he was chipping cast iron with a steel chisel and steel-faced hammer. He said the blow was a heavy one, and half stunned him; that he was confident he must have been struck with a fragment too large to be buried within the globe. His eye was acutely inflamed; just to one side of the corneal centre there was the scar of a recent wound, which was so plugged with soft lymph as to allow of the aqueous being retained. There was severe iritis, and the pupil was blocked. Atropine freely used during twenty-four hours did not open the pupil. Then, judging that it would be possible, by the aid of an electro-magnet, to ascertain whether or not the foreign body, which from the nature of the circumstances of the accident was necessarily either steel or cast iron, and therefore especially susceptible of magnetic influence, had lodged itself within the globe which it had punctured, I proceeded as follows: Placing the north pole of the electro-magnet before the patient's damaged eye, I completed the galvanic circuit, when he immediately exclaimed that the pain of his eye was unbearably augmented. This clearly indicated not only that the chip was buried within the eye, but that it was materially attracted towards the magnet without. With the patient lying on his back, I held the electro-magnet with its positive pole in close apposition, but not in contact with the wounded cornea, the eyelids being separated by a silver speculum. For some four or five minutes from the commencement of this procedure, the patient complained that the pain was constantly increasing. At the end of ten minutes the iris was seen projecting forward on a sharp point directly behind and in contact with the back of the so recently closed corneal wound. When the magnetic attraction had been further applied for some ten minutes, or for fifteen minutes in all, a metallic surface could be seen penetrating the iris and becoming hidden in the track of the corneal wound. Five minutes later a projecting point was visible on the surface of the cornea, but on withdrawing the magnet to apply mechanical traction to the fragment, it was observed to immediately recede below the corneal surface. The administration of ether was then commenced, as I contemplated reopening the corneal wound, and thus reducing the resistance opposed to the fragment when attracted by the electro-magnet. During the few minutes occupied in the administration of the ether, the application of the magnet was steadily continued, whilst I gave the eye a slight lateral, and up and down, movement beneath the magnet, for the purpose of causing traction upon the chip in alternating directions, and thus loosening it. Simultaneously with the patient coming fully under the anæsthetic influence, this fragment of metal, measuring two by five mm., with sharp ends, passed out of the eye through the track by which it had entered, and fastened itself upon the pole of the magnet. From this time forth the ocular congestion gradually subsided, and he has had no further pain in the eye, which retains good perception of light and normal tension. There is a cataract, also numerous synechia; but he is too well satisfied with the present condition of his eyes to submit to the operative treatment necessary to restore useful vision in the damaged one.

In using magnetic traction upon similar cases, it is important to keep the same pole of the magnet towards the chip; for that is almost of necessity not truly soft iron, and therefore becomes, by induction, itself a permanent magnet, and is consequently attracted by, and attracts with but one of its ends or poles at a time; hence, it was not merely a piece of good fortune which allowed the chip to come out point, rather than broadside, foremost.

It may be better to apply the north, rather than the south, pole of the magnet in the manner just described; as Drs. John Vansant¹ and William A. Hammond,² of New York, have stated that the north pole of a magnet does not cause pain when in contact with the conjunctiva, whereas the south pole, under similar circumstances, occasions a sharp sensation and involuntary twitch; but two or three of you who made the attempt thus to distinguish between the poles of my large electro-magnet failed to detect any difference.

Last Tuesday week, this patient, a bricklayer, aged thirty, of steady habits, whose left eye had been hurt by a chip on the

¹ Journal of Psychological Medicine, New York, April 1879, page 264.

² New York Medical Journal, November, 1880, page 453.

previous day, whilst he was cutting brick-work with a steel chisel and steel-faced hammer, consulted me. The vision was materially impaired, the corneal surface was disturbed at its centre, the lens was unusually visible, and far back, behind the very centre of the lens, a small opacity existed, which returned a metallic lustre when properly demonstrated by focal illumination. The most searching examination, both before and after dilatation of the pupil, failed to detect any further abnormal appearance. When examined through ophthalmoscopic illumination during vertical and lateral movement of the globe, the relative movement of the intraocular opacity, which was unquestionably an iron or steel chip, proved it to be situated in the optic axis, slightly behind the posterior capsule of the lens, through the centre of which it had unquestionably penetrated. During the second twenty-four hours after the receipt of the injury the lens had become slightly cloudy, though still readily permitting a view of the chip. Then was the time for any attempt, if such were to be made, to extract the foreign body, the exact size of which could only be approximately judged from the obliquity of its single visible surface. I will refer presently to the experiments I made to demonstrate by the deflection of a suspended magnetic needle the proximity of the ferruginous chip both before and after magnetizing it by induction. The patient's sensations with the north pole of the electro-magnet, the same as used in the two previous cases, just not touching the cornea, did not enable him to distinguish when the galvanic circuit was completed. The steady application of the magnet produced no visible effect upon the chip other than a questionable change in the amount of metallic reflex returned from it, which suggested that if at all changed in position the chip was lying more obliquely across, but just as far back along the optic axis. I therefore abandoned all hope of extracting the body without the introduction of some instrument into the vitreous, a proceeding not free from risk, but one which I would too willingly undertake with a reasonable prospect of thereby converting a most serious case into a simple one of traumatic cataract. The next question was, with what instrument and in what direction to attempt the extraction of the chip. Having well magnetized the chip by induction, through the proximity of the large electro-magnet, I similarly rendered a sharp lance-pointed cataract needle a permanent magnet, selecting for this purpose a needle likely to be capable of making, during its withdrawal, a passage sufficiently wide for the chip. Introducing the point of this magnetized cataract needle eccentrically through the upper and outer quadrant of the cornea, over the still visible annulus of iris, I carried it through the wide pupil, across the aqueous chamber, to the anterior surface of the lens, through which it passed in a direct line to the chip. After making a little lateral movement with my needle-point against the chip, I gently withdrew the former, to which the latter clung through the whole length of the track along which the needle had been thrust, after it had entered the anterior chamber. Removing the cataract needle from the eye left the chip, which declined to follow through such a minute corneal puncture, lying upon the iris. Making a peripheral corneal puncture with a non-magnetic, bent, broad needle, I passed in the round end of a non-magnetic, cataract, secondary knife, and, withdrawing the same, found the magnetic chip had followed into the corneal puncture, whence it was either washed by the flow of aqueous humor or attracted by the approach of the iris forceps intended to grasp it.

Here is the chip, which weighs (.0012 grm.) twelve ten-thousandths of a gram.

(To be continued.)

— The house staff of Cook County Hospital, Chicago, is to be increased by the addition of six *externes*, to be appointed every six months by competitive examination, and to serve six months. The present staff consists of six *internes*, who serve eighteen months each. The rules adopted for the appointment of the *externes* requires each of these gentlemen to spend at least four hours daily in the service of the hospital.

The number of patients now constantly in the hospital is from 350 to 400, and the demand is for more room. The commissioners are anxious to build an additional pavilion, but the sixty thousand dollars requisite is not forthcoming. A small one-story, independent ward-building is to be built the coming summer for cases of erysipelas and puerperal fever.

Original Articles.

CASES OF LEAD POISONING TREATED AT THE MASSACHUSETTS GENERAL HOSPITAL.

BY FRANCIS MINOT, M. D.

My object in reporting the following cases, which have been under treatment, at intervals, since September last, is to call attention to the decided and sometimes rapid effect of the iodide of potassium in relieving the symptoms caused by the introduction of minute quantities of lead into the system during a considerable length of time, as well as to the aid afforded by the internal use of that salt in the detection of lead in the urine. Electricity was also employed in one of these cases for a week, and in another case for several weeks. Both cases were of long duration, but in neither was the electricity continued for sufficient time to have had any probable effect on the disease. The principal symptom in four of the cases is paralysis, which as usual affected chiefly the extensors of the hands, feet, fingers, and toes. The first patient had no paralysis. In one of the cases there was so much atrophy of the muscles of the hands that a diagnosis of wasting palsy was made before a more complete investigation revealed the true nature of the disease. In another the atrophy was less extensive, though well marked. In both these cases the improvement was necessarily slower than in the others, although very satisfactory under the circumstances. A few other considerations suggested by these cases are reserved for the end of the paper.

CASE I.² James C. W., fifty years old, driver of an express wagon, entered the hospital, October 15, 1880. He began to notice a gradual failure of strength and of appetite four months before his entrance; a month later he began to have constant pain over the lower part of the belly, with obstinate constipation, and frequent attacks of nausea and vomiting. The pain was not increased by eating, nor relieved by vomiting. Vomitus consisted chiefly of food, and never contained blood. He was very anæmic and much emaciated. There was no history of exposure to lead. Nothing abnormal was found on physical examination, except some tenderness over the abdomen, which was increased by pressure. No paralysis. No blue line was detected, or could have been detected if present, on account of the foul condition of the teeth. Professor Wood, on analysis, found no lead in the urine. He was ordered a good diet, with opiates and cathartics as required, but no permanent relief to the symptoms followed. Five grains of iodide of potassium were then given three times a day, and at the end of a week a second specimen of urine was examined, which was found to contain lead. The iodide was then increased to ten grains three times a day, and marked improvement of the symptoms followed. At the end of three months the patient left the hospital greatly relieved, though the urine still contained lead. The daily average amount of urine was twenty-six ounces.

He was advised to continue the treatment at home.

CASE II. Lucretia D., thirty-five years old, living in Stoughton, entered the hospital November 4, 1880, with the following history: She noticed that she was

"running down" for three years, but had had no serious illness till two years ago, when she was confined to her bed for seven months. Her symptoms at that time began with nausea, vomiting, constipation, and abdominal pain, which was relieved by pressure. Then followed a gradual paralysis of the upper and lower extremities, till at one time she was only able to move her head. During this period she had several convulsions, with loss of consciousness, foaming at the mouth, and biting of the tongue. At the end of seven months the vomiting and abdominal pain ceased, and she began to gain the use of the hands and feet, the improvement continuing up to the present time; but during the last few months the progress has been so slow that she came to the hospital for advice as to further treatment. She had been in the habit of drinking water which was drawn through a lead pipe. No one in the village was similarly affected, except that two years ago one of her neighbors, who uses the same water, had paralysis of the lower extremities for some months, and then gradually recovered. On her entrance, the most striking sign observed was the "bird-claw" appearance of both hands, with marked wasting of the interossei muscles, strongly suggesting progressive muscular atrophy, though elsewhere the muscular system was well nourished. There was complete paralysis of the extensor muscles of the fingers, and also, to a less degree, of the extensor pollicis. The appearance of the feet much resembled that of the hands, with paralysis of the extensors of the toes, though the atrophy of the interossei was not as marked. She could walk only a few steps alone, and with great difficulty. There was no wrist-drop on entrance, though she stated that there had been previously. No blue line on gums. Bowels constipated. Appetite good. She was ordered ten grains of iodide of potassium three times a day. In a few days the urine was examined, and found to contain lead. After remaining under observation at the hospital for a week, during which time the faradic current was applied to the wasted muscles twice a day, she returned home, with advice to continue the same treatment, and to abstain from drinking water drawn through lead pipes. She returned to the hospital for examination on January 27th, and showed marked improvement in all respects, especially in walking. She came a second time February 21st, when she could walk easily about the room without support, though she did not venture to walk in the street. There was some gain in the extensors of the fingers, but the muscles of the hands were still much wasted.

CASE III. January 3, 1881, Mrs. Mary L., aged twenty-six, was brought to the hospital by her husband from Southbridge, where she has lived for sixteen years, her family consisting of herself and husband, three children, and two boarders. All the water which is used in the house comes through lead pipes from a well near by. Her children, four, six, and ten years old respectively, are in good health; the boarders have been chronic invalids, with indefinite symptoms, for several years. Her husband has been troubled for some time with nausea, vomiting, and abdominal pain, and his gums showed a well-marked blue line. Mrs. L. for the last two years has noticed a gradual but progressive loss of power over the hands and feet, and now she is completely disabled. During the last year she has suffered much from pain in the arms, feet, and abdomen. Bowels constipated, appetite poor. After her entrance she had a convulsion, biting her tongue,

¹ Read before the Boston Society for Medical Improvement, February 28, 1881.

² The cases are reported by Mr. F. M. Sherman, medical house pupil.

but said she had had convulsions more or less frequently since childhood. When seated she could not raise herself, but if lifted to her feet could walk with difficulty, the toes of both feet dropping to the ground. Her arms hung helpless at her sides; there was bilateral wrist-drop, the fingers being tightly flexed, with inability to extend them. Blue line very evident on gums. The urine was diminished in amount, and showed lead in abundance, together with a trace of albumen, the sediment containing a little pus and a few hyaline casts. She was ordered potassio iodide, and at the end of three weeks the record was as follows: "Patient can stand and walk readily, with nothing noticeable as regards gait except weakness. The improvement in the use of the arms is not as marked as in that of the feet. She can raise the right arm almost horizontally; the left arm not quite as much. She can flex the right arm, but not the left. Fingers still flexed, but can be extended a little." She is free from pain, and though the urine still contains lead, she bids fair to make a complete recovery.

CASE IV. Caroline F., single, thirty-five years old, born in Ireland, has been a domestic in a family in Ashburton Place, Boston, during the last four years. The house is supplied, as usual, with Cochituate water, which the patient has been in the habit of drawing from a tank lined with lead, placed in the upper part of the house, for drinking; while the other inmates chiefly used water which came directly from the main, and which did not remain long in the house-pipes; and none of them have exhibited symptoms of lead poisoning. Caroline's health was very good till six months ago, when she began to have a feeling of numbness, accompanied by a sensation as of pins and needles sticking into the left hand, foot, and side. Bowels much constipated. She continued her work till a month ago, when she noticed that she was walking lame. She then went to the out-patient department for a few times; but the paresis of the lower extremities increasing to such an extent that she was unable to walk, she was admitted to the hospital December 28th. Soon after her entrance she was examined by Dr. J. J. Putnam, who reported "that the sensibility of the skin to contact was perfect everywhere, even on the soles of the feet. The tendon reflexes were greater than usual. While there was no loss of power over the upper extremities the gross strength of the lower limbs was decidedly deficient." She could stand alone, but was unable to walk without being supported. In walking the right foot dragged, the toes dropping to the floor. There was no blue line on the gums. Examination of the urine by Professor Wood showed considerable lead, but no albumen and no casts. As in the other cases, the treatment consisted of iodide of potassium and cathartics as required. After four weeks of this treatment she is now nearly ready for discharge. She can walk unsupported, with but little difficulty, and has no pain. The urine still contains a trace of lead, and varies in amount from twenty-five to thirty ounces daily.

CASE V. Mrs. C., "clairvoyante," thirty-three years old, was born in Middle Haddam, Conn. When twenty years old she went to East Hampton, where she was employed during the next three years in casting and polishing coffin trimmings, which were made chiefly from lead. During this period her health was good, with the exception of occasional attacks of abdominal pain, with nausea and vomiting. She never

knew of any one else engaged in this work to be similarly affected. After leaving Hampton she worked in a millinery store for a time, and in 1875 came to Boston, where she has since lived in Green Street. Five years ago, noticing that her hair was turning gray, she began to use "Ayer's Hair Vigor," six bottles of which rendered the hair as black as she desired. This preparation was found, on analysis, to contain a large amount of lead; but the patient is positive that she has used none of it during the last two years. Last August she noticed a feeling of numbness, accompanied by darting pains in the hands and feet; but she continued to do her house-work till one morning in September, when, in attempting to walk from her bed to the window, she felt her ankles "give way," and fell helpless to the floor, where she remained about two hours till assistance came. During this time she was perfectly conscious, but could move neither hand nor foot. On her entrance to the hospital, January 3d, her condition was as follows: "No facial paralysis; protrudes tongue straight, and can move it readily in any direction; pupils normal; partial wrist-drop on both sides; fingers flexed, and inability to extend them; wasting of interossei muscles. She can flex the thighs readily, but cannot move the feet or toes in any direction. No blue line detected; bowels constipated." Analysis of urine gave the following result: "Average daily amount, nineteen ounces; sp. gr. 1027; albumen, trace; sediment contains amorphous urates, pus, vaginal epithelium, and hyaline casts. Much lead present." She was ordered the iodide of potassium and to have the faradic current applied twice a day. Her improvement, though not as rapid as in the other cases, is still marked; and she can now, February 3d, extend her fingers a little and extend or flex her hands readily. She has, as yet, made no decided gain in use of her feet.

The difference shown by individuals in their susceptibility to the poison of lead is seen in Cases II. and III. Out of several families, probably, who drank water drawn from lead pipes, only two persons (Case II.) were affected. In Case III., out of seven members of a family exposed to lead poisoning, two adults showed characteristic symptoms, and two others had indefinite symptoms; while three children escaped entirely.

An interesting fact, which does not seem to have received the attention which it deserves, is that a person may be paralyzed and yet spontaneously recover—at least to some extent—while continuing to drink water containing lead. Thus, Case II. applied for treatment after five years of illness, during the last two of which she showed unmistakable signs of lead poisoning; but for more than a year before her entrance into the hospital there was progressive improvement, and she began to recover the use of her hands and feet, drinking the same water all the time. It is somewhat remarkable that one of her neighbors had a similar experience.

Notwithstanding the frequency with which lead gives rise to chronic renal disease, there is no evidence that the kidneys were structurally affected in any of the above cases; though in two—both of long duration—the urine showed traces of albumen and a few hyaline casts. But the average daily amount of urine was considerably diminished in all the cases in which it was measured. In two of the cases there were epileptic convulsions; but in one of them the patient stated that she had been subject to convulsions from childhood.

THROMBOSIS OF THE MIDDLE CEREBRAL ARTERY.¹

BY OLIVER C. WIGGIN, M. D. HARV.,

Visiting Physician to the Rhode Island Hospital.

SUNDAY evening, June 27th, S. P., a medical student, aged twenty-five, was sitting on the door-steps of a friend, when he was observed to raise his hand suddenly to the left side of his head, and to give a suppressed groan. He immediately rose to his feet and staggered into the house, across a front room into a back room, and threw himself upon a lounge. He was unable to utter a word, but he called attention to his paralyzed right arm and leg by lifting them with the corresponding members of the left side. A few minutes later he vomited, and became restless. I saw him an hour after he fell. I found him tossing his head and body to and fro continuously, at one moment grasping his right wrist in his left hand, at another pulling a pillow over his head and face as if to protect them from the air. There was very marked pallor of the face. He was unable to make a single articulate sound, and he did not appear to comprehend anything said to him. He could not protrude his tongue nor swallow liquids. The entire right side of the body, including the face, was paralyzed. The pupils were moderately dilated; temperature normal; pulse 50, rather full; respiration irregular and sighing; perspiration profuse.

June 28th, nine A. M. Patient remained restless all night. He swallows liquids this morning; temperature normal; pulse 50. He urinates on being lifted to a vessel. Sensation is partially intact in the paralyzed parts. Eight P. M. He protrudes the tongue by request, which turns to the left.

June 29th, nine A. M. He appeared to sleep at intervals during the night; he voided urine twice when requested to do so; he recognized friends. On being requested to move his right hand he picked it up with the left one. When requested to draw up his right leg he worked the toes of his left foot under the right heel and attempted to comply. Temperature normal; pulse 50, and full; takes nourishment well. Eight P. M. He grew worse after noon; he does not comprehend anything said to him; very restless; respiration sighing; temperature normal; pulse 60.

June 30th, nine A. M. He was restless during the night. The breathing grew heavier up to six o'clock, when it became decidedly stertorous; the temperature increased perceptibly about midnight, and is now 101° F.; perspiration has ceased; he has not swallowed anything since last evening; voids his urine unconsciously; pulse 120, weak; flexor muscles contracted; extremities cold; he lies perfectly quiescent; eyes fixed, pupils widely and equally dilated.

He died two hours later, sixty-five hours after the attack.

Previous history. This patient was born cyanotic, but he gradually recovered at the age of four months. After this age he had what his mother described as "large purple spots" on various parts of the body. These spots appeared at irregular intervals up to the age of three years, after which they were not noticed. He was now taken to the West to live, where he had malarial fever in its worst phases. He became pale, weak, and dropsical. Two years later he was so feeble

it was found necessary to return to the East with him. He soon began to recover under the change of climate, and became a bright, active, healthy, and studious boy, entering college at the age of seventeen. From this time onward he pursued his academical and professional studies without interruption. He seldom complained of malaise of any nature whatever. He was, however, of a somewhat taciturn nature. He was a very sound sleeper, and he had the peculiarity of sleeping across the bed with his head hanging over the side. He was subject to attacks of profuse nosebleed. These attacks frequently happened in the night. On several occasions during the six months previous to his death he had several attacks, the real nature of which he would never explain to his relatives. He appeared for a moment to be out of breath, placing his hand over the region of the heart as if in pain. He always recovered in a few moments, if not from the distress, at least his presence of mind, and said it was nothing. These attacks happened two or three times last spring while at the dinner table. He would arise suddenly, clap his hand to his left side, then in a moment resume eating, and turn the conversation from himself. He also had several attacks in the night, which caused him to spring from his bed. These were all that were observed by his friends. On two or three occasions during this period the middle finger of the right hand became numb, and as white as if every drop of blood had been extracted from it. At the same time severe pain shot up the forearm, sometimes reaching to the shoulder. After an hour of rubbing and heating circulation and sensation were restored. He confided to a friend his opinion that these phenomena were due to embolism of one of the arteries of the affected finger. He at the same time predicted that he should die of embolism!

For several weeks previous to this fatal attack, Mr. P. had been hard at work in a machine shop to earn money to meet the expenses of his last course of medical lectures the coming winter. The Sabbath on which he fell and the several previous days were excessively warm and oppressive.

Autopsy, thirty-six hours after death. The subject was of light complexion, medium height, rather spare, but of exceptionally fine and uniform muscular development. Abdominal organs normal; lungs normal; pericardium, normal; heart and large vessels filled with dark fluid blood; chambers of the heart absolutely free from any indication of disease, past or present; but there was no right auriculo-ventricular septum. The two chambers made one continuous conical cavity. The tricuspid valves were laid plaited out closely against the expanded walls, while their lower margins were pulled down smoothly by the tense chordæ tendinæ; but they were nowhere adherent nor in any way diseased. The fossa ovalis was normal. The pulmonary vessels and aorta, together with the other thoracic vessels, were perfectly healthy. The carotids were not examined. The left heart was certainly very muscular, and it seemed to me somewhat hypertrophied, but other physicians present at the autopsy thought its walls no thicker than they should be in a man so muscular and accustomed to vigorous exercise.

The brain. The dura mater was feebly adherent to the left second frontal convolution, evidently the result of very recent inflammation; sinuses free of clots; diffuse extravasation of blood and lymph beneath the sheath of the superior longitudinal sinus, extending

¹ Read before the Rhode Island Medical Society, September 18, 1880.

along two thirds its length, from the torcular forwards; nothing unusual in the appearance of the surface of the brain: a few drops only of serum either in the membranes or ventricles. The middle cerebral artery, with all its branches, was filled with coagulated blood. The clot was confined to those portions of the arteries lying in the fissure of Sylvius. The clot in none of the branches extended beyond the points of entrance into the brain substance. Beyond these points the vessels were empty and collapsed, but nowhere obliterated. The lining of all these arteries was of a bright red color, softened and wrinkled longitudinally. Just within the origin of the middle cerebral, about a quarter of an inch from the junction with the anterior cerebral artery, there was a small area studded with minute granular protuberances. They were five or six in number, of uniform size, about as large as a millet seed. They were subepithelial, and of the same microscopical appearance as the basement membrane (hyperplastic). The epithelial membrane was everywhere intact over these points, and presented no difference in color or texture from the rest of the membrane. The clot was a little firmer at this point, and slightly adherent to the granular surface. At all other points the coagulum rolled easily from the arteries after incision.

On section, nearly all those portions of the brain supplied with blood by these occluded vessels were found in an advanced state of yellow softening. The corpus striatum was completely broken down, forming a mere granular pulp. The softening in other portions, though less advanced, extended outwards to the temporal and second frontal convolutions, involving also the island of Reil. All other portions of the brain were normal.

Comments. Looking at this case without the light of the subsequent autopsy, what would be the most plausible explanation of the phenomena presented? Evidently, one of three things has happened—cerebral hemorrhage, embolism, or thrombosis. Do the symptoms recorded indicate, with any degree of certainty, which of these three lesions has taken place? Frankly, nothing in my own experience, either in private or hospital practice, enabled me to feel certain as to the diagnosis. I find nothing in the age, sex, suddenness of attack, pallor, vomiting, temperature, pulse, unconsciousness, impairment of sensation, extent and location of the paralysis, nor contractions which might not obtain in either of the three lesions mentioned. Nor do I find in the differential diagnosis of authors any great degree of certainty. It is the absence of certain conditions, rather than the symptoms presented in this case, which determined my diagnosis. The chief factor in causation not being perceived, the reasoning led to error. Here was a young man, in apparent health, of excellent habits, and of fine physique, who had never been ill since early childhood, with no perceptible disease of the heart or blood-vessels, with no personal nor family history of rheumatism, scrofula, syphilis, tuberculosis, or carcinoma, with no impoverishment or contamination of the blood. In the absence of these conditions we should hardly expect either embolism or thrombosis. The diagnosis made was cerebral hemorrhage in the region of the left corpus striatum.

The anomalous condition of the heart was not recognized during life. A soft, indistinct, hæmic murmur at the base, attending the systole only, was heard at in-

tervals, but this was not attributed to structural disease. I never examined the patient in health, and I do not know what auscultation would have revealed then. The effect of this state of the heart would be to increase both arterial and venous tension, and to diminish the velocity of the blood current,—two conditions favorable and adequate to the production of thrombosis. My first impression, on viewing the site of the lesion, was that a thrombus had originally formed in the trunk of the middle cerebral artery at the point of the granular protuberances; that shreds had washed from it into the connecting branches, producing emboli, and that the intervening clots were the result of infarction. I think it may be doubted, however, if this theory represents the true order of events. The attack was so sudden and unheralded, and the injury so profound, it seems probable that the entire clot was formed within a period of a few seconds. The clot, moreover, was of uniform color and texture throughout. If the clot was slightly adherent to the granular surface, it was probably due to the mere mechanical advantages of that locality, and not necessarily to an earlier formation. This appears to be a case of autochthonous thrombosis. It is true that the suddenness of the attack is remarkable and, I should say, somewhat exceptional. But there may have been premonitory signs which the reticent patient carefully kept from his friends. The numbness of the fingers referred to in the report, may have been one of them.

The stasis of blood was not due to an enfeebled heart, which, on the contrary, was remarkably vigorous, but to the antagonism of the venous and arterial currents. The point of greatest tension and of least velocity would be somewhere on the arterial side of the capillaries. If there was any element of causation other than the state of circulation, it was probably the depressing effect of the very hot weather at the time of the attack.

It is difficult to account for the granular protuberances, so limited in number and distribution. They were evidently not recent in origin. They were identical in their character and in relation to the arterial structures with those seen in cases of undoubted inflammation of arteries. But why here? I do not regard them as factors of causation of the thrombosis.

The extent, the rapidity, and the character of the softening are of great interest. There was no distinct line of demarcation between the healthy and the diseased brain substance. Nor should we expect any clearly marked area of diseased tissue. The softening would naturally begin first, and be the most complete and rapid in those portions supplied by terminal vessels. As there is no anastomosis here with other vessels, death of the parts is sudden and complete, and the decay partakes of all the characteristics of non-inflammatory softening. The entire mass of the corpus striatum and nearest adjacent parts were of this nature. Their pulpy, granular texture illustrated very perfectly that condition so familiar to pathologists. All this disorganization took place within the brief space of sixty-five hours. The cortical portions of the affected region were in a state much less advanced towards softening. Here collateral circulation very materially delayed decay.

The yellow softening was what would be expected under the circumstances, if the generally received opinion as to the cause of coloring be correct; namely, the staining by disintegrated blood corpuscles en-

trapped in the parts. The occlusion was so extensive, there was no possibility of regurgitation, or setting back of capillary circulation. The arterioles were found collapsed, and hence a large area of brain tissue was anæmic.

The only evidence of inflammatory action in all this wide area of disease was found in a small surface of the pia mater over the left second frontal convolution. The red, softened, and corrugated state of the lining membrane of the occluded vessels, no doubt, took place after the accident.

Aphasia was complete from first to last. Many interesting queries as to the mental state of this patient suggest themselves; but any adequate consideration of them would prolong this report to too great a length.

REPORT ON THE PROGRESS IN MATERIA MEDICA AND PHARMACY.¹

BY W. P. BOLLES, M. D.

THERE has been no important discovery in this line within the past six months, although some interesting investigations are in progress and will perhaps be ready for summarizing in a short time. Several of the newer drugs are being carefully analyzed by eminent workers, but evidence of their medicinal value is more wanting than the details of their composition.

JABORANDI.

In addition to pilocarpine, Messrs. Flarnack and Meyer have obtained a second alkaloid from this drug, which they propose to call jaborina: this alkaloid differs from pilocarpine in its sparing solubility in water and readier solubility in ether. It was separated from commercial pilocarpine, as a colorless amorphous body of strong basic properties, forming amorphous salts. Its action is said to resemble that of atropia upon a frog's heart; no other test appears to have been tried.

QUILLAIA IN EMULSIONS.

Nothing delights an apothecary like the prospect of making an "elegant" emulsion, so we have had emulsions with tragacanth, and other gums, with almonds, egg and pancreatine, in innumerable variations. Now quillaia in tincture appears as an emulsifying agent (it has, we believe, for some years existed in soda water syrups to make them foam). It will "extinguish" mercury, and holds oils, chloroform, copaiba, and resins in fair suspension. From one fourth to one eighth appear to be suitable proportions of the tincture for oils etc. Turpentine and copaiba require an equal quantity of the tincture, and resins still more; of course all with the addition of water.

CHIAN TURPENTINE.

Perhaps this substance received all the attention it deserved in the last report; but as Dr. Clay still maintains that he is justified in his claims for it, and as there is a constant, though moderate, demand for it, coupled with great difficulty in detecting the genuine from the numerous imitations, a word or two more may be accepted.

There are, it seems, only about a thousand old trees

¹ The Pharmaceutical Journal and Transactions. The American Journal of Pharmacy. The Pharmacist. New Remedies. Pharmaceutisches Centralblatt, etc.

in Cyprus, many of them very old and large. For many years little or none of the resin had been collected until last year, when the natives were surprised by the orders from England, and began to gather it again. The quantity from Cyprus can never be large, and collectors are already looking around in Asia Minor and Algeria for larger forests, so far without success being assured.

The description in the last report, although correct for a clean and pure product, does not correspond with the appearance of much of that at present in the market, and believed to be genuine.

Three specimens in the possession of the writer, with a satisfactory history of having come from Cyprus, are briefly as follows:—

(1.) Is a brownish-yellow, not quite transparent, honey-like, very sticky, liquid containing scattered grains of sand and bits of bark. Imported in cans.

(2.) Similar to number one, but darker, thicker, and dirtier.

(3.) Solid, brittle when cold, of a greenish or grayish-brown color, full of impurities (twenty-five per cent.). Imported in lined boxes. After softening with ether and straining the resin is deep yellow.

The odor of all the specimens is characteristic and similar, and the taste free from persistent bitterness.

Two specimens, believed to be factitious, have a coniferous odor, are clean and transparent, without bark, sand, or other obvious impurities, and leave a persistent, disagreeable resinous taste in the mouth. They were probably made from Canada turpentine. The present method of collecting the genuine article is such that a certain amount of bark and dirt is necessarily included, and a perfectly clean product, unless it comes with a history of being strained by reliable hands, should be avoided; but if the demand continues it is to be hoped that a more rational mode of gathering it will yield a more respectable product.

ACONITIA.

Mr. C. R. A. Wright, who has carefully investigated the constituents of the aconites, has given in detail the chemical distinctions between aconitia, pseudaconitia, and "Japaconitia," the two latter the alkaloids of Indian and Japanese species respectively. They are of too nice character for ready pharmaceutical tests, and will fail, therefore, directly to clear up the confusion in which these products have for some time been.

Crystalline aconitia has been for a number of years prepared according to the process of M. Duquesnel, but the alkaloids of the other two species can equally be prepared in crystals.

Dr. Wright considers aconitia to be the chief, if not the only, active ingredient of the roots of *Aconitum napellus*; that it occurs therein with other amorphous alkaloids of lower molecular weight, and containing a higher percentage of carbon. "If the amount of aconitia present relatively to the amorphous bases is not considerable it is often impossible to get it to crystallize at all; in any case a considerable amount of aconitia is retained in solution permanently by the agency of the amorphous alkaloids which thus cause considerable loss." Therefore crystalline aconitia can so far be prepared only at the expense of waste, and remains very costly. Amorphous aconitia, on the other hand, may be good in quality as a small portion of the uncrystallizable bases will suffice to prevent its crystallizing, but there seems to be no good way of determining it unless, pos-

sibly, the physiological one, which at least is inconvenient.

It is to be regretted that we are not in possession of facts showing the physiological differences in quality and intensity of the several alkaloids which are dispensed under the common name of aconitia, since, liable as he is to get any one of several different extremely active substances, without knowing which it may be, or whether it be a mixture of them, the physician cannot but be extremely liable to disappointment or alarm at the uncertainty of his results. It is at present best to prescribe the crystalline alkaloid in small doses, rather than larger doses of the others, which are of uncertain strength.

RESORCIN.

The increasing use of anti-septics in surgery within the last few years has brought to the notice of physicians many compounds, new and old, possessing the property of destroying the different plants concerned in putrefactive changes, and consequently stopping or preventing those processes; and as none of those in use are perfect and free from disadvantages, others will still be offered.

Carbolic acid, the oldest, of course stands first, and is in universal demand. Its disadvantages are its odor, which is offensive to many, its occasionally irritating character, and its serious poisonous effects when absorbed.

Thymol is occasionally used¹ and is very good. Menthol and many others are equally reliable, but no better than thymol.

Dr. Justus Andeer, of Wurtzburg, has just written a pamphlet upon Resorcin, as applied to medicinal uses, and recent numbers of *New Remedies* contain a long abstract of it.

It is a colorless, crystalline substance, of a sweetish and harsh taste, soluble in something more than its own weight of water, also soluble in ether and alcohol. It was first obtained in 1861, by fusing galbanum resin with potash, the result being about six per cent. It has since been made from other resins and in other ways.

Dr. Andeer found that a one per cent. solution prevented the decomposition of urine for months, and also destroyed the organic causes of putrefaction; it preserved pancreas and blood perfectly, retaining even their natural odors. Wounds treated by it healed by first intention, and those poisoned by septic material yielded to it as completely as to carbolic acid. Applied dry to the skin it is not absorbed, and is not irritating; hypodermically a two per cent. solution may produce painful cramps and twitchings, but never abscess. On the moist lips it will raise a white blister. Used with the atomizer it is entirely unirritating to either eyes or lungs, and nearly free from odor. Applied to granulations the crystals are a painless and mild caustic.

Dr. Andeer also recommends its internal use in diphtheria and other diseases, and as injections in leucorrhoea, etc. The dose is one grain to two in water, syrups, glycerine, etc.

— At Bellevue and the University Medical Schools the winter term of lectures closed the 1st of March, but at the College of Physicians and Surgeons the course will be extended until the 1st of May, the spring term having been abolished in this institution.

¹ See JOURNAL, volume cit. page 516.

Hospital Practice and Clinical Memoranda.

JUGLANS NIGRA, A REMEDY FOR DIPHTHERIA.

REPORT OF CASES.

BY C. R. S. CURTIS, M. D.,

Surgeon to St. Mary's Hospital, Quincy, Ill.

IN view of the fact that the mortality from diphtheria throughout our country, and especially in the Eastern States, has been very great for a number of years, notwithstanding the best efforts of the most scientific and successful practitioners, and in the hope that this communication may aid the profession to some extent in their efforts to cure this direful plague, I have been induced to contribute to your journal a short account of the results of some experiments recently made by me with a new remedy (at least a remedy that I have never yet seen recommended in any medical work or pamphlet for diphtheria).

I will premise by saying that in the treatment of this disease I had, previously to July, 1880, adopted about the following plan, with such modifications and changes as the individual peculiarities or the progress of the case might from time to time seem to indicate. Internally quinine and iron in liberal doses, preceded in most cases by a mild mercurial cathartic, also an occasional dose of chlorate of potash, and often, when the symptoms demanded it, I administered an expectorant mixture; the patients at the same time being sustained by milk, beef tea, egg-nog, and other nutritious diet.

Locally, I was in the habit of applying freely over the neck, throat, and parotid glands equal parts of tincture iodine and tincture camphor. The throat was gargled alternately with Ingals' solution of iodine, solution of chlorate of potash, and solution of acetate of lead in dilute acetic acid or with alum in the same, as advised by Trousseau, and the mouth and throat were sprayed frequently with diluted sulphurous acid. This method, I presume, did not differ materially from the general plan of treating diphtheria by many of the best practitioners in this country.

My success was certainly as satisfactory as that in cases generally reported. I could record the recovery of quite a large percentage and number of my cases. Still my treatment did not always succeed, and therefore I felt justified in cautiously trying new remedies where there was a reasonable hope of their proving useful.

About the 1st of last July, while reading Nélaton's *Éléments de Pathologie Chirurgicale*, I came across the following passage in volume i., page 339, in regard to the treatment of pustule maligne. It is to be presumed that the walnut leaves alluded to by Nélaton were those of the *Juglans regia* and not the *Juglans nigra*. But the properties of the various species are said to be much the same. M. Nélaton remarks:—

“En 1853 un praticien de Perpignan, M. Pomagral, annonçait dans les *Annales de Montpellier* qu'il guérissait la pustule maligne par l'application de feuilles ou d'écorce de noyer fraîche. M. Raphaël (de Provins) institua cette médication dans un cas de pustule maligne où il était impossible, à cause du siège et de l'étendue du mal de pratiquer la cautérisation. Le malade guérit. Encouragé par ce succès, le même

moyen fut conseillé dans deux cas où les symptômes ne pouvaient laisser de doute sur la nature de la maladie; le succès ne s'est pas démenti. Voici ce qui se passe sans l'influence de ce topique; l'œdème disparaît très rapidement, les téguments recouverts par les pustules laissent suinter une grande quantité de sérosité, bientôt la pustule s'affaîsse, et la maladie se trouve réduite à une plaie gangréneuse qui s'élimine par l'inflammation des tissus qui la circonserivent, etc.¹

This suggestion made quite an impression on my mind at the time on account of its extreme simplicity, yet as it in reality was not more simple than the discovery of the potency of cinchona bark in the treatment of malarial diseases, and as it was deemed worthy of notice by so distinguished a surgeon as Nélaton, I believed it deserving of serious consideration.

Happening, a short time afterwards, to have a bad case of diphtheria on hand, in a boy about seventeen years of age that was not improving under the usual plan of treatment, it occurred to me that these same leaves of walnut, that had been found beneficial in the treatment of malignant pustule in France, might prove of some service in the treatment of diphtheria, and certainly a trial of them could do no harm. Accordingly, on my next visit, not being supplied with *Juglans regia*, I ordered the parents to obtain a good supply of the leaves of the black walnut (*Juglans nigra*), and to make a strong decoction of them, and use it as a gargle in their son's case, alternating with the other washes and local remedies. This was done. On my visit the next morning I was agreeably surprised to find my patient much improved. The treatment was continued, and at the end of about a week he was well enough to dismiss. How far his recovery was due to the use of the decoction of walnut leaves was a matter of great doubt, and I thought little more about it for some time.

A few weeks afterwards I was called to treat a case of diphtheria a short distance in the country. The patient was a girl about eleven years of age. The symptoms at first were somewhat obscure, as they had been preceded for several weeks by a persistent catarrh. About the second day of my attendance, however, the peculiar diphtheritic membrane became manifest on the tonsils and palate, accompanied by the other symptoms of this most distressing disease. The usual remedies were resorted to until the morning of the third day without any perceptible improvement. The patient, in fact, seeming to be worse from day to day, I then bethought me of my apparent success with the decoction of walnut leaves in the previous case, and ordered the parents to procure and use them in the same manner. I was again agreeably surprised the next day to find my patient better. The treatment was persisted in, and by the end of ten days her convalescence had progressed so far that she no longer required my attendance. During the progress of this case an older sister was taken with diphtheria in its initial form, complaining of pains and difficulty in swallowing, and on examination the peculiar ash-colored deposit was observed on the tonsils. My usual treatment was at once adopted, and in addition the decoction of walnut leaves was ordered to be used freely, and as there was considerable thickening and

œdema of the neck and parotid glands I ordered a poultice to be applied, of the walnut leaves, over the neck and glands. Our success in this case was even more signal than in either of the previous ones, and in a few days she was apparently as well as ever. The ash-colored spots had disappeared. The œdema was gone. The feeling of malaise and all signs of fever had subsided.

One of the greatest difficulties heretofore encountered by physicians in the local treatment of diphtheria has been the painful and distasteful qualities of the local applications. I found, after once trying the decoction of walnut leaves, even when made stronger by the addition of the hulls of the green walnuts, my patients were willing to continue its use, and made no complaint either of the decoction being painful or of its having an especially disagreeable taste, and nurses found little difficulty in swabbing out the throats of young children with it.

After the above related experience I felt more confidence in it as a remedy, and resolved to use it in all my cases. I have now tried it on about thirty patients, gradually depending more and more on the decoction as a local remedy and less on other local applications. I have used it as a gargle, as a poultice, in the form of spray with the steam atomizer, and in children too young to use it as a gargle I have directed the nurses to swab out the throat frequently with the strong decoction. In the worst cases I have added at times portions of the green walnut hulls to the leaves, in order to make the decoction still stronger, with apparently good results; and in one or two instances the remedy has been administered internally with seeming advantage. Since beginning this treatment I have used it in all my cases of diphtheria, amounting to about thirty, and *all have recovered*. I cannot but feel that such satisfactory results must be in a great measure due to the free use of the decoction of walnut leaves. While I do not regard the evidence I am able to furnish as conclusive by any means, I believe it to be so encouraging as to render it my duty to make it known to the profession. In all of the worst cases this treatment has been supplemented by the use of iodine locally, both externally and internally, and by the general tonic course previously mentioned. In the milder cases that I have had to treat recently, especially when called to see the patient early, I have depended on the walnut decoction alone. But whenever a case has seemed severe, or has already considerably advanced, I have also used the iodine locally, a remedy in which I have always had great confidence in the treatment of diphtheria, and which, until the curative powers of the walnut can be more firmly established by a much more extensive experience than I have been able to give it, I could not conscientiously discard.

I believe the experience above related warrants a careful and thorough trial by the profession at large. Many of my cases were bad. In the neighborhood of some of them children were dying of diphtheria under the care and treatment of skillful physicians. In the immediate neighborhood of one of my patients, a girl about ten years old, three children died in one family, and several others near by died, all being treated by good physicians, so that it can hardly be argued that these thirty cases were all favorable, and would have probably recovered under almost any of the usual plans of treatment. Some of the cases, it is true, were mild (at least under the treatment instituted at an early day

¹ The supposed curative qualities of the *Juglans regia* in the treatment of malignant pustule are alluded to in the United States Dispensary (thirteenth and fourteenth edition), but so briefly as scarcely to attract attention.

they never became severe), and the symptoms of malignant diphtheria never developed themselves.

I trust the report above made will be found sufficiently encouraging to induce the profession to give the remedy a cautious but thorough trial, and that my hopes and confidence in it may not be disappointed.

THREE CASES OF DIPHTHERIA TREATED WITH PILOCARPIN.

BY F. W. VOGEL, M. D.

CASE I. Wilbur S., aged six years ten months, taken ill January 22d. The physician who was called pronounced the disease diphtheria and declined to treat on the plea that he had lost three cases the same week. A homeopath took charge for two days, and patient becoming rapidly worse another physician was called, who prescribed chlorate of potash. Patient "becoming choked" I was sent for.

Status præsens: January 25th, 2.30 p. m. Small, ill-ventilated room, patient anæmic, ill-nourished (has always been troubled with a cough). Sits upright in bed; breathing hurried (to 44); eyes staring; constant croupy cough; aphonia; pulse 128, fairly strong; temperature 102.2° F.; retraction of supra-clavicular spaces and of lower ribs during inspiration. Dyspnoea has commenced early last night; ten suffocatory attacks since then. Inspection of fauces reveals nothing beyond a little redness and loaded state of tongue. Father says the doctors saw white patches and that these disappeared after a few swabbings with tincture chloride of iron. Submaxillary glands not tumefied, but subhyoid glands hard and painful. Ordered, according to Guttmann,¹ pilocarp. mur. 0.03, ac. hydrochl. gtt. ii., pepsin sacch. 1.25, aqu. 80.00, S. One teaspoonful every hour, followed by one half teaspoonful of brandy with water, night and day, milk every second hour. A hot compress to the throat every eighth hour. If patient should get worse to double the dose of medicine and wine. Any membranes that might come up to be put into a ten per cent. solution of carbolic acid.

January 26th, nine A. M. Through misunderstanding patient had taken the mixture only every second hour; had had four suffocatory attacks up to midnight, when he coughed up a tubular membrane, forming a complete cast of larynx and trachea down to bifurcation, being over seven centimeters long, very tough and compact at the upper end, where it measured more than one millimeter in thickness, and loose and shreddy in its lower portion. Patient then became quiet and slept in recumbent position during the remainder of the night. He looks a little brighter, voice audible but hoarse, respiration 24, extensive large tracheal râles, pulse 132, temperature 100.5° F., takes nourishment well. Ordered mixture, brandy, and nourishment every hour.

January 26th, six p. m. Passed the day pretty well, had four attacks of orthopnoea, during the last one, about noon, he coughed up a tape-like membrane about three and a half centimeters long and one half wide, which almost choked him, the father pulling it out of his mouth with his finger. Pulse 140, rather weak; no perceptible salivation. Finding the brandy to be largely a diluted with water I ordered a better quality, to continue mixture and brandy every hour.

January 27th, ten A. M. Passed a fair night; three attacks of orthopnoea, during last of which he expectorated another tape-like membrane of the same size as the first one, but looser in texture. Pulse 128, rather small; respiration 24, accompanied by large, loose râles; salivation; he spit out a good deal of muco-pus. Eight p. m. About noon he coughed up another tape-like membrane about five centimeters long, loose and shreddy. Parents were astonished at the ease with which he expectorated it. Pulse 128; temperature 98.4° F.; voice stronger; hoarse; large râles extending over part of back. Takes nourishment quite well.

January 28th, nine A. M. Expectoated with ease another tape-like membrane about four centimeters long, same state otherwise, pulse 120, temperature 99.0° F.

January 29th. No more membranes were brought up, but considerable muco-pus; sleeps now in recumbent position; orthopnoea did not return; pulse 116, stronger; temperature 97° F. To discontinue pilocarpin. One teaspoonful of beef, wine, and iron every third hour; milk or beef-tea and one dessertspoonful of port wine every second hour.

January 30th. No membranes, loud râles, no more orthopnoea, expectorates much muco-pus, pulse 112. Becomes hungry and asks for baked beans; father gives him mashed potato against my wishes.

January 31st. During the night the fire, which had been kept up day and night, went out, it being one of the coldest days of the season. I find the room chilled, patient lying on back, pulse 112, respiration 24, large râles, no change for the worse apparently.

February 1st. I am sent for in haste at seven A. M. Patient has passed a very bad night, orthopnoea, constant restlessness, head bathed in sweat, cyanosis, respiration 42 to 48, pulse rapid, irregular, compressible; wants to be carried and rocked all the time, voice quite strong, hoarse, refuses food and stimulants, tongue dry in centre. Subcrepitant râles over base of both lungs mingled with large moist râles. Mustard to chest. Pilocarpin 0.03; 80.00, one dessertspoonful every hour, one teaspoonful of port wine every half hour. No change at night. Examination of urine shows considerable albumen. Pulse growing feebler. To discontinue pilocarpin and give stimulants every half hour.

February 2d, eight A. M. Very restless night, jactitation, cyanosis has increased, wants to be carried and rocked hard, voice quite strong, pulse not countable, subcrepitant râles over considerable portion of chest. At ten A. M., whilst rocking in his father's lap, he suddenly stretched himself out and expired.

CASE II. Ernest S., aged three years and two months, brother of former, sick for two days, but not taken notice of. In the night from 2d to 3d he became very drowsy, vomited, moaned all night.

February 3d, eight A. M. Drowsy, pulse 144, feeble, face congested, sanious discharge from both nostrils, left nostrils, excoriated. Fauces inflamed, but no exudation, which shows only in the back of the pharynx and tonsils when everted during depression of tongue; there is pain in the left ear, which causes the constant moaning; submaxillary glands enlarged on both sides, especially on right. Put on pilocarpin 0.02; 80, teaspoonful every hour followed by one teaspoonful of port wine; milk, and compress, as in Case I. Eight p. m., exudation has not spread, changed to a dark gray and curls up at edges, tongue very moist but no salivation, pain in ear has subsided, glands very perceptibly reduced in size, pulse 128, takes milk very well.

¹ Berl. Klin. Wochenschrift, 1880, volume 49, page 571.

February 4th. Membranes much detached, submaxillary glands on the left scarcely to be felt, on right very much reduced, pulse 116 strong, sits up and plays. Six p. m. Has become very boisterous in the afternoon, running and climbing about.

February 5th, nine a. m. Is apparently well, fauces still reddened but no swelling or exudation visible, a mucous discharge from the nose continues. To discontinue pilocarpin, spray out nose with lime-water three times a day, and to take sod. sulph. carbol. 0.3 every second hour for the next six days; to continue wine every second hour. Continues well up to present writing.

CASE III. Baby S., aged eight months. Taken ill same day as Ernest, but taken little notice of, until the night from February 2d to 3d, when he begins to have a croupy cough, being very restless.

February 3d, eight a. m. Large tumefaction of submaxillary glands and tonsils, which are partly covered with exudation, pulse about 160; swallowing extremely painful, hoarse cry, little cough, not croupy. Pilocarpin 0.02:80, every hour one teaspoonful, followed by one teaspoonful of port wine. This case was restored to complete health in four days, the pilocarpin producing much salivation.

The membranes in both cases were probably swallowed, since none were expectorated, careful watch being taken.

These three cases add to the testimony of others in regard to the great efficaciousness of pilocarpin in diphtheria. I may add that I have never seen a case of this still much dreaded disease get well as quickly as under this treatment. Even in the first case of laryngo-tracheal diphtheria it did wonders, accomplishing more than tracheotomy could have gained. This remedy ought to be tried in every case, even in full doses of 0.02 to 0.03. Depression of the heart's action was not noticeable, the pulse keeping up as well as can be expected in any case of diphtheria.

New Instruments.

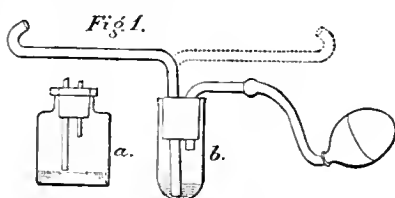
IMPROVED AND NEW POWDER INSUFFLATORS.

BY EDWARD J. FORSTER, M. D.

To those who have given any attention to diseases of the nasal passages, the powder blower of Dr. A. H. Smith, of New York, is well known. Its principle is that of the common wash-bottle of the chemical laboratory, the medicated powder being substituted for water and the force applied by an air bulb.

By practical experience in its use I soon learned that, on account of the convexity of the bottom of the bottle, the powder was blown away from the tube, falling about the sides of the bottle and much of the force of the air being wasted.

Fig. 1, *a*, is drawn to show this:—



To obviate this I had made some stout bottles in shape like a short test tube, the omission of any should-

der permitting them to be easily cleaned if it is desired to change the powder. This, with their size, makes them more convenient to hold in the hand, the concave bottom rendering it unnecessary to keep the bottle on a horizontal plane.

The tubes are made of either hard rubber or glass, the latter being preferable; besides being less expensive, they can be more easily cleaned, powders containing tannin readily blocking the rubber ones.

With some glass tubing, a spirit-lamp, and a slight amount of manual dexterity the tubes can be easily made of any desired length and curve to suit any special case.

To save trouble it is advisable to have a different bottle for each powder in general use. A stand can easily be made by boring the requisite number of holes in a piece of plank.

The long curved tube originally intended for the posterior nares can be readily turned about, as shown by the dotted lines in Fig. 1, *b*, and thus used anteriorly.

In the cut the air bulb is not drawn proportionately large.

By substituting a straight tube for the curved one, the patient can easily be taught to use the blower for the anterior nares, the expense can be lessened by replacing the air bulb with a glass mouth-piece and using the force of the expired breath.

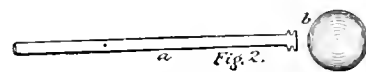


Fig. 2 represents a modification of the Rauchfuss powder blower with the bulb detached. The glass tube has two shoulders or rims at one end, the first of which is inserted into the rubber air bulb; the second prevents the tube from further entering, and the thickness of the bulb lying between the two, is firmly held in place. By crowding the distal end of the tube into the powder a sufficient quantity is taken up.

By this instrument the powder is not well distributed, but deposited in bulk, as it were; and the principal use of this blower is to deposit a powder in one locality, as is the case when sulphur is applied topically to the throat, as many practitioners do about here when treating diphtheria.

Since the cut was made, and the above was written, I have found that if the distal end is drawn out, leaving an opening one half the diameter of the rest of the tube, this insufflator answers fairly well, and has the advantage of being much less expensive than the one made of hard rubber.

For some time I have used such a blower for applying boracic acid to the ear, the tube in this case being only six centimeters in length.



Fig. 3 represents a bent glass tube with an opening in the upper surface of the shorter arm. This I have designated a "spoon" insufflator; for when charging it for use, the opening permits the powder to be easily "spooned" up. This is closed by the tip of a finger, the powder being blown by the breath. This instrument is inexpensive, and answers admirably for the

insufflation of sugar, camphor, etc., for the treatment of "snuffles" in infants, as recommended so warmly by Dr. Robinson in his recent work on nasal catarrh.

These can be made with the shoulders, as the tube in Fig. 2, a bulb added, thus making them available for self-use.

The instruments described can be obtained of Messrs. Leach and Greene, 1 Hamilton Place, Boston.

22 MONUMENT SQUARE, CHARLESTOWN DISTRICT, }
BOSTON, February 15, 1881. }

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROUCH, M. D., SECRETARY.

FEBRUARY 28, 1881. DR. T. B. CURTIS presided.

LEAD POISONING.

DR. F. MINOT reported some cases of Lead Poisoning treated in the Massachusetts General Hospital. Vide page 121 of this journal.

DR. ELLIS spoke of the great rapidity of invasion in cases of lead poisoning, one case being reported where it was almost instantaneous. He also remarked on the difficulties which frequently arise in the diagnosis.

DR. WEBBER, in speaking of the detection of the blue line in lead poisoning, said that he had always supposed that where the teeth were not well cared for there was a more favorable condition for the formation of the line. He also spoke of the great variety of symptoms arising from lead, such as tremor, simulating spinal paralysis, and other nervous disorders. Some of these cases which simulate spinal disease are often shown by an examination of the urine to be caused by lead. Dr. Webber also reported a case where the symptoms appeared to be those of syphilis until the diagnosis of lead poisoning was established by the administration of iodide of potash.

DR. JAMES J. PUTNAM remarked that up to the time of these cases of Dr. Minot's he had only found a record of twenty-five cases treated in the Massachusetts General Hospital; he said that there had been a few authentic cases of lead poisoning originating from the use of Cochituate water, and that he was at present investigating the question of how frequently lead is found in this water. Dr. Putnam also spoke of the greater possibility of lead being taken up in the hot-water pipes than in the cold, and of the desirability of keeping the hot and cold water pipes separate in their arrangement.

DR. C. H. WILLIAMS spoke of the immunity noticed among workers in lead in those individuals who drank milk in comparison with those who did not drink it, and suggested that the children spoken of in Dr. Minot's paper might have been protected in this way.

DR. DENNY said that while some authorities, as Charcot, regard the toxic action of lead as essentially peripheral and myopathic, others, as Ranvier, regard it as central, like a poliomyelitis anterior. Another opinion, that it may attack the system peripherally, centrally, or both, even in the same individual, finds support in the following brief abstract of symptoms attributable to lead poison, occurring in cases under my

observation, and principally at the out-patient department for nervous diseases at the City Hospital. In the following four cases the attack appeared to be peripheral in regard to the central nervous system. (1.) Colica pictona and paralysis of extensors of wrists. (2.) Paresis of extensors of wrists. (3.) Constipation, paresis of extensors of wrists. (4.) Extensors of wrists paralyzed.

In the following six cases the effect of the poisoning seemed to be central mostly. (1.) Insanity, complete paralysis, trembling of hands, blindness, nystagmus. Painter. Death. (2.) Apoplexy, aphasia, hemiopia involving temporal half of right and nasal half of left retina. Plumber. (3.) Vertigo, incomplete and intermittent paralysis (saturnine hemiplegia) involving left arm and leg, ambidextral in use of hands. Never had colica pictona. Forty-three years old. Painter twenty-six years. (4.) Saturnine cachexia, anemia, vertigo, constipation, cardialgia. Operative in rubber works. Eighteen years old. Well up to entering factory, five months previously. (5.) Cramps in legs, crural neuritis, anesthesia of thighs anteriorly, no ataxia. Silver watch turned black from lead. Rubber worker. (6.) Paralysis of extensors of wrist, absence of tendon reflex, intermittent aphasia, violent pains (lancinating), beginning in back, heels, and toes, then in legs and arms, ataxia of legs and arms, marked decrease of rapidity in conduction of sensation in legs, exaggerated dyspepsia, complicated progressive locomotor ataxia. Woman, thirty-six. Symptoms began two years ago, after beginning to make, by rubbing with her own hands, a "vegetable preparation" for complexion, containing lead, for sale.

The following cases exhibit evidence of both peripheral and central action. (1.) Painter, twenty-eight. First attack: colica pictona, constipation, trembling of hands. Recovery. Second attack, two years after: constipation, colica pictona, paralysis of extensors of wrist, paresis of legs, trembling of hands. Recovery. Third attack again in two years more: incontinence of urine, paralysis of extensors of wrist, paralysis agitata saturnina, constipation. Recovery, and good health for one year, when, in May, 1880, he began painting again. Fourth attack August 14, 1880: weakness of wrists, vomiting, no constipation or blue line, ataxic movements of hands on attempting special coördinated movements, spills tumbler of water on attempting to drink, cramps in calves of legs, fibrillary contractions of tongue, absence of patella reflex, vertigo, atrophy of inter-osseous muscles of thumbs, paralysis of extensors of left wrist, walks unsteadily. Sent into hospital. September 9, 1880. Patella reflex returned, walks more firmly, improved, handwriting trembling. (2.) Worker for seventeen years in lead works. Thirty-five years old. First symptom, colica pictona one and a half years ago, well up to August, 1880, paralysis of extensors of arms, fore-arms, and wrists, delirious one week.

The occupations were as follows: painters five, rubber workers two, plumber one, brass-finisher one, cosmetic maker one, lead-works operative one, one from drinking lead-water after severe malarial disease. The average age was thirty-four, the youngest was eighteen, and the oldest fifty-one.

The disease is here principally one of the nervous diseases belonging to a handicraft, and its poison, like that of syphilis, or paludal poison, seems capable of setting up disease in the cerebro-spinal as well as in

the ganglionic nervous system. Thus it may cause local trouble in the digestive tract or in the peripheral motor apparatus, while its action seems able to set up degeneration of the cord, either in the posterior column, the anterior column, or in the form of disseminated sclerosis, producing the phenomena of progressive locomotor ataxia, paralysis agitans, senile trembling, apoplexy, delirium, and insanity, in which latter it is marked by hallucinations and a tendency to violent excitement, as seen in the toxic action of alcohol.

Déjerine¹ reports four post mortems where there was paralysis of extensors after lead poison, and found disappearance of axis cylinders and degeneration in muscular nerves and in the anterior roots of the cord, and regards the disease as an affection of the spinal cord.

Friedlander,² in a similar autopsy, found atrophy of extensors and their nerves, extending to the cord, and considers the disease to be myopathic.

More observations are needed to settle the pathology of this disease.

DR. WHITE remarked that the water which has stood over night in the pipes in Boston is liable to show the presence of lead, and that as this had long been known it would be more interesting and instructive to examine the urine for lead of a hundred apparently healthy individuals than the Cochituate water, from which they are supposed to receive the lead, and that until this was done it did not follow that the lead found in the drinking-water necessarily produced the nervous symptoms spoken of.

DR. T. B. CURTIS wished to inquire of Dr. Minot whether, to his knowledge, any one in this country had verified the observations of Potain, Brouardel, and other investigators, showing the existence, in cases of lead-poisoning, of important temporary functional disturbances of the liver. Professor Potain, of Paris, a most trustworthy observer and an admirable clinical teacher, has called attention to the fact that during paroxysms of lead-colic the liver undergoes a remarkable temporary diminution of size, easily recognizable by percussion. Dr. Brouardel, of the Paris hospitals, on the other hand, in the course of his careful investigation of the variations in the elimination of urea and uric acid in hepatic diseases, has found that coincidently with the paroxysms of lead-colic accompanied by retraction of the liver there was a very marked diminution of the amounts of those urinary ingredients eliminated by the kidneys. Thus, in one case, the quantity of urea, which in the intervals of the paroxysms had amounted to twelve or thirteen grams in the urine of twenty-four hours, fell, during the attacks of lead-colic, to three grams. This temporary diminution of the formation of urea which accompanies lead-colic resembles the more marked, less transient, and more deleterious disturbances of the same kind which are known to occur in certain organic diseases of the liver involving a considerable degree of destruction of the hepatic parenchyma, with impairment or arrest of its metabolic functions; such, for instance, as acute yellow atrophy, suppurative hepatitis with large abscess, cancer of the liver, and suppurative angiocholitis due to obstructing biliary calculi. Garrod, to whom, with Charcot, we owe the demonstration of the fact that uric acid is the *materies morbi* of gout, had

already pointed out the important part played by chronic lead-poisoning in the aetiology of gout, especially as affecting the kidneys; and he had shown that, in lead-poisoning, there was a defective elimination of uric acid in the urine and a consequent accumulation of that substance in the blood and tissues. These facts and considerations, with others of similar import, are cited by Charcot, in his recent lectures on the liver and kidneys, as corroborative of the views elaborately expounded by Murchison, according to which the liver is the main seat or headquarters of the metabolic processes by which urea and uric acid are formed, preparatory to their elimination by the kidneys. These views, considered in connection with the analogy existing between certain of the cerebral disturbances occasionally observed in cases of lead-poisoning and the various forms — convulsive, comatose, or delirious — of so-called uramic attacks, have suggested the inquiry whether these disturbances, both in hepatic and in renal diseases, might not be of one and the same nature, though differing in origin. This theory is, however, liable to certain objections, and cannot yet be regarded as proven.

DR. WEBBER reported the case of a man who came to him with the fingers of the right hand tender, swollen, and purple, especially at their ends.

The right side of the face over the malar bone was tender and purple with round hard spots, the right side of the scalp also being affected, somewhat the same appearance was found on the right arm but none on legs or anywhere else. A sphygmographic tracing showed the tension to be much greater on the right than on the left. The affection for which no cause could be assigned was apparently a vaso-motor disturbance leading to a cyanotic condition of the skin.

DR. JAMES J. PUTNAM had also treated the case and spoke of sweating of the fingers being a marked symptom while under his observation.

DR. WHITE, after referring to an observation of Mr. Hutchinson's, made some years ago, that it was not rare to find zoster appearing in patients who were taking arsenic, spoke of a case of double zoster where arsenic had been given which he had reported at the last meeting of the Dermatological Association, and also the case of a gentleman whom he had lately been treating for psoriasis with arsenic, in whom a well-marked zoster developed.

Recent Literature.

A Treatise on the Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine. By AUSTIN FLINT, M. D., etc., etc. Fifth edition, revised and largely rewritten. Philadelphia: Henry C. Lea's Son & Co. 1881.

An extended notice of a book so well and so favorably known as Professor Flint's Practice of Medicine is scarcely necessary, although the progress made in various branches of medicine since the publication of the fourth edition in 1873, and the necessary changes in a work of this character consequent thereon, are very considerable. In making these changes the author declares himself not to have been influenced by any sense of obligation to maintain consistency of views with the previous editions of the treatise, or with other works which he has written. In the light of more recent reflection and enlarged knowledge, some statements made at a prior date seem to him no longer

¹ Virchow's Archiv, Bd. lxxv.

² Progres Med., No. 7, 1879. Déjerine finds destruction of nerve substance in the intra-muscular nerves, nerve trunks, and anterior roots, and believes the disease is probably first central and subsequently peripheral. Soc. de Biologie, February 1, 1879.

tenable; he has, therefore, in this point of view, endeavored to regard his own writings divested of the partiality of authorship, and to subject them to as critical an examination as if they were the writings of another. Dr. William H. Welch, lecturer on pathological histology in the Bellevue College, has contributed in Part I. the first seven chapters, embracing the general pathology of the solid tissues and of the blood; the descriptions of the anatomical characters of the diseases considered in the rest of the volume have also been revised, and in great part rewritten by him. A new section has been introduced devoted to the diseases of the hematopoietic system, the classification of the diseases of the nervous system has been placed on an anatomical instead of a symptomatic basis; and several diseases have been added which were not considered in previous editions.

The summary of recent theories and investigations upon such subjects as tubercle and carcinoma, which are still *sub judice*, though brief and somewhat one-sided, is perhaps as extended as could be expected in a work of this character, or as is desirable in regard to topics still so unsettled. The new part of the book is, in general, very well done. In spite of condensation and omissions the size of the volume is somewhat enlarged, and a half-russia binding gives it a very solid and substantial appearance. In the matter of treatment Professor Flint does not seem to have been affected by recent therapeutical enthusiasms, and those who desire to be assured that so many grains or fractions of a grain of a given drug will drive out so many inches of a given disease must look elsewhere for their authority.

Lectures on Syphilis. Delivered at the Harveian Society, December, 1876. By JAMES R. LANE, F. R. C. S., etc. Second edition. London: J. and A. Churchill, New Burlington St. 1881. Pp. 95.

In 1878 Dr. Lane published three short lectures, showing (1) historically, the progress made in the investigation of venereal diseases; (2) actually, the generally accepted views of the profession at present; and (3) potentially, whither his own views and opinions would tend. The present edition is equally compressed, the three lectures averaging thirty pages in length, while yet the leading features are discussed of duality, contagion in the "secondary" stage, vaccinal, and hereditary syphilis, etc.

Lecture No. 1 traces concisely the principal steps by which progress has been made from the time of Hunter until to-day. Dr. Lane believes with Mr. Hutchinson that "duality is dead," and deals some hard blows to that *deus ex machina* the "mixed chancre." "Syphilization" he justly considers inadmissible as a curative measure, and takes issue with Turenne as to its value as a prophylactic against future contagion. As to "phagedæna," the chief progenitors are regarded as want, neglect, dirt, and drink; no special relationship to syphilis being recognized. A "specific gonorrhæal poison" is denied; clap is an acute urethritis, and may arise subjectively from violent and excessive sexual and alcoholic indulgence, objectively from "whites," menses, etc.

Lecture No. 2 admits the possibility of syphilitic re-infection, and deprecates the hopeless view of the case which is conveyed by the axiom, "Syphilis once, syphilis ever." It affirms that the clinical evidence of the

communicability of an induration at the inoculated point after a period of incubation, and subsequent general affections in due course, by the secretions of "secondary" syphilis, is abundant; that the contagious quality of the blood of syphilitic persons must also now be regarded as an established fact; that it is clearly proved that vaccination with syphilitic blood may convey syphilis, but it is not yet proved that vaccine lymph from a syphilitic child, even though unmixed with blood, will not do so, and it is therefore the height of imprudence to act on any such belief so long as vaccine lymph direct from the calf is obtainable; that as to the physiological secretions of syphilitic persons, the only safe course is to regard every one of them with profound distrust, and to take such precautionary measures and to give such advice as the circumstances seem to call for. The remarks upon "hereditary syphilis" are good, but hardly admit of condensation. Visceral syphilis is barely touched upon.

Lecture No. 3 on "treatment," asserts that syphilis has a strong tendency to get well of itself; that any application of the much abused non-"caustic" nitrate of silver only irritates the sore, and causes inflammation and even phagedæna of the adjacent parts, and that often without even destruction of the sore; that cleanliness, tonics, and mercury are the treatment for early constitutional symptoms, while iodide of potassium has no therapeutic value whatever either in the primary or early "secondary" stage. Dr. Lane is, from personal observation and a five-and-twenty years' experience in Lock Hospitals, an ardent advocate of legislative prevention by means of "contagious disease acts."

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. By FRANK CLOWES, D. Sc., Lond. With illustrations. From the third English edition. Philadelphia: Henry C. Lea's Son & Co. 1881.

The present edition of this work, and particularly that section of it which treats of the analysis of simple salts has been carefully revised. The book is eminently a practical one, and we can cordially recommend it as one of the best text-books for practical instruction in the laboratory. The analytical reactions and methods are those which experience has proved to be the most accurate, and the directions for working are given so fully as to be perfectly intelligible to the student without extended verbal explanation from the instructor.

Medical Diagnosis, with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCOSTA, M. D., etc., etc. Illustrated with engravings on wood. Fifth edition, revised. Philadelphia: J. B. Lippincott & Co. 1881.

The first edition of DaCosta's Medical Diagnosis was published in 1864. Since then it has gained a firm place in medical text-book literature, and in the confidence of the general practitioner. A new edition was unquestionably called for; and the present volume will certainly strengthen the reputation and add to the popularity of the book. The chapters on the nervous system and on the blood have been rewritten, and a number of new wood-cuts have been introduced. A German translation is now in process of publication by Hirschwald, in Berlin.

Medical and Surgical Journal.

THURSDAY, MARCH 10, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,

No. 4 PARK STREET, BOSTON, MASS.

A BILL PROVIDING FOR THE EXAMINATION OF RAILROAD EMPLOYEES FOR COLOR-BLINDNESS AND DEFECTS OF VISION.

THE admission on the part of railroad officials of the existence and danger of defective sight as to form and color among those engaged in moving trains, and the repeated advice of state railroad commissioners to have such persons tested in reference to these qualifications, has finally caused the reporting to the Massachusetts legislature, by the railroad committee, of a bill to the effect that—

“No railroad company shall employ any person in a position requiring the distinguishing of form or color signals, unless such person within two years next preceding has been examined for color-blindness and other defective sight by some competent person, and has received a certificate that he is not disqualified, by reason of any defect of vision, to perform the duties of such a position.”

The penalty for this is a fine of one hundred dollars for every such person so employed. The act to take effect July 1, 1881.

This is the third year the attention of our state legislature has been called to the subject. At present, printed documents from abroad, the annual reports of the several departments of the national government and of the state boards of health and railroad commissioners, the published arguments before committees, etc., give us the experience of Europe and this country in deciding the importance and necessity of what railroad officials now admit and railroad commissioners insist on, namely, the physical examination of all employees engaged in moving trains, as to their perception of form and color. Of this need the profession and the community have, however, long been aware, it having been proved to them in many ways. Legislative recognition of this need has at last been secured, and the right of the community to be protected admitted.

The rights of the employee and of the community, however, are not recognized in this bill reported by the railroad committee, in that it fails to protect both, by requiring examinations to be made by those who alone can do so with justice to both parties. The term “some competent person” is a very loose one. Our railroad commissioners have declared any railroad official to be such; the Connecticut commissioners that only experienced ophthalmic surgeons are such, and they could easily prove this by the results in their State. Hence in Massachusetts it will hereafter, under

this act, have to be decided by judge and jury. It certainly would require but a few moments on the part of the counsel prosecuting a railroad corporation to prove the incompetency of any of the laity, and probably of all but a few of the profession, in detecting visual defects. But such incompetency proved on the part of a railroad official who had tested five hundred men on his road would subject the corporation to a penalty of \$50,000 fine.

The laity who are interested, and perhaps even the profession, have till now been rather loath to admit the need of the specialist in these examinations. No doubt this has been largely due to the *seeming* simplicity of the methods employed by those specialists who have brought the subject before the community. History repeats itself, and it may be that we in this country must go through with the experience of Europe instead of profiting by it. There these examinations were first put in the hands of railroad officials, and their reports were simply ridiculous; then the work was transferred to railroad surgeons, and they equally failed till specially instructed by those who had rendered themselves experts by study and by practical experience in testing employees. So that finally, in those countries where the greatest care is taken, the matter is put wholly in the hands of competent ophthalmic surgeons. That this is fairest to the employee, the traveling community, and the stockholder, is self-evident. The last would here be liable to have his pocket touched by the corporation being fined for employing men who possess a certificate from a person proved incompetent to give one. He is also liable to have his dividend “passed” by damages from accidents proved to be due to defective vision, whether from want of eyesight or from color-blindness. Officials admit that the former do occur, and it will not be long before the latter is equally proved, as it has been on the water.

A careful perusal of the printed material above referred to will show that the need of special examiners is as perfectly proved as the need of the examinations themselves, which latter no one, no matter how interested to the contrary, now attempts even to deny. This was certainly very clearly set before our railroad committee. The testimony of medical officers of the government and of some of the railroads, that notwithstanding their experience and study which their duty called for, yet that they were not infrequently puzzled, and forced to apply to the specialist, certainly is most convincing, and we think that this will be the result when any of the profession take up their examinations on the correct carrying out of which so much depends, not only for the examined, but also for the reputation of the examiner. It is to be doubted if any but those very familiar could have, as in Connecticut, so perfectly proved the absurdity of testing for color-blindness by flags and lanterns; and yet all but experts had thought it quite possible, totally ignoring European experience, where this had already been tried and reported on, just as have the Connecticut examining ophthalmic surgeons and the board of health reported. This need of expert examinations is absolutely proved by specialists finding

in Connecticut, among employees already tested by railroad officials informed and instructed by our railroad commissioners, a larger per cent. of color-blindness and defective vision than had ever been claimed as existing even on roads where no examinations were made.

Another most important point is that, by this bill, "any competent person" decides what defect of vision disqualifies for performing the duties of the employee's position. Now the amount of permissible chromatic defect and loss of visual power is not at all decided. The rules advised by the best and highest authority in Europe, resulting from practical experience, were the basis of the Connecticut laws. There is, however, nothing in this bill calling for these or *any* definite standards, either as to methods of testing or requirements. But so important is this that a royal commission in Belgium, in an extended report to the government, urges the forming of an international commission to decide these points for the countries of Europe in general; and as to the navy and marine a bill, as is well known, is now in Congress to initiate a similar international commission for the ocean.

The act which was proposed to the railroad committee caused the Governor and Council to appoint competent medical examiners, who should draw up proper rules, etc., and submit them for approval. Thus all parties interested could be heard, and the examiners would be strictly held by such rules and regulations; they would simply test and report, etc., uninterested in rejection or approval. A bill was also presented the committee providing for an interstate commission, to agree upon what was fairly required of employees engaged in moving trains, in respect to their power of sight and color-sense, and standard methods of testing these by those competent to do so.

Massachusetts now avails herself of the experience of Europe and this country in requiring examinations. Why can she not avail herself of the experience gained as to the equal necessity of such examinations being made only by those who can decide fairly between employee, stockholder, and the millions of people so much of whose lives must be spent on our quickly moving railroad trains? The community await an answer.

REVACCINATION: A REPLY TO G.

"Now, here's another discontented paper," as Shakespeare has it, yet another complaining and capacious correspondent, expostulating in unmeasured terms against our recent editorial on small-pox and revaccination, and charging us with various unpardonable offenses, both of commission and of omission. We are somewhat surprised, we must confess, by the *manner* as well as by the matter of the protests which have been entered against our statements, and we are quite at a loss to account for the markedly polemical animus so freely displayed by our correspondents in their attacks. We will, however, once more attempt to meet the objections and criticisms — such, at least, as admit of comprehension and discussion — again in-

curred by our remarks on the prophylaxis of small-pox, after which we trust that our readers will be spared the further continuance of a controversy so profitless, to say the least, as that which has been forced upon us.

Taking up successively, one by one, the questions raised by our correspondent, we must, in the first place, vindicate our entire right to address our readers on the subject treated of in the indiscriminated article, and maintain the absolute propriety and opportuneness of our remarks and admonitions. G., referring to "those who have authority to speak on the subject," adds that he alludes "of course to our board of health." In thus implicitly restricting to our sanitary board the authority to speak on the prophylaxis of small-pox, and denying our own competence and right to an independent voice and action in the matter, our correspondent shows that he is manifestly confounding two distinct branches of sanitation, the duties and responsibilities of which lie in wholly opposite directions. *Public hygiene*, to be sure, comprising, as agencies designed to prevent the spread of small-pox, isolation and *compulsory* vaccination, concerns our sanitary authorities. This province we did not venture in the remotest manner to infringe upon, though, in our editorial capacity, we should not feel called upon to refrain from suggestions or criticisms, should such outside intervention in the affairs of our sanitary government seem at any time called for. The domain of *private* or *individual hygiene*, on the other hand, belongs wholly and exclusively to the physician and to his patient; and in times like the present, of foreboded prevalence of small-pox, it is not only the right but the bounden duty of the physician to see to it that his patients receive *in due season* the benefits of the requisite precautions against the disease. This is a matter of private hygiene, lying between the physician and his patient, which does not in the least concern the sanitary authorities, in which they very properly forbear to interfere, and in which any attempt at intervention on their part would only be an unwarranted intrusion.

No one more fully recognizes than ourselves the admirable efficiency and the entire competence of our municipal sanitary board; but we are not in the least disposed, for aught G. or any one else may say, to abdicate the right of dealing, in these editorial columns, with any such questions of private or even of public sanitation as may seem to us expedient, whether in the interest of the profession, or of the public, or of both. Boards of health, though active, are mostly silent bodies; *acta, non verba* is their motto; it is not their province nor their habit to undertake to teach the medical profession its duties; nor do we, as physicians, look to them for instruction or guidance in matters which are manifestly of our own special and technical competence. On the other hand, it is not only the right but the plain duty of a medical journal to do all in its power to raise, agitate, and discuss questions of interest to the profession, and to dispense information and advice bearing upon all medical subjects, whether relating to the theory and practice of medi-

cine and surgery, or, as in the present instance, to sanitation, public or private.

The object of our article, then, was simply to warn our readers of the possible and *probable* advent of small-pox, in order that the resources of private hygiene might be voluntarily brought to bear at once, in order that vaccination might be attended to *in season*, without the homicidal delays shown to have occurred at the time of the last great epidemic of 1872-73. It did not in the slightest degree enter into our intentions or our programme to touch upon the duties of the board of health, of which our correspondent has so gratuitously constituted himself the hot defender and expounder. These same considerations suffice to show the inanity of his blundering charge that our "omission of even a reference to the very thorough work in the way of vaccination and re-vaccination in this city in 1872-73 is inexcusable," etc.

Alluding to our editorial article, G. says that its "*only result* (excepting, of course, the general public excitement and the consequent rush for vaccine matter) has been the article by Deltoid," etc. Now this altogether disinterested testimony to the *complete success* of our undertaking is in the highest degree gratifying to us, especially when we take into account the quarter from which it comes, and the shape in which it is conveyed. Deltoid's communication, to say the truth, we have not looked upon as a particularly valuable fruit of the agitation which we thought it expedient to arouse; though G. seems disposed to rate that rather intemperate epistle, those "wild and whirling words," as on the whole the most important result of our efforts. But the "general public excitement" and the "rush for vaccine virus," alluded to in an accessory and disparaging way by our correspondent as our "only" achievement, happened to be exactly what we wanted in the way of "results," and absolutely *all that we wanted*. What other ends G. can have supposed us to have had in view we are wholly at a loss to imagine, and leave to the ingenuity of our readers to find out.

G., referring to our very temperate appeal in favor of the usual measures of prophylaxis against small-pox, says that he "will not stop to investigate whether the existing state of affairs in Boston and the surrounding country is such as to warrant such a note of alarm, . . . as that is a matter on which argument is impossible." He nevertheless, although having thus explicitly acknowledged his inability to justify his conclusion by any evidence or process of reasoning whatsoever, does not hesitate to assert, further on, that it seems to him "that there is no occasion for alarming the public," and that he does not believe it advisable under the present circumstances to start "a popular scare."

Being thus challenged to justify what G. calls our "note of alarm," or, as we would rather say, the *warning*, which, upon due consideration of the past and present state of affairs here and elsewhere, we felt called upon to convey to our readers; and not finding ourselves at all disposed to agree with him in

looking upon this topic as "a matter on which argument is impossible;" being, on the contrary, of the opinion that herein is the fundamental question wherein we find ourselves absolutely at variance with G., as well as with Deltoid, both of whom deprecate what they choose to call a "panic" or a "popular scare" as unnecessary or premature, we will simply call attention to the following *facts*:—

For nearly a half century small-pox has been almost constantly present in Boston, the only years in which no deaths by this disease were recorded being 1833, 1844, 1878, and 1879. In that space of time we have undergone at least six distinct epidemic recrudescences of variola, each of which has generally lasted between one and two years, and has been followed by an interval of six or seven years, during which a few yearly deaths have occurred, due to imported or sporadic cases. Ever since the introduction of vaccination at the beginning of the century, the severity of these successive epidemics has been growing greater, culminating in the last, which subsided in 1873, after a duration of about a year. The following figures, exhibiting the yearly death-rates by small-pox per 100,000 living, in Massachusetts, during twenty-four years, from 1851 to 1874, shows the increasing severity of the disease:—

Years.	Death-Rates.	Years.	Death-Rates.	Years.	Death-Rates.
1851	12	1859	21	1867	15
1852	3	1860	27	1868	2
1853	4	1861	3	1869	4
1854	19	1862	3	1870	9
1855	29	1863	3	1871	19
1856	12	1864	19	1872	67
1857	2	1865	17	1873	43
1858	1	1866	11	1874	2

The American epidemic of 1872-73 followed closely upon the great transatlantic epidemic of 1871-72, which raged in Great Britain and all over the continent of Europe during the Franco-German war, following the footsteps of the contending armies in the field and harassing the troops within and around the beleaguered cities. The epidemic of 1872-73 proved fatal to 1040 persons in Boston, of whom nearly 70 per cent. were adults, aged 15 years and over. In Suffolk County, in the year 1872, when the epidemic was at its height, the deaths by small-pox amounted to 73.27 per cent. of all the deaths so caused in the State of Massachusetts, although the population of the county did not exceed 22 per cent. of that of the State.

Now, this great epidemic lasted everywhere about a year. In pretty much all localities, *whether provided or not with boards of health*, it subsided spontaneously at the end of about a twelvemonth, when the previously accumulated stock of predisposed subjects had become exhausted; the fire then died out for want of fuel; the combat ceased for want of combatants. It is therefore extremely doubtful, to say the least, whether the sanitary authorities of any of our cities really deserve to be credited with the "stamping-out of the epidemic of that period," so un-

hesitatingly affirmed by our correspondent G. If he had wanted to do full credit to the unquestioned efficiency of our municipal Board of Health, he ought to have enlarged upon the more recent and very severe epidemic of 1875-76 which in those two years killed 1651 persons in Cincinnati, and in the year 1875 caused 1280 deaths in New York, and which we entirely escaped in Boston (four deaths only taking place), thanks, without doubt, to the vigilance with which the flying sparks were stamped out by our sanitary guardians as fast as they fell within the limits of our community, as well as to the other precautions initiated in the course of the epidemic of 1872-73, and carefully maintained ever since by our Board of Health.

Such having been our experience of small-pox in the past it now behooves us not to be unduly sanguine with regard to the future, but to act at once upon the probability of the disease being at hand. To be sure, we *may* escape it altogether, as was the case in 1875, though it is in the highest degree unlikely that we shall continue indefinitely to enjoy such immunity. Small-pox may not appear for six months or more; but, on the other hand, it *may be established in our midst to-morrow*; and nothing could be more unwise, more criminally imprudent, than to allow ourselves again to be overtaken by it, unprepared, as in 1872. Therefore let us at once, without alarm or panic,—such excitement being wholly superfluous and uncalled for,—hasten to make up our arrears of prophylaxis, by vaccinating, as speedily as possible, all unvaccinated infants and children, even if under the age of legal requirements, and by revaccinating all adults whose primary vaccination is such as to afford insufficient guarantees of protection.

Such was our advice to our readers. The propriety and opportuneness of our warning is corroborated by the recent circular of our State Board of Health, setting forth the existing legislation with regard to vaccination and small-pox, in which it was stated that "the State Board of Health, Lunacy, and Charity voted at its regular monthly meeting, February 5th, that a communication be sent to the towns of the Commonwealth urging the importance of a protection of the people before small-pox appears in this State," and urging that, "in view, then, of the possible appearance of small-pox in this State, it is earnestly desired that a vaccination of all unprotected individuals should be made," etc.

Another circumstance, which testifies strongly to the opportuneness of the recent and present extensive resort to revaccination in this community,—the latter having been largely consequent upon our appeal, and presumably a result of it,—is the unusual susceptibility to vaccinia now being displayed by revaccinated adults. In ordinary times, revaccinations are apt to be unsuccessful in a large majority of cases; but, as Prof. W. B. Davis, of Cincinnati, says in a very instructive paper on Revaccination, published in the *Journal* a few years ago, "exposure to infection and to intense epidemic influence largely increases the susceptibility of the system to the influence of vaccine

virus, and accounts for the unusual number of successful revaccinations during the existence of an epidemic."

Finally, in further justification of the so-called "scare" with which, to our great gratification, we are credited by our critics, we will appeal to the general assent and compliance with our advice so promptly exhibited by the profession of the city and its environs, and made manifest by the "rush for vaccine matter," admitted by G. to have followed as one of the results of our article.

Several points, incidentally and lightly touched upon by our correspondent, still call for comment. He ventures upon the entirely gratuitous and absurd insinuation that we are actually so fatuous as to suppose that "the idea of the necessity of revaccination is a new one." Now we must say that we are utterly at a loss to imagine by what perverse exercise of misdirected ingenuity he can have fancied that any portion of our remarks could be twisted into any such appearance of pretention on our part. His misconstruction of our statements with regard to this comparatively unimportant point can hardly be accounted for, save by a hasty and prejudiced perusal of our article. We are so confident that he stands alone in this singular interpretation that we will not risk importuning our readers with any discussion of the point. We will only advise our correspondent to reread attentively what we have said; and if, on careful re-perusal, he still clings to his disparaging view, we shall simply have to do our best to resign ourselves cheerfully to his very unfavorable estimate of our intelligence and modesty.

G. accuses us of "ingeniously twisting" Marston's (not Marston's) statistics of comparative mortality by small-pox among different categories of patients (unvaccinated, ill or well vaccinated, and having previously had small-pox), with the object of bearing out our own statement, as well as that quoted from the *Lancet*, to the effect that the protection afforded by vaccination, and *a fortiori* by revaccination, was greater than that accruing from antecedent small-pox. We are really gratified by this recognition of our ingenuity; we accept the unexpected compliment with all the modesty at our command, and only regret that we cannot return it. G. says of Marston's table of figures that "it does not, of course, prove anything of the sort, but simply shows that in cases where the disease attacks a person a second time the ratio of mortality is high." He here concedes all that we wished to establish. We have almost always found that the chief preoccupation and most earnest wish of sick people was to survive. When small-pox, or any other disease, has proved fatal, we have been in the habit of looking upon the means of prophylaxis employed as defective; the deficiency of protection being, in our eyes, proportional to the degree of mortality. Of course, post-variolous small-pox is met with very much more rarely than the post-vaccinal disease, inasmuch as there is an infinitely greater supply of vaccinated individuals about than of persons offering the necessary conditions for second small-pox; namely, having never

been vaccinated, and having already experienced and survived small-pox. Our statements touching the superior protection afforded by vaccination are corroborated in the paper by Professor Davis, already quoted from, one of the conclusions of which, based upon cases observed in Cincinnati during the very severe epidemic of 1875, was to the effect that "variola and varioloid give no more protection from a recurrence of variola than vaccination."

With regard, finally, to the charge of presumption, finely implied in our correspondent's last "homely" paragraph, we hardly know what notice to take of it. Our space, and probably the patience of our readers, are alike exhausted, and we will only observe, for the sole benefit of G. himself, that we are making it our particular business, in these editorial columns, to give instruction of the kind alluded to by him, — to which he will himself always be welcome, — and that we propose in future, without allowing ourselves to be at all discouraged by this gratuitous protest against our competence, to continue our best efforts in behalf of the dissemination of such information as it is the legitimate province of a medical journal to impart to its readers.

BELLEVUE HOSPITAL MEDICAL COLLEGE: A DISHEARTENED REFORMER.

In the issue of the *JOURNAL* for January 27th extracts were made from the annual report of Harvard University for 1879-80 relating to the medical department of the university. Tables were reproduced, giving statistical information concerning the working of preliminary examinations and extended time requirements for a degree.

In conclusion we sympathized with the regret expressed by the president of the university that similar statistics are not published by other prominent medical schools, and expressed the hope that they might be stimulated to an honorable rivalry accompanied by such a "fair count" as might make the figures really valuable for comparison. The nearest approach to a response to the expression of this hope, which we have as yet noticed, is a somewhat euphemistic circular issued by the faculty of Bellevue Hospital Medical College, the greater part of which we reprint, even at the risk of increasing the usefulness of so prudent an institution.

The faculty of the Bellevue Hospital Medical College introduced, for the session of 1880-81, important changes in the curriculum of instruction and in the requirements for graduation. The preliminary term was abolished, and the regular winter session was extended to six months. Attendance upon three winter sessions was made obligatory. Students were required during the two first years to attend all the lectures, didactic and clinical, and at the end of the first and second years to pass examinations in chemistry, anatomy, physiology, materia medica, and therapeutics. An examination in these branches having been passed, the third year was to be devoted to the practical departments of medicine, surgery, and obstetrics. The requirements embraced, in addition to dissections, practical courses in chemistry and histology. Provisions were also made for additional exercises in the three practical departments. These exercises, consisting of personal examinations in cases of disease, the performance of surgical operations on the cadaver, and demonstrations in gynecology, were limited to third-course students. These changes were made by the faculty with entire unanimity

and with the expectation that a considerable pecuniary sacrifice would be demanded on the part of its members, who were actuated solely by a desire to secure a higher grade of professional acquirements for the graduates of the college.

The experience of the session of 1880-81 has led the faculty reluctantly to the conclusion that to persist in the requirement of attendance during three courses will be to incur a risk as regards the interests of the college, which they do not feel justified in assuming; and the purpose of this announcement is to state that, after the present session of 1880-81, attendance during a third session will be optional and not obligatory. This college, like most American medical colleges, is self sustaining; and the special provisions for instruction which have been and will continue to be maintained call for a large expenditure of money as well as of time and labor. With an undiminished desire to continue the requirement of three sessions, and with not less willingness than heretofore to make whatever personal sacrifices may be necessary, the faculty feel obliged, by a proper regard for the prosperity and usefulness of the college, to return to the requirements for graduation which were in force prior to the session of 1880-81. In making the changes introduced during this session, it was foreseen that a large proportion of the students in this college coming from distant parts of the United States, the necessary expenses of spending three winters in the city of New York would render difficult or impossible the attendance of many who would otherwise join the classes. Many students, of course, would be led to attend other colleges which require only two sessions for graduation. It was hoped, however, that the progressive movement of the Bellevue Hospital Medical College would secure approval and coöperation on the part of the medical profession sufficient to render the change feasible. In so far as a judgment can be formed from the present session the profession is not prepared to sustain the movement.

In announcing a return to their original requirements for graduation, the faculty desire to state that all the new additions to the curriculum will be retained. It is not proposed to recede in the least from these. Students will have the same opportunities for practical exercise in the different departments as those enjoyed by the class of 1880-81. For those who choose to attend during three sessions, the provisions as respects examinations in the elementary branches at the end of the second year, and an exclusive devotion to the practical departments during the third year, will be continued. To all students who are able to do so, now, as hitherto, attendance during three years is strongly recommended; and, from the number of those who have already matriculated with the expectation of attending three sessions, the faculty entertain a belief that not an inconsiderable proportion of future classes will voluntarily follow their example.

Notice is herewith given that, for the session of 1881-82, the requirements for graduation will be three years' pupillage, after eighteen years of age, and attendance upon two full courses of lectures, the last being at the Bellevue Hospital Medical College.

February, 1881.

After one session of well-doing the Faculty of the Bellevue Medical College has lost heart. Having put its hands to the plow, it turns back before the dew is fairly off the grass, not so much because it dislikes the sun as out of regard to the plow.

A judgment formed upon so short an experience might safely be termed a "snap" judgment, but if its judgment is correct the Faculty seem willing to consider its own lack of perseverance as attributable to a want of approval and coöperation on the part of the medical profession!

It is very important that this country should possess medical schools with high standards, whose degrees mean something positive, but we cannot see that it is otherwise of any inherent consequence, unless possibly to the members of its Faculty themselves, that any particular medical school should continue to exist.

We congratulate our excellent contemporary, the *New York Medical Record*, upon its manly and straightforward editorial remarks on the Harvard Medical School and Reforms in Medical Education, in its num-

ber for February 26th, from which we make the following extract:—

"The Harvard school is one of the few medical institutions which dares to publish the figures showing the number of students who come up for final examination and the per cent. rejected. The proportion last year was nearly one third. It is the belief that in one of the largest, if not the largest, college in this city the proportion rejected is about one fiftieth!—which means that all but a scant half dozen are rushed through the tests, to the great financial comfort of the college and the shame and damage of the profession.

"With the manifest benefits which a system of medical education like that of Harvard confers upon our profession, it is a duty, as well as for its interest, to encourage this particular school and all others conducted on a similar plan."

It is very desirable that a school should have the encouragement of the profession in its efforts at reform in medical education, but encouragement here as in other matters is most apt to be shown to those who manifest a strong tendency to help themselves.

MEDICAL NOTES.

—Professor Bigelow's operation of litholapaxy has at last successfully invaded both Vienna and Paris, and is meeting with the appreciative recognition previously bestowed on it elsewhere. Professor Billroth (*Wien med. Wochenschrift*, Nos. 44 and 45, 1880) and Professor Dittel (*Allg. Wien. med. Zeit.*, No. 44) recently referred to the operation in terms of generous approbation. M. Rousseau, of Paris, in the last number of the *Archives Générales*, speaks of litholapaxy in terms of unqualified praise.

NEW YORK.

—Dr. T. Gaillard Thomas's beautiful new private hospital for the treatment of diseases peculiar to women, at the corner of Lexington Avenue and Fifty-Second Street, has now been opened, and any patient admitted there will be sure to have every possible provision made for her comfort as well as to receive such treatment as the highest skill and science can suggest. The resident surgeon is Dr. James B. Hunter, of the attending staff of the State Woman's Hospital, and his own private office is located in the building.

Miscellaneous.

RESECTION OF THE STOMACH.

MR. EDITOR.—It is well known that resection of the stomach has, up to the present time, never been successful; but it gives me much pleasure to state that the operation has at last been performed with the most satisfactory results. On January 29th, Professor Billroth, in an operation which I had the advantage of witnessing, removed the pylorus and about one third of

the stomach for carcinoma, and the patient has made a good recovery.

In his public clinical lecture on the 31st, Professor Billroth gave an account of the case, as well as a short history of the operation and the experiments that have led to its successful performance. The substance of this lecture appears in the *Wiener Medizinische Wochenschrift* of February 5th.

The history of the operation is as follows: In 1810 Merrem published a work on this subject, giving the results of his experiments on dogs, two out of three having survived the extirpation of the pylorus and sewing together of stomach and duodenum. In spite of these results, the operation was not attempted on man, and, though surgeons of different nationalities investigated the subject, no material advance was made until Lambert discovered the true method of uniting all wounds of the intestinal tract: namely, apposing the serous surfaces. After this, recovery after sewing up of intestinal wounds became more frequent.

In 1871 Billroth excised a part of the œsophagus in a large dog, the operation being followed by recovery. Czerny first performed this operation on man with good result. This was shortly followed by the experiments of Gussenbauer, Winiwarter, Czerny, and Kaiser on resection of different portions of the intestinal tract in dogs. These operations, when performed with antiseptic precautions, were very successful, and in one case the whole stomach was removed, and the œsophagus and duodenum united with good result.

In 1877 Billroth operated on a gastric fistula following abscess by opening the abdomen at that point, excising the thickened, adherent edges of the gastric opening, sewing up the wound, and returning the stomach to the abdominal cavity. The patient made a good recovery.

In 1879 Péan, of Paris, first resected the pylorus for carcinoma in a patient who was greatly exhausted by the disease, and who died on the fourth day. Catgut sutures were used.

The present case is that of a woman, forty-three years of age, who had had the usual symptoms pointing to cancer of the stomach for more than a year. The patient was very anæmic and weak, having been able to retain only very small quantities of sour milk for several weeks. A freely-movable tumor could be felt in the epigastrium through the thin, flaccid abdominal wall lying slightly to the right of the median line.

The operation was performed in the small room always used for large abdominal operations, the temperature being high and the air moist. The stomach was washed out and a nearly horizontal incision, eight centimeters long, was made over the tumor, which was drawn out through the opening. It was found to involve the pylorus and about one third of the stomach.

First the greater and then the lesser omentum were ligatured and cut through close to the tumor, and the whole stomach being drawn out of the abdominal cavity, was divided, the cut beginning at the lesser curvature and passing about half way through the stomach, one centimeter from the infiltrated portion. The duodenum was incised in like manner, and six trial sutures were passed through the cut surfaces, but not tied. It being found that the edges could be easily brought together, the incisions were continued through both stomach and duodenum, and the tumor thus wholly removed.

The oblique wound in the stomach was then sewed up, beginning at the greater curvature, until an opening was left which corresponded in size with the duodenum, which was then stitched into the opening. Lambert's stitch was used throughout, fifty-four carbolized silk sutures being applied.

The stomach was then washed with two per cent. carbolic solution, and the whole returned into the abdominal cavity, which was closed in the usual manner. A carbolized gauze dressing was applied, which was not removed until the sixth day. The spray was not used. Hemorrhage throughout the whole operation was very slight, and no blood or fluid from the stomach was allowed to get into the abdominal cavity, warm carbolized compresses being packed behind the stomach while it was open.

The mass removed measured on the greater curvature fourteen centimeters; the pyloric opening allowed only a large probe to pass.

Since the operation there have been no unfavorable symptoms; no fever, no vomiting, scarcely any pain; in fact, the patient has been much more comfortable than for weeks before the operation. The external wound has entirely healed.

Wine and peptone enemata were given for two days,

and since then only wine. By the mouth, only ice for the first twenty-four hours, then milk in small quantities. On the eighth day *bouillon*, with egg, and later meat and apple *purées* have been taken without bad effect.

Now, on the fourteenth day, the patient is allowed to sit up, and in a day or two will be able to take meat and other solid food.

The success of this operation marks a great advance in abdominal surgery, and enlarges still farther the field of the surgeon. The technical difficulties of the operation are not greater than in many other cases; even the difficulties of diagnosis are now much lessened when the abdominal cavity can be opened and its contents examined with almost no danger to life, and the methods of illuminating and exploring the interior of the stomach are being daily more and more perfected.

The operation may not always be successful or applicable to all cases, but it will relieve, even if it does not permanently cure, many patients whose sufferings are generally intense, and who have absolutely no hope of cure by the means hitherto employed.

SAMUEL J. MIXTER, M. D.

VIENNA, February 11, 1881.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 26, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	694	284	22.54	21.47	8.79	6.20	1.01
Philadelphia.....	846,984	369	122	20.60	8.67	2.17	1.63	11.92
Brooklyn.....	566,689	279	119	25.81	20.07	13.62	7.89	.71
Chicago.....	503,304	211	98	27.01	18.01	6.16	3.80	3.80
Boston.....	362,535	190	74	20.53	15.26	11.05	.53	—
St. Louis.....	350,522	136	52	23.53	11.03	3.68	—	—
Baltimore.....	332,190	135	44	20.74	9.63	7.41	7.41	—
Cincinnati.....	255,708	117	36	11.97	22.22	3.42	2.56	—
New Orleans.....	216,140	121	30	23.14	14.90	6.61	3.31	—
District of Columbia.....	177,638	96	34	14.58	13.54	5.21	1.04	—
Pittsburgh.....	156,381	60	26	23.33	10.00	5.00	10.00	6.67
Buffalo.....	155,137	55	23	25.45	14.55	16.36	1.82	—
Milwaukee.....	115,578	46	24	23.91	13.04	4.35	10.87	—
Providence.....	104,850	39	14	23.08	20.53	5.13	2.57	—
New Haven.....	62,882	19	8	10.53	26.32	5.26	—	—
Charleston.....	49,999	27	5	3.70	18.52	—	—	—
Nashville.....	43,461	22	10	27.27	4.55	—	—	—
Lowell.....	59,485	25	6	16.00	8.00	—	—	—
Worcester.....	58,295	17	10	17.65	35.29	5.88	5.88	—
Cambridge.....	52,740	22	8	4.55	27.27	4.55	—	—
Fall River.....	49,006	30	9	13.33	—	6.67	—	—
Lawrence.....	39,178	19	5	21.05	—	—	—	—
Lynn.....	38,284	15	8	20.00	26.67	6.67	—	—
Springfield.....	33,340	12	5	8.33	16.67	8.33	—	—
Salem.....	27,598	14	2	7.14	14.29	—	—	—
New Bedford.....	26,875	8	1	—	25.00	—	—	—
Somerville.....	24,985	8	1	12.50	12.50	12.50	—	—
Holyoke.....	21,851	12	3	25.00	50.00	—	—	—
Chelsea.....	21,785	11	—	27.27	27.27	18.18	—	—
Taunton.....	21,213	9	4	11.11	22.22	11.11	—	—
Gloucester.....	19,329	10	7	10.00	—	10.00	—	—
Haverhill.....	18,475	6	2	16.67	16.67	16.67	—	—
Newton.....	16,995	11	2	18.18	27.27	18.18	—	—
Newburyport.....	13,537	2	2	50.00	—	—	—	—
Fitchburg.....	12,405	2	—	—	—	—	—	—
Twenty-four Massachusetts towns.....	196,528	64	18	20.31	12.50	7.81	—	—

Deaths reported 2913; 1096 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fe-

vers) 620, lung diseases 476, consumption 407, diphtheria and croup 209, scarlet fever 112, small-pox 65, typhoid fever 43, malarial fevers 40, diarrhoeal diseases 34, erysipelas 31, cerebro-

spinal meningitis 28, measles 27, whooping-cough 20, puerperal fever 10, typhus fever one. From *typhoid fever*, Philadelphia eight, Chicago seven, Boston six, New York and St. Louis three, Providence and Lawrence two, Brooklyn, Baltimore, Cincinnati, New Orleans, District of Columbia, Pittsburgh, Charleston, Lowell, Holyoke, Chelsea, Attleborough, and Weymouth one. From *malarial fevers*, New York and St. Louis 11, New Orleans and District of Columbia five, Chicago, Baltimore, Cincinnati, Buffalo, New Haven, Lawrence, Chicago, and North Adams one. From *diarrheal diseases*, New York seven, Chicago and New Orleans four, Philadelphia three, Brooklyn, St. Louis, and Providence two, Boston, Baltimore, Cincinnati, Buffalo, Milwaukee, Lowell, Lawrence, Attleborough, Spencer, and Amherst one. From *erysipelas*, New York and Chicago six, Philadelphia and St. Louis four, Brooklyn three, Boston and Cincinnati two, Buffalo, Milwaukee, Providence, and Salem one. From *cerebro-spinal meningitis*, New York seven, Chicago four, New Orleans three, Philadelphia, Baltimore, Lynn, and Holyoke two, Boston, St. Louis, Cincinnati, Milwaukee, Worcester, and Newburyport one. From *measles*, New York six, Boston and Nashville five, New Orleans three, St. Louis and District of Columbia two, Milwaukee, Providence, Lowell, and Fall River one. From *whooping-cough*, New York four, Brooklyn, Chicago, and Baltimore three, Boston two, Philadelphia, St. Louis, Buffalo, Nashville, and Milford one. From *puerperal fever*, Chicago and St. Louis three, Brooklyn, Cincinnati, Lowell, and Fall River one. From *typhus fever*, New York one.

Twelve cases of small-pox were reported in Brooklyn; 30 in Chicago; one in St. Louis; seven in Pittsburgh; diphtheria

42, scarlet fever two, in Boston; scarlet fever 16, diphtheria eight, in Milwaukee.

In 43 cities and towns of Massachusetts, with a population of 1,114,439 (population of the State 1,783,086), the total death-rate for the week was 22.79, against 22.17 and 20.97 for the previous two weeks.

For the week ending February 5th, in 149 German cities and towns, with an estimated population of 7,838,433, the death-rate was 27.4. Deaths reported 4127; 1772 under five: pulmonary consumption 606, acute diseases of the respiratory organs 485, diphtheria and croup 165, scarlet fever 76, typhoid fever 63, measles and röteln 58, whooping-cough 50, puerperal fever 25, small-pox (Königsberg two, Munich) three, typhus fever (Posen) one. The death-rates ranged from 14 in Hanover to 36.4 in Nuremberg; Königsberg 29.5; Breslau 29.8; Munich 30.7; Dresden 30; Berlin 23.5; Leipzig 29.8; Hamburg 29.9; Bremen 21.5; Cologne 32; Frankfurt 18.2; Strasburg 32.8.

For the week ending February 12th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 22.9. Deaths reported 3347: acute diseases of the respiratory organs 408, scarlet fever 71, whooping-cough 70, small-pox (London) 52, measles 37, fever 37, diarrhoea 26, diphtheria 23. The death-rates ranged from 13.4 in Portsmouth to 31 in Oldham; Bristol 17.5; Sheffield 20.5; Birmingham 22; London 23; Leeds 23.5; Manchester 26.5; Liverpool 28.5. In Edinburgh 18.8; Glasgow 27.9; Dublin 41.8.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration. Hours.	Amount in inches.	
Feb. 20	29.424	28	38	19	85	61	88	78	NW	E	SE	7	7	12	C	F	F	—	—	
" 21	30.009	32	34	29	100	100	89	96	E	N	NW	11	6	12	T	S	S	—	—	
" 22	30.070	31	44	22	100	46	74	75	W	W	S	10	8	7	C	C	C	—	—	
" 23	29.770	30	50	17	70	82	72	75	SW	W	NW	11	18	24	O	R	C	—	—	
" 24	30.183	7	18	1	73	42	77	64	NW	NW	W	25	20	8	C	C	C	—	—	
" 25	30.205	15	22	5	100	70	82	84	SE	NW	W	3	6	5	S	F	C	—	—	
" 26	30.377	22	34	6	78	45	75	66	NW	W	SW	7	4	5	F	C	C	—	—	
Week.	30.248	31	50	1				77										24.52	.77	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 26, 1881, TO MARCH 3, 1881.

WILLIAM H. ARTHUR, GEORGE E. BRUSHNELL, H. P. BIRMINGHAM and M. C. WYLLIE appointed assistant surgeons United States Army, to rank from February 18, 1881.

AMERICAN MEDICAL ASSOCIATION.—The thirty-second annual session will be held in Richmond, Va., on Tuesday, Wednesday, Thursday, and Friday, May 3, 4, 5, 6, 1881, commencing on Tuesday at eleven A. M.

Sections. Practice of Medicine, Materia Medica, and Physiology: Dr. William Pepper, 1811 Spruce Street, Philadelphia, Pa., chairman. Dr. T. A. Ashby, Baltimore, Md., secretary. Obstetrics and Diseases of Women and Children: Dr. James R. Chadwick, corner of Marlborough and Clarendon Streets, Boston, Mass., chairman. Dr. Joseph Taber Johnson, Washington, D. C., secretary. Surgery and Anatomy: Dr. Hunter McGuire, Richmond, Va., chairman. Dr. Duncan Ely, Nashville, Tenn., secretary. State Medicine: Dr. James T. Reeve, Appleton, Wis., chairman. Dr. R. G. Jennings, Little Rock, Ark., secretary. Ophthalmology, Otolaryngology, and Laryngology: Dr. Dudley S. Reynolds, Louisville, Ky., chairman. Dr. Swan M. Burnett, Washington, D. C., secretary. Diseases of Children: Dr. A. Jacob, 110 West Thirty-Fourth Street, New York, chairman.

Dr. T. M. Rotch, 77 Marlborough Street, Boston, Mass., secretary.

A member desiring to read a paper before any section should forward the paper, or its title and length (not to exceed twenty minutes in reading), to the chair of the committee of arrangements at least one month before the meeting. — By-Laws.

Committee of Arrangements. Dr. F. D. Cunningham, Richmond, Va., chairman.

At a meeting of the New York Academy of Medicine, held January 20, 1881, the following resolution was adopted:—

Resolved, That a committee be appointed by the president to investigate the extent to which leprosy prevails in the United States.

The president appointed as such committee Drs. H. G. Piffard, F. R. Sturgis, and G. H. Fox.

The committee are desirous of ascertaining the actual number of lepers in this country at the present time, and to that end respectfully request any physician who may know of the existence of a case in his neighborhood to communicate the fact to the chairman of the committee, at No. 10 West Thirty-Fifth Street, New York.

BOOKS AND PAMPHLETS RECEIVED.—Cases treated by the Lister Method. Reported to the Portland Clinical Society, 11th of September, 1880. By Frederick Henry Gerrish, M. D. Portland, Me. Privately printed. 1880.

Lectures.

A CLINICAL LECTURE, WITH CASES, ON FOREIGN BODIES WITHIN THE EYE, AND THE ELECTRO-MAGNET AS AN AID TO THEIR DETECTION AND REMOVAL.¹

BY MACDONALD MCHARDY, F. R. C. S., ED.,

Professor of Ophthalmology and Ophthalmic Surgeon to King's College Hospital, London.

THE lens, which has since grown universally opaque, is becoming flocculent, and has not as yet, either by pressure or irritation, occasioned iritis. If the eye remain quiet another forty-eight hours, by which time the cataract will probably be very flocculent, I intend to then remove it by suction, as recommended by Mr. Pridgin Teale. The most opposite opinions exist regarding the merits of this mode of dealing with soft cataracts, as different operators have achieved most opposite results from it. I do not hesitate to recommend it most confidently, as being fraught with exceedingly little danger, provided a properly constructed instrument properly cleansed and disinfected be properly used. Those instruments are best to which the operator's mouth supplies the suction power, as the working of a mechanically contrived suction apparatus must necessarily hamper a hand already fully occupied in the orifice of the curette. The curette portion of the instrument should unscrew so as to admit of its being cleansed more thoroughly than is possible when it is cemented directly on to the glass tube.

You may ask, Why not leave the bricklayer's cataractous lens to be absorbed just as happened in the sawyer's case? You should remember, (1) That the absorption of such a lens would necessarily occupy many weeks, probably months. (2.) That so long as any considerable bulk of the traumatic cataract remains it may swell, press upon, and irritate either the iris or ciliary body, occasioning iritis or cyclitis. (3.) That consequently the organ of vision continues in jeopardy whilst lodging the cataract, and renders the patient unfit to work. Thus there are at least three weighty facts in favor of the most complete and early removal of a wounded lens consistent with safety to the eye.

The concluding number of the last volume of the Boston Medical and Surgical Journal furnishes an interesting report of cases in which Drs. B. Joy Jeffries and Williams successfully utilized the traction of an electro-magnet to facilitate the extraction of steel chips which had penetrated to the aqueous chamber. Dr. Bradford had furnished them with an electro-magnet weighing but four ounces, which when driven by a single bichromate of potash cell sustained five times its own weight at a distance of one inch from the extremity of the core.

Dr. E. Gruening, of New York, after experimenting to concentrate the greatest possible magnetic polarity in the least possible dimensions has finally constructed a permanent magnet of six parallel steel rods somewhat separated from one another with their ends fitted into iron caps, one of which caps terminates with a delicate soft iron stem, thirty-two mm. long by one mm. thick, and three mm. wide, which is capable of sustaining a weight of fifteen grams. The Germans have been using a Janin's magnet, which is a permanent one, composed of layers of watch-spring.

By the introduction of the pointed pole of such an instrument, between the lips of a scleral incision, Fruenkel was enabled to immediately withdraw from the vitreous a concealed fragment of iron, over the suspected position of which he had cut down.

These examples could be easily multiplied, but hoping I have said enough to induce you first to recognize the possible practical utility of magnetic traction in the extraction of chips of iron or steel within the eye, and, secondly, to produce the most handy and powerful electro-magnet, we will pass to the consideration of their use as an aid to diagnosis.

You are all aware that in the presence of iron or steel a delicately balanced magnetic needle is deflected; that a portion of iron or steel whilst magnetized is far more capable than previously of deflecting such a needle; that all steel, and such iron fragments as are not absolutely soft, are capable of being magnetized by induction, that is to say, by remaining in the magnetic circle evolved from a neighboring magnet, with which they need not be in absolute or even approximate contact.

To test the practical applicability of these truths to the diagnosis of the special class of injuries under consideration, I conducted an experiment, of necessity omitting many important but almost impracticable precautions with the bricklayer's eye, whilst it lodged that minute piece of steel in the vitreous. Suspending a delicately balanced magnetized needle with one pole immediately over the chip, I, in vain, endeavored to recognize some deflection of the former. After the chip had been magnetized by induction, and thus rendered more capable of deflecting the magnetic needle, the experiment was repeated with a negative result. Here let me call your attention, as I demonstrated at the time, to the circumstance that if the pole of the magnetic needle be allowed to touch the cornea or conjunctiva the moisture thereon may cause a false deflection, which, unless assigned to the proper cause, might lead to the most erroneous deductions. Dr. Pooley, of New York, who has conducted some very interesting experiments on this aid to diagnosis,² believes that it may prove of real use. Though believing him to be over sanguine on this point, I wish you to know that the negative result furnished by my experiment corroborates his deduction, which was that the test would fail to indicate a magnetized steel chip as small and as deeply placed as that was in the eye of the bricklayer.

For such investigations the needle must be highly sensitive and its deflection often very slight. The delicacy of the needle necessitates its protection from the influence of draughts, and the adoption of some means to neutralize the earth's magnetism, whilst the insignificance of the deflection must be met by some such device as the observation of the reflected light in the focus of a concave mirror mounted on one pole of the magnetic needle. But, after providing all these requirements, how can the influence of jar be neutralized efficiently and consistently with the conditions of such a clinical investigation. These momentous strictures were made upon the occasion of Dr. Pooley contributing a report of his experiments; but an equally cogent and still more serious comment is that even if this method demonstrated two intersecting axes, in which the chip rested, it would not give the third axis needful to fix the position of the chip. However, the method is worthy

¹ Concluded from page 220.

² Vide Knapp's Archives for 1880.

of most careful, intelligent, and patient elaboration; and, until success crown the surgeon's efforts to diagnose intra-ocular fragments of iron or steel by the magnetic needle, recollect and make use of the aid of a powerful electro-magnet in the same direction.

You noted the pain experienced by the blacksmith when his injured eye was well within the magnetic range of the pole of the magnet. That pain enabled him to immediately recognize the completion or interruption of the galvanic current which induced the magnetic action, and therefore furnished conclusive evidence, not only of the lodgment of an iron or steel body, but also that the magnet was exercising a sensible traction thereon. I have used this pain test, with the electro-magnet, on four other eyes in which the presence of iron or steel was suspected; two experienced pain immediately the galvanic circuit was completed, and these upon being enucleated testified the correctness of the diagnosis, that they contained the foreign body, the other two, being unaffected by the magnet, were not enucleated, but dealt with as the nature of the punctured wound demanded. Up to the present, the behavior of each of these preserved eyes has confirmed the diagnosis that the projectile which wounded did not remain in the eye.

The facility which the electro-magnet affords of testing, by the making and breaking of the galvanic circuit, the real as distinguished from the imaginary pain, caused by the proximity of its pole, affords a weighty argument for its selection in preference to the more handy permanent magnet. Moreover, whilst the latter only admits of saturation, the former can be supersaturated.

Quantity, as distinguished from intensity, is needed in the current for working an electro-magnet, and this must be attended to in selecting the battery.

Furthermore, when you experiment to deflect a magnetic needle with a minute influence, do not forget to remove from yourselves, and from the neighborhood, all iron and steel bodies.

Having now narrated my personal knowledge of the value of the electro-magnet as an aid to the removal and detection of iron or steel within the eye, let me ask your best attention to its further development in that direction. Lack of time forbids my entering fully upon the wider subject of foreign bodies in general within the eye. They are very commonly fragments of copper percussion gun caps, and other substances insensible to magnetic influence.

One word of warning in conclusion, when using powerful electro-magnets do not wear a watch lest it be stopped, through the steel therein becoming magnetized, and baffle the skill of the would-be repairer.¹

—Jean Ingelow's Don John is not written for medical readers, judging by the following sentence: "But he had much worse pain to bear before the surgeon had done with him, for it was found that his wrist was badly sprained, and that the small bone of the upper arm was broken." Novelists might with propriety consult their family physicians for the fictitious ailments of their heroes as carefully as for their own material ills.

¹ See the above was delivered, Dr. Wolfe, of Glasgow, has allowed me to test the electro-magnetic apparatus, which has been supplied to him with the permission of its having received Dr. Hirschberg's approval. I have found it to retain some magnetism during a cessation of the current through it, thus evidencing that it is in part a permanent magnet, owing to the employment in its construction of iron that is not pure and soft.

Original Articles.

A CASE OF OILY URINE, WITH AUTOPSY.¹

BY E. W. CUSHING, M. D.

K. R., widow, aged fifty-seven, died December 25, 1880. Eleven years ago had severe illness, with fever, delirium, and severe pain in head; otherwise was generally healthy until November, 1872, eight years ago, when she complained of pain in left side, a feeling of swelling and constriction, which continually troubled her.

In spring of 1873 had weakness in left hand, and afterwards in right leg; frequently let things fall from left hand. In June noticed some difficulty in walking, and especially in entering a carriage; also noticed formication in hand and feet, and felt as if walking on air.

In December, 1873, the right hand was similarly affected. She became irritable, could not stand in the dark, stumbled, and fell frequently.



Was examined by a physician, assistant to Professor Bamberger, who pronounced it a case of "tabes dorsalis." In February, 1874, was in bed a week with fever and severe pain in back and head; the sense of constriction persisted, and was very troublesome. She could only lie on left side, walked with staggering gait, fell not unfrequently on attempting to turn suddenly; was nevertheless pretty well as to her general health, and reasonably strong, so as to be about all day. Decided constipation was developed, which required the use of physic every second day during the remainder of her life.

In June made passage to America, traveling with assistance and with some difficulty, especially as to entering cars. In November, 1874, could no longer go up and down stairs; electricity was tried, and was immediately followed by a febrile attack, with much pain in the back. She was seen by Dr. C. Ellis, who pronounced it a case of spinal sclerosis. Such attacks

¹ Read before the Boston Society for Medical Observation, January 18, 1881.

recurred at irregular intervals of about eight months. After each, patient was usually a little more helpless, and after one in 1879 there was ptosis and double vision, lasting for some weeks. In February, 1875, she was unable to leave her bed; this was about two and a fourth years from the first insidious onset of the disease, and not quite five years before her death. The legs soon swelled as high as the knee, the feet were very large and cedematous, so that during all her illness they must be bandaged very carefully to prevent the skin from giving way.

Reflex action in the legs was easily excited, although no voluntary motion was possible, and patient could not tell the position of the legs without seeing them.

In the summer of 1875 a machine was devised to lift her from bed to chair by mechanical power, and she was able to use it until within four days of her death. A platform on castors was attached at one side to a framework, which, when the platform was under the bed, extended over it; proper supports were provided for the hands and feet. A stout piece of canvas, with a suitable hole in the centre, was slipped under the invalid in bed, hooked to the frame by ropes in front, tied round the knees so that it could not slip back, and then, a fall and tackle being hooked to an iron rod in the rear of the canvas, the patient was swung clear of the bed, the whole platform drawn out, the chair placed under the body of the patient, who was then lowered into it, and then the whole apparatus could be rolled to any part of the room.

For convenience in using a wheeled chair, an inclined plane was devised which could be annexed to the rear of the platform.

Thus for five years this poor sufferer passed her life. She could not lie in any position, except on the left side, and then never longer than two hours, without suffering atrocious pains in the back and limbs. Sleep was usually obtained in the sitting position, leaning on a table. The feet and legs grew enormously swollen; there was occasionally some difficulty with the bladder, always relieved by regular catheterization and a little buchu. The hands were tremulous, and could hold no small object, but could manage a spoon or fork; the appetite was good; temper cheerful; intellect serene. There was, however, great sensitiveness to cold, and much suffering from erratic pains, especially in right hip and in legs.

In the summer of 1879 patient repeatedly said that she felt that she should not live long, but seemed about as usual, and was in particularly good health when, just eight years from the first definite symptoms, on November 28, 1880, she was suddenly attacked in the evening with persistent vomiting and atrocious recurrent pains in the left side, in the region of the stomach.

At first it was supposed to be simply a "verdorhener magen," but, as the vomiting continued after the stomach was empty, and the pains grew even more severe, it was thought that it might be a renal calculus or perhaps an intestinal obstruction, and one fourth of a grain of morphine was injected. In the morning about four o'clock there was a very severe rigor, repeated in an hour, but by ten A. M. the pain was much less, and the vomiting was infrequent, watery, somewhat tinged with bile. Soon the temperature began to rise rapidly, and by three P. M. it was 105° F. Dr. Reynolds was called, and when he arrived, by four P. M., patient became totally unconscious, and the temperature in the

axilla was 106.25° F. by accurate and repeated measurements. In the evening (twenty-four hours from the onset) temperature was 103° F.; profuse sweat; patient delirious. The second day temperature 102° F., pulse 120; patient usually delirious; occasional vomiting. The third day the symptoms were the same. The fourth day patient became rational, bowels moved, vomiting ceased, but pulse ran from 120 to 125, at which point it remained for the next two weeks, rising to 130 and 140 as the end approached.

Patient ate well, asking for some solid food. Anasarca commenced to spread over the body and face; there was a steady pain in left hypogastrium. Urine was found to contain pus and mucus, a little albumen, and much phosphatic deposit.

The bladder was washed out with carbolized water, and pain in side relieved by injection of oleate of morphia, fomentations, etc. Pulse always 120 to 130; temperature 102° to 102.5° F. On the thirteenth day there was great pain, referred to rectum; relieved by suppository of opium and belladonna. On the fifteenth day there was an attack of terrific pain in left hypogastrium; patient fairly yelled until brought under the influence of opium in large doses, and from this time until the end morphine was given regularly but moderately *pro re nata*. In drawing the water it was ascertained that the uterus was crowded down, and it was surmised that there was internal suppuration.—probably a perinephritic abscess,—but owing to fatness of patient and anasarca no external tumor could be found, and it seemed very possible that the symptoms of fluid were due to ascites. The urine became acid again, but pus was still evident in it, and some casts were found.

Up to this time the condition of the patient, if serious, had not been hopeless, nor even intolerable; the appetite had been fair, the bowels moved regularly, she was able to sit in her chair for some hours daily; only the high pulse and temperature, and a gradual failure of strength, with the anasarca, told of the internal mischief. From the fifteenth day, however, symptoms of septicæmia developed.

On the sixteenth a profuse diarrhœa commenced, and on the seventeenth great quantities of foul, decomposed pus were evacuated from the bowels involuntarily. There was a chill every morning, and an increase of fever at night, followed by a profuse sweat, great thirst, rapid prostration of strength, and, fortunately, cessation of pain, so that the sufferer was able to lie on her back for the first time in nearly eight years. Great black eschars formed over the left trochanter, and later over the sacrum; no food was taken, except some soup and some milk. There was a continual foul smell in the nose, a subjective symptom merely; the breath was peculiar, pyæmic.

On the nineteenth day a unique phenomenon occurred; the urine when drawn through a catheter (not oiled) was thick, foul, and muddy, and at the end of each catheterization pure, clear oil ran out, in volume about one fifteenth of the urine. This continued during the next three days, with occasional intermissions. It was surmised that the abscess had opened into the urinary tract. A specimen of the urine was shown at the Society for Medical Observation, and was afterwards pronounced to contain oil by Drs. Wood and Fitz.

During these three days the condition of the patient grew rapidly worse. Repeated chills, great prostra-

tion, absolute disinclination for food, repeated involuntary dejections, increase in size of sloughs over sacrum showed the approaching end. On the twenty-third day the urine suddenly became nearly clear, without oil, and continued so until death, which occurred on the twenty-sixth day, after twenty-four of unconsciousness.

The autopsy was made thirty-eight hours after death by Dr. A. N. Blodgett, in the presence of Drs. Reynolds, Fitz, Ellis, and Cushing.

The cord was first removed, and showed patches of sclerosis.

Foul pus and oil were encountered in the left lumbar region, while sawing the spine.

On opening the abdomen a large, foul collection of pus, containing an abundance of free oil and large strings and pieces of sloughing fat, was encountered in the left abdominal and iliac region. It was external to the peritoneum, lying among the fatty tissue. The neighboring coils of intestine were glued to the peritoneum nearest the abscess. Over one and a half pints of this pus were sponged out, the intestines, bladder, and kidney removed in a mass and examined. The kidney was a long one, a so-called horseshoe, reaching across the spine, and having a long pelvis, with two ureters. The pelvis showed diphtheric inflammation, and near the exit of the left ureter was a small opening communicating with the abscess. A larger opening through a mass of sloughy tissue joined the cavity of the abscess with the intestine. There was evidence of diphtheritic cystitis.

The chest and head were not examined.

As far as the symptom of oil in the urine, occurring in any such quantity, goes, the case is unique so far as I can learn. The only lesson of importance which could be drawn from this symptom, if it be again observed, seems to me to be that it is a sign not only of an abscess opening into the urinary tract, but moreover that there is sloughing going on sufficient to set free the oil of the fatty tissue, and sure to terminate fatally, unless by free opening and counter-opening a very free drainage and disinfection can be carried out.

The following letter has been received from Professor Wood:—

DEAR DR.,—I shall not be able to be present to hear your case of oily urine at the Observation Society to-morrow evening, and therefore send you the following items in regard to my examination of the specimen which you gave to me at the former meeting. The urine had become alkaline, and when placed in a graduated vessel the oily fluid occupied one fifth of the total volume. The microscope showed triple phosphate, urate of ammonium, oil, and numerous crystals of fatty salts, due partially to the saponification of some of the oil by the ammonia.

This sediment, so far as the fatty elements were concerned, had the same appearance as represented in Funke's Atlas, Taf. VI., Fig. 4, Fettkrystalle aus saurem Eiter.

I found no extraneous elements in the urine which would tend to show any direct connection with the intestine.

The case is, so far as I have been able to look it up, a unique one, and I am very glad that you are to report it. Very sincerely yours,

EDWARD S. WOOD.

Boston, January 16, 1881.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

OSTEOLOGY.

A THIRD OCCIPITAL CONDYLE.¹

Dr. ALLEN begins his paper, in many respects an interesting one, with the following description of the anomalous process which he had observed on an adult female skull:—

"This tertiary condyle is in the form of a conical process of bone, about two fifths of an inch in depth, directed downwards from the anterior edge of the *foramen magnum*, and bearing posteriorly a vertical transversely concave articular surface, which extends superiorly to the upper level of the basilar process." In three other cases which Dr. Allen examined the condyle is merely an articular facet on the border of the *foramen magnum* and does not project downwards. When it exists only to this extent it may easily be overlooked.

Dr. Allen concludes that "the third occipital condyle which is occasionally seen in the human subject, corresponds to the intervertebral surfaces of the vertebral centra, and is also the morphological representative of the central element of the single avian and reptilian condyle." Also that "the abnormal articular surface is associated with growth upwards of the odontoid process, and is not the result of any change beginning primarily in the cranium."

This lengthening of the odontoid, Dr. Allen believes to be the result of over-extension of the head in utero, whereby the end of the odontoid is relieved from pressure. This view rests in part on what he saw in a median section of a mature fetus in which the odontoid was decidedly lengthened and articulated with the occiput.

PECULIARITIES OF THE SQUAMOUS PORTION OF THE OCCIPITAL BONE.²

Ten years ago Professor Merkel called attention to a third transverse ridge on the posterior surface of the occipital bone. He still called the original superior line by its old name, and the new one the *suprema*. It is not, we believe, always present, though it certainly is far from rare, and a hint of it may be seen in the illustrations of several anatomies that contain no mention of it. Its relations to the superior line are uncertain. There may be a depression or an elevation between them or they may both appear as the edges of a transverse prominent ridge which has been named the *torus occipitalis transversus*. Other anatomists have discussed the anthropological significance of this structure, and the last of these is Professor Waldeyer. We will quote from his conclusions from which an idea can be gained of the views that others have held. "It follows from these observations that the torus occurs more frequently among Europeans than would be inferred from the publications before us. Further, that it is not a peculiarity of a race in which it occurs without exceptions, . . . and finally that in itself it should not be considered the *characteristic* of a low race, for it seems to be very rare in negro skulls and is found with remarkable frequency in European skulls of the present time. We do not, of course, mean by this to deny the

¹ Tertiary Occipital Condyle. By William Allen, M. D. *Journal of Anatomy and Physiology*, October, 1880.

² Waldeyer, *Archiv für Anthropologie*, Band xii., 1880.

anthropological value of the *torus occipitalis*, which may well be claimed for it as an ape-like formation. Moreover, as certainly must be admitted, it is much more common in prehistoric skulls and in those of lower races, so it is still an important sign which, in connection with others, may permit us to assume the low character of a skull." It should also be mentioned that Waldeyer gives drawings of two skulls, one of a child at birth, and the other of a six months' fetus, on both of which the three lines can be made out. This is of consequence, as they had not previously been described as present at so early an age.

ANOMALOUS LUMBO SACRAL VERTEBRA.¹

Plenty of observations have been made of late years on an extra vertebra in the lumbo-sacral region which may appear as a sixth lumbar or as a first sacral, or as a nondescript piece which might be described as wanting the definite characteristics of either, rather than combining those of both. We may find, however, that the lowest lumbar vertebra possesses such distinct sacral characteristics that if we examine it only from the front we may doubt in which region it should be placed, and thus, though we have a peculiar vertebra, we do not have an additional one. From the very various appearances it presents, we are rather inclined to believe that this piece may occur in very various ways and may have more than one signification. The last writer on the subject is Dr. Wilhelm Raab. He holds that the anomaly is really a modification of the last lumbar vertebra and implies that the essential change is the association and development of the ilio-lumbar ligament into a lateral piece of the sacrum. He believes this to be a homologue of the ribs, which seems to us very possible. The important part of the communication is that which shows the effect of this process on the figure when it occurs only on one side. The capacity of the pelvis is less on that side than on the normal one, the distances from the sacrum to the pubes and to the hip-joint being decidedly lessened. The ileum is higher on the affected side and thus the corresponding leg is, according to the author, apparently shortened. The difference is found more marked in the older subjects. If the assimilation occurs on both sides this apparent asymmetry does not occur, but the iliac crests are higher on both sides than usual, and the sacrum presents two promontories. We do not think that this curious question is by any means settled, but it is worth while to know of another cause of real inequality in the length of the legs. We know from the numerous measurements taken of late years that the bones are very frequently of different lengths, so much so, indeed, as to make our stock of observations on shortening after fracture practically worthless, and now we have another cause of asymmetry. It would be interesting to know whether the longer leg is not sometimes found on the side on which the pelvis is placed higher.

COALESCENCE OF THE BONES OF THE FOOT.²

Dr. Zuckerkandl, the indefatigable prosector at Vienna, reported some years ago a case of synostosis of the astragalus and the calcaneum of both feet. He has now observed two other cases in which it occurred on one side, the first in a boy of ten, the second in a grown

man. In all the cases, the coössification was between the astragalus and that part of the calcaneum known as the *sustentaculum tali*. In both cases reported in the paper before us the head of the astragalus, and consequently the foot, was strongly rotated inwards. The author points out that this synostosis could hardly be acquired by a person who walked on account of the movements in the inter tarsal joints, and further that the position of the foot is precisely the opposite of the one that the foot could assume in bed. It is not reasonable, therefore, to look on this as a result of disease, but rather as caused by an arrest of development, to wit, of the formation of the joint between the bones in question. This view is strengthened by the appearances of the other foot of the boy. There was no union there between the bones, but the smooth articular surface on the sustentaculum was small, and the neighboring opposed surfaces were rough, and resembled strongly those between the end of the shaft and the epiphysis of a long bone when they have been separated by maceration. Clearly such an arrangement must greatly check motion. In at least one of these cases, that of the boy, the sole was abnormally flat, and Zuckerkandl suggests that this, together with the loss or great diminution of the foot's power of rotation, might point to this condition in the living. He further believes that under these circumstances the step must lose some of its elasticity. He gives a largely magnified drawing of a vertical transverse section of the foot of a two months' fetus which seems to show that the joint above the sustentaculum tali is formed at a later period than the other joint below the astragalus and the one above it. He mentions in the same paper another anomaly which is probably very rare; but is of interest as it would make it impossible to perform Chopart's amputation. This consists in a firm connection of the inner part of the front of the calcaneum with the outer end of the scaphoid. The band was formed of an uncommonly tough fibrous tissue, covered in front with cartilage, so that the cartilage of the scaphoid articulation passed without change of level into that of the heel-bone. Thus there was a continuous articular surface for the three cuneiform bones and for the cuboid. The former set of observations seem to us of great importance in regard to the etiology of club-foot. May it not be that in some cases the primary cause is the arrest of the process of separation between neighboring bones?

Hospital Practice and Clinical Memoranda.

BOSTON LYING-IN HOSPITAL.

CASES IN THE SERVICE OF DR. W. L. RICHARDSON.

REPORTED BY R. A. KINGMAN.

I. DEFORMED PELVIS. INDUCTION OF LABOR.

M. G., twenty-two years of age, single, primipara, born in Maine. This patient entered the hospital November 20, 1880, to await confinement. Catamenia ceased late in February or early in March. She states that when four years old she fell down stairs and received an injury to the spine. On examination there was found a spinal curvature involving the four lower lumbar and first sacral vertebrae. The curva-

¹ The Occurrence and Signification of the Assimilation of the last Lumbar Vertebra with the Sacrum. *Medizinische Jahrbücher*. 1880, Heft 1 and 2.

² *Medizinische Jahrbücher*, 1880, Heft 1 and 2.

ture was regular in outline and of considerable prominence.

External measurements of pelvis:—

Between anterior-superior spines of ilia .	8 $\frac{1}{4}$ inches.
Between the crests of the ilia	9 inches.
Antero-posterior diameter	6 $\frac{7}{8}$ inches.
Antero-posterior diameter of the inlet (internal measurement)	3 $\frac{1}{4}$ inches.

The pubic arch was much narrowed. The abdominal tumor stood out at nearly a right angle from the body, and was almost entirely anterior to the plane of the sternum. Patient's height was 4 feet 6 $\frac{1}{2}$ inches.

It was decided to induce labor by means of manual dilatation.

The following day ether was administered at 10 A. M. Dilatation was commenced at 10.30, but, after a trial of ten minutes, it was discontinued as being impracticable, the pubic arch being so narrow that the hand could not be accommodated, and a dangerous amount of pressure was being exerted upon the labia.

At 10.45 A. M. a catheter was introduced between the uterine wall and the membranes and fixed in position by means of a stylet and bandage around the waist. A pain came on before the patient was fully out of the ether. At 1.30 P. M. the catheter was removed, the pains being then quite strong and frequent. During the afternoon the pains grew weaker and occurred at longer intervals. Patient vomited frequently after recovering from the ether.

In the evening the labia were found to be much swollen. A warm carbolyzed douche was ordered to be repeated every three hours. 11 P. M. Pulse 94; temperature 98.6° F. Cervix nearly taken up. Has slept most of the time for the past hour. Pains very infrequent. Nausea and vomiting continue. (Sodæ bicarb. ℥i., ol. absinth. gtt. iij., aquæ ℥ij., M. ℥ss every three hours was ordered.)

November 22d. 2.15 A. M. Morph. sulph. gr. $\frac{1}{4}$ subcut., followed by sleep during the remainder of the night. 10.30 A. M. Pulse 90; temperature 98.4° F. No pains this morning. Catheter again introduced between the uterine wall and membranes. Nausea and vomiting continue. 2.30 P. M. Chill. Has vomited as often as once in fifteen minutes during the last three hours. Temperature 99.3° F. 3 P. M. Pains infrequent but severe. The last one lasted six minutes. 8.05 P. M. Catheter removed, and membranes artificially ruptured. Pains occur every ten minutes. Cervix taken up. Os one half inch dilated. The uterus has been extremely hard all day, as though in a state of partial tonic contraction. 10 P. M. Os fully dilated. Head presenting O. R. A. 11 P. M. Head kept from descending by the narrow arch. Ether was given, and forceps were applied at 11.25 P. M. The child was born at 11.35 P. M., and was apparently of about seven and one half months' growth. It was resuscitated with much difficulty. Male, four pounds. 11.40 P. M. Placenta expressed. Perineum deeply lacerated. Three catgut sutures were inserted. Ergot ℥j. No hemorrhage. In half an hour the pulse was 150. Urine acid, sp. gr. 1015. No albumen.

November 23d.¹ Pulse 111. Temperature 100° F. Quite comfortable. No vomiting. Baby died at 8.30 A. M. Pulse 118. Temperature 102° F. Headache. Intra-uterine douche daily. Vaginal douche every

¹ Temperature and pulse taken daily at 8.30 A. M. and 5 P. M. in all these cases, hence the double record.

three hours, followed by the insertion of a vaginal tampon saturated with carbolyzed vaseline. Vulva dressed with same. Milk and lime-water *ad libitum*.

November 24th. Pulse 114. Temperature 99.8° F. Treatment as yesterday. Uterus large and very tender. Pulse 111. Temperature 101.1° F.

November 25th. Uterus smaller and less tender. Two intra-uterine carbolyzed douches. Pulse 108. Temperature 99° F. Pulse 123. Temperature 101.1° F. Seidlitz pulv. no. ij. enema.

November 26th. Pulse 114. Temperature 98.4° F. One intra-uterine douche. Bromide gr. xx., chloral gr. x., at eleven P. M. Pulse 120. Temperature 100.8° F.

November 27th. Pulse 121. Temperature 100.4° F. Painful micturition. Pulse 117. Temperature 101.2° F. Bromide gr. xx. at seven and nine P. M. Urine, odor very offensive, sp. gr. 1025, neutral, albumen one eighth per cent. Sediment contains pus, epithelium, and bacteria.

November 28th. Pulse 108. Temperature 98.7° F. Bladder washed out with carbolic solution. Intra-uterine douche discontinued. Pulse 111. Temperature 99.5° F. From this time the patient made steady improvement up to the time of her discharge, having no marked rise of temperature and complaining of nothing but the painful micturition. She was placed upon saleratus water, *ad libitum*, for four days, by which time all bladder symptoms had disappeared.

December 6th. Patient sat up for the first time.

December 10th. Examination showed that the perinaeum had not completely united, and the torn surface had not wholly healed. Depth of uterine cavity two and one half inches. Local applications were made to the unhealed surface of the perinaeum, and the patient was discharged well December 15th.

II. ACUTE JAUNDICE.

A. T., twenty-four years old, married twice, multipara, born in Massachusetts. After her previous confinement in the hospital, June 19, 1879, patient had puerperal mania. Catamenia last seen May 10th. November 26th entered in labor. Has had pains all day, her attending physician having given morphia without effect. For the past two or three weeks patient has suffered from headache, nausea, and vomiting. Her skin is deeply jaundiced; and this symptom she has noticed for the past four days. Palpation: Breach in fundus to right; fetal heart not heard; fundus two inches below ensiform cartilage. Per vaginam: vagina normal; cervix not quite taken up; os easily admits the finger.

The labor progressed rapidly, lasting only about five hours. The child was a female, weighing three and one half pounds. It was immediately swathed in cotton, and kept warm by means of heaters. Urine, acid; specific gravity, 1025; albumen, a trace. The color was very high, owing to biliary pigment present.

November 27th. Pulse 82. Temperature 97.6° F. Bromide gr. xx. at 3.30–6–10 A. M. 2–5–8–11 P. M. Pulse 90. Temperature 97.6° F.

November 28th. Pulse 88. Temperature 98.4° F. — Pulse 101. Temperature 100° F. Hemierania of right side instead of left as heretofore. Itching of skin. Jaundice increasing. Bromide gr. xxx. at 10–1–4–7–10 o'clock. Calomel gr. v., jalap gr. vi. M. At nine P. M. Ice-water to head.

November 29th. Pulse 106. Temperature 98.7° F.

Two dejections last night, of a clay color. Pulse 110. Temperature 100.8° F. \mathfrak{R} Sodæ bicarb. \mathfrak{z} i., ol. absinthii gtt. iij., aquæ \mathfrak{z} ij. M. \mathfrak{z} ss. was given at 12-3-6. Bromide continued. Chloral gr. x., 11 p. m.

November 30th. Pulse 84. Temperature 98.8° F. — Pulse 84. Temperature 100.4° F. Breasts tense and painful. Rubbed with camphorated oil and strapped. Calomel gr. v., jalap gr. vi., 11 a. m. Bromide continued. Chloral gr. x., 9-10.30 p. m. Morphia suppository gr. one fourth at 11 p. m. Ice-water to head continued.

December 1st. Pulse 114. Temperature 102° F. Lochia somewhat excessive. Cried most of the time last night, and refused her medicines. Tore the bandages from her breasts. Refuses to eat. Seems rational but cross. Pulse 94. Temperature 100.2° F. Same treatment continued. Calomel gr. v., jalap gr. vj. Chloral gr. x., 9 and 10 p. m. Has passed a comfortable day.

December 2d. Pulse 100. Temperature 100° F. Slept soundly all last night. Feels nicely. Pulse 94. Temperature 102° F. Soreness of gums. Yellow dejection. Jaundice lessening. Bromide continued. Chloral gr. x., at 10 p. m.

December 3d. Pulse 104. Temperature 99.1° F. Slept well last night. Pulse 100. Temperature 100.8° F. Bromide continued. Chloral gr. x., 9 and 10 p. m.

December 4th. Pulse 104. Temperature 99.6° F. Gums still sore. Tannic acid mouth wash. Pulse 90. Temperature 100.6° F. Bromide gr. xx. Chloral gr. xv., 9 p. m.

December 5th. Pulse 108. Temperature 99.8° F. Lochia have ceased. Pulse 108. Temperature 100.2° F. Hunyadi water, \mathfrak{z} iv. before breakfast. Tannin mouth wash continued. Intra-uterine douche.

December 6th. Pulse 102. Temperature 100.2° F. — Pulse 108. Temperature 102° F. Patient very cross and refractory. Was moved to small room, where she will be alone. Lochia reëstablished.

December 7th. Pulse 100. Temperature 99.6° F. — Pulse 100. Temperature 100.1° F. Patient moved back to general ward on promise of good behavior.

December 8th. Pulse 76. Temperature 99.2° F. — Pulse 80. Temperature 99.8° F. Sat up. Mouth nearly well.

December 9th. Pulse 96. Temperature 98.2° F. Jaundice has entirely disappeared except on the conjunctivæ.

December 13th. Examination. — Perinaum intact; cervix somewhat lacerated; depth of uterine cavity two and three quarters inches. Discharged mother and child well.

III. ECLAMPSIA, ACUTE PARENCHYMATOUS NEPHRITIS, MANUAL DILATATION, VERSION.

M. McG., nineteen years old, married, multipara. Born in Cambridge. Catamenia ceased in April. Patient entered the hospital December 17th, having had a convulsion December 12th. The following is an extract from a letter received from her physician, who attended her in her former confinement:—

"In her first confinement she had albuminuria with severe convulsions. I delivered her with forceps. The occiput swept the perinaum and ruptured it partially through the sphincter ani. It was carefully sewed up at once, but failed to unite. After a time she regained control of the faeces, and declined to allow further op-

eration. In the present pregnancy, when three or four months advanced, she took a lot of oil of tansy. She had several severe convulsions, and was unconscious several hours."

When admitted to the hospital patient was put immediately to bed, and was constantly watched. She appeared stupid, lay with eyes closed, lids constantly vibrating slightly, and hands tightly clenched. Would rouse if spoken to sharply. At 10.30 p. m. the catheter was passed, and \mathfrak{z} ij. of urine obtained, none having been passed since two a. m. Reaction, acid; albumen, two per cent.; fine granular casts. 1.15 p. m., vomited; 2.30 p. m., had a severe convulsion, lasting about one minute. Ether was administered the moment the convulsion commenced, and the patient was afterwards kept under its influence.

Artificial delivery having been decided upon, manual dilatation was commenced at 3.55 p. m., and was completed in sixty-five minutes (five p. m.). The operation was attended with considerable difficulty, owing to a low attachment of the placenta, a small piece of which was torn off, giving rise to considerable hæmorrhage. At five p. m. distinct uterine contractions commenced. The membranes were ruptured a few minutes later, and the child was extracted by version, forceps being applied to the after-coming head. At 5.15 p. m. the child was born, and was resuscitated with some difficulty. It was a girl, and weighed five pounds. Five minutes later the placenta was expressed, and ext. ergot. \mathfrak{ss} . administered. Considerable hæmorrhage occurred, and the uterus contracted only after a hot intra-uterine douche. Pulse 145.

Previous to the convulsion patient had received cream-of-tartar water *ad libitum*, also spts. æth. nitrosi \mathfrak{z} i. in water every two hours. This was recommenced after the labor, and continued through the night. 3.30 p. m. Catheter passed. Urine \mathfrak{z} viiss. Albumen one per cent.

December 18th. Pulse 88. Temperature 97.2° F. Slept well after one a. m. Vomited at six o'clock. Pulse 120. Temperature 103.6° F. Skin very hot and dry. Patient lies in state of stupor, from which she can be aroused by speaking sharply. Same treatment continued. The catheter was used at frequent intervals, and the following are the amounts of urine drawn: Seven a. m., \mathfrak{z} ij.; albumen one per cent. 11.30 a. m., \mathfrak{z} ij.; albumen one per cent. 1.50 p. m., \mathfrak{z} v.; albumen one half per cent. 4 p. m., \mathfrak{z} v.; albumen one half per cent. 5 p. m., \mathfrak{z} iss.; albumen one half per cent.; epithelial, hyaline, fine granular casts. 7 p. m., \mathfrak{z} v.; albumen one fourth per cent. 9 p. m., \mathfrak{z} iv.; albumen one fourth per cent.

December 19th. Pulse 108. Temperature 99° F. Restless during the night. Feels much better this morning. Baby died. Pulse 124. Temperature 103.4° F. Amounts of urine obtained by catheter: One a. m., \mathfrak{z} v. 4.30 a. m., \mathfrak{z} vss. 9 p. m., \mathfrak{z} v. 11 a. m., \mathfrak{z} ivss.; albumen one half per cent.; casts. 1 p. m., \mathfrak{z} ijss.; one half per cent. 4 p. m., \mathfrak{z} vij. 6.30 p. m., \mathfrak{z} vss. Skin hot and dry. Headache. Same treatment continued. Intra-uterine douche at 7 p. m. Much offensive matter came away.

December 20th. Pulse 88. Temperature 97° F. Lochia offensive. Skin cool and moist. Mental condition much improved. Appears perfectly rational. Intra-uterine douche at 5 p. m. Pulse 100. Temperature 100.6° F. During the day patient has passed \mathfrak{z} xxix. of urine; albumen one half per cent.

December 21st. Pulse 112. Temperature 100.4° F. — Pulse 112. Temperature 101.2° F. Milk in breasts. The latter tense and painful. Breast supporter (as



shown in the plate) applied with great relief. Lochia offensive. Intra-uterine douche twice. During last night passed \bar{x} of urine. During the day \bar{x} vi. of urine; albumen one half per cent.; casts very few. Nitre and cream-of-tartar water continued.

December 22d. Pulse 112. Temperature 100° F. Very restless all night. Sleeping this morning. Pain in right leg. Cream-of-tartar water continued. Nitre omitted. Intra-uterine douche. Urine during last night and to-day \bar{x} xxxiijss.

December 23d. Pulse 100. Temperature 99.6° F. — Pulse 100. Temperature 100° F. Is much brighter this morning. Headache in afternoon. Albumen one half per cent.; few casts.

December 24th. Pulse 96. Temperature 98.4° F. — Pulse 80. Temperature 98° F. Very bright and talkative. Albumen one fourth per cent.; very few casts; amount normal. December 25th. Pulse 96. Temperature 97.6° F. — Pulse 104. Temperature 100° F. Albumen a trace; no casts. December 26th. Pulse 86. Temperature 98° F. — Pulse 100. Temperature 100.6° F. Intra-uterine douche. December 27th. Pulse 92. Temperature 99.2° F. — Pulse 80. Temperature 98° F. Intra-uterine douche at 11 A. M. Cream-of-tartar water. December 28th. Pulse 92. Temperature 98.4° F. — Pulse 92. Temperature 100.8° F. December 29th. Pulse 116. Temperature 103° F. Headache. Sleep disturbed last night by a confinement in the same ward. Sleeping this morning. Lochia all right. Evacua at 11 A. M. Intra-uterine douche. Pulse 112. Temperature 103.2° F. December 30th. Pulse 112. Temperature 99.8° F. Did not sleep well last night, on account of talking in the ward. Feels nicely this morning, however. Pil. cath. comp. No. ij. at 12 M. Pulse 108. Temperature 102.2° F. December 31st. Pulse 120. Temperature 101.2° F. Urine acid; albumen one fourth per cent.; no casts. Nitre \bar{x} every three hours. Pulse 136. Temperature 104.6° F. January 1st. Pulse 100. Temperature 99.4° F. — Pulse 94. Temperature 103.2° F. Nitre and cream-of-tartar water continued. Urine, amount normal; albumen one fourth per cent.; casts present. January 2d. Pulse 99. Temperature 99.8° F. — Pulse 92. Temperature 101° F. January 3d. Pulse 98. Temperature 99.6° F. — Pulse 94. Temperature 102° F. Complaints of pain in the back. January 4th. Pulse 96. Temperature 98.8° F. — Pulse 100. Temperature

101° F. Tr. ferri chloridi gtt. xx. t. i. d. to be continued. Nitre and cream-of-tartar water stopped. January 5th. Pulse 90. Temperature 99.5° F. — Pulse 90. Temperature 99.4° F. Sat up. January 6th. Pulse 80. Temperature 98.4° F. — Pulse 80. Temperature 99.8° F. January 7th. Pulse 80. Temperature 97° F. — Pulse 72. Temperature 99.2° F. Doing well. January 8th. Pulse 84. Temperature 98.2° F. January 10th. Urine acid; specific gravity 1018; albumen, trace. Sediment. Renal epithelium, mucus, hyaline, and fine granular casts.

January 15th. Examination showed the depth of the uterine cavity to be two and a half inches. Old laceration of perinaeum; double laceration of cervix, with anteversion of uterus. Discharged, well.

The breast supporter was invented by Mr. Kingman and has been used in many cases in the hospital with great relief to the patients.

IV. EXCESSIVE THIRST AND POLYURIA OCCURRING DURING PREGNANCY.

A. C., aged twenty-four years, single, primipara, born in Boston. Patient entered the hospital December 14th. While awaiting confinement it was noticed by the night-nurses that the patient drank large quantities of water. She was confined December 20th, having a normal labor, and gave birth to a healthy male child weighing seven pounds. Urine much increased, slightly acid, specific gravity 1003, no albumen.

Patient complains of constant thirst, and drinks very frequently. The amount of liquid supplied to her was carefully measured, as was also the amount of urine passed. The results of this measurement may be seen in the table below, the figures representing the number of fluid ounces during the twenty-four hours ending at noon of each day. The morning and evening pulse and temperature may also be found in the same table. This great thirst came on when about three months pregnant, and continued unabated until after her delivery, when it gradually ceased.

December 23d. Patient had headache, nausea, and offensive lochia. An intra-uterine douche was given at seven P. M., followed by frequent vaginal douches during the night. Quinia gr. x., 9 P. M.

January 6th. Discharged, mother and child well.

Date.	Morning.		Evening.		Urine in fl. oz.	Liquids in fl. oz.	Remarks.
	P.	T.	P.	T.			
Dec. 21.	84	98.6	72	100.0	327	234	
" 22.	88	99.4	84	100	317	264	
" 23.	93	100.4	120	105	241	257	
" 24.	88	99	88	98.6	253	236	No tenderness over abdomen.
" 25.	88	98.4	96	99.8	216	284	
" 26.	96	98.2	80	99.8	64	76	
" 27.	80	98.2	76	98.6	140	200	
" 28.	88	98.6	80	98	158	178	
" 29.	88	98.6	84	97.8	152	185	Sat up.
" 30.	96	98.4	-	-	196	138	
" 31.	-	-	-	-	124	164	
Jan. 1.	-	-	-	-	124	224	
" 2.	-	-	-	-	218	278	
" 3.	-	-	-	-	120	160	Kept her bed, owing to some pain in back.
" 4.	-	-	-	-	152	204	Sat up again.
" 5.	-	-	-	-	140	160	

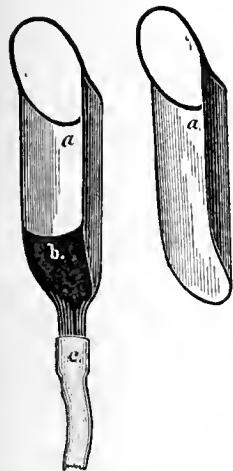
— At the stated meeting of the New York Academy of Medicine, held February 17th, Professor John C. Dalton read a paper on Centres of Vision in the Cerebral Hemispheres.

New Instruments.

AN IMPROVED EAR-SPOUT.

EDWARD J. FORSTER, M. D., CHARLESTOWN, MASS.

THE annexed cuts represent both the common ear-spout as sold by the instrument dealers and as improved by me. As ordinarily made its *raison d'être* is difficult to discover, for it does not in the least obviate the use of the basin unless the patient wears a rubber suit.



The basin has the disadvantage of often being in the way of the syringe, and as usually made, unless it is held steadily and in a horizontal plane, its contents are apt to be spilled.

By adding to the common spout a shield in front and having a tin tube and the necessary length of rubber tubing attached to its lower extremity we have an instrument by which the ear can be syringed without danger of wetting the clothes. The patient holds it readily to the ear and the rubber tubing conducts the water to a receptacle placed in any convenient position.

The spouts can be obtained of Messrs. Leach & Green, 1 Hamilton Place, Boston.

22 MONUMENT SQUARE, February 12, 1881.

AN IMPROVED POCKET-CASE.

BY FRANCIS H. BROWN, M. D.

MANY of the pocket-cases furnished by surgical instrument makers are clumsy, some have instruments too small to be easily handled, some are lumbered up with appliances which are obsolete or have been supplanted by more convenient patterns, and most of them are sadly wanting in just what the surgeon needs in his every-day work. One of our neighbors carries only a lancet; he borrows a knitting needle when he needs a probe; a gum elastic male catheter is in his carriage; and scissors, needle, and sewing silk are to be found in every lady's work-basket. To those, however, who wish to be provided with their own individual tools, a well appointed case is at once a comfort and a necessity.

I believe the combination which is here offered, and which has been put up by one of our instrument makers, will more nearly meet the needs of the average medical practitioner than any other in the market.

The case itself is known as the cigar-case pattern; it has a metal skeleton to give it firmness and prevent the warping and distortion so soon experienced in cases made entirely of leather.

The first knife (in a turtle shell handle) is a small amputating knife, with a blade, from pivot to point, of about ten cm. (nearly four inches). With this a country physician, at a distance from his home, can, in an emergency, and with a borrowed back-saw, do any amputation, except of the thigh. Three double knives, in handles 10.5 cm. (about four and one fourth inches) long, are thus combined; scalpel and Newman's can-

ulated needle; gum lancet and tenotome; probe and sharp-pointed curved bistouries. Tiemann's shorter bullet forceps, the best possible form for dealing with bullets, serves admirably for impacted foreign bodies in the ear, and for the general purposes of dressing forceps. A slide catch dissecting, artery, and needle forceps is of general utility, a hard-rubber porte caustique, sixteen cm. (six and one half inches) long, with Tiemann's combined trocar and canula, scissors, female catheter, director and aneurism needle (in one) two probes, Evans's lancet, surgeon's needles, silk, and adhesive plaster complete the list. A subcutaneous syringe, made to correspond in size and shape to the common stylographic pen, can be introduced.

The special points claimed are the case, the amputating knife, and the bullet and dressing forceps.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. T. CABOT, SECRETARY.

JANUARY 3, 1881. Dr. DRIVER read a paper upon Relaxation of the Pubic Ligaments. He recounted several cases of this condition which had occurred in his practice, and in which his attention had been called to the relaxation by the symptoms. The patients at times felt the slipping of the bones upon each other, and the insecurity of the gait was always marked.

Believing that laxity of the pubic ligaments after child-bed was a more common condition than is generally supposed, Dr. Driver examined sixty successive cases of midwifery with reference to this point.

A slight degree of relaxation was found in a considerable proportion of the cases, and in one or two of them the laxity was quite marked.

Dr. F. H. DAVENPORT said that the theory that relaxation was caused by the pressure exerted by an unusually large head in its passage was disproved by many observations. A most striking fact in opposition to this view is that an extreme degree of laxity has been observed after an abortion at four months. He asked Dr. Driver's experience upon this point.

Dr. DRIVER said that in some of the hardest of his labors there had been no separation, while in some easy labors there had been much.

JANUARY 17, 1881. Dr. MORRILL reported a case of severe laryngeal spasm in an infant relieved by an incision into a mass of suppurating cervical glands.

Dr. T. B. CURTIS suggested that the alarming symptoms of glottic spasm, occurring in paroxysms and terminating in a deep, prolonged inspiration, described by Dr. Morrill, and so successfully relieved by his timely and efficacious surgical intervention, were perhaps amenable to another interpretation, as regarded their pathological physiology, than that brought forward by the reader. Instead of a direct irritation of the recurrent nerves occasioning laryngeal spasm, Dr. Curtis would rather be disposed to attribute the disturbances observed in this case to an irritation of the superior laryngeal nerves, exerted by the pressure of the enlarged glands, and causing reflex disturbances of the respiratory movements. Such is the accepted explanation of the symptoms which characterize *laryngismus stridulus* or "spasm of the glottis," a neurosis

related to *celampsia*, often associated with tetany, occurring mostly in infants under one year of age, especially when syphilitic or rickety, and proving fatal in a very large proportion of the cases in which it takes place. Laryngismus may also occur as a fatal complication of whooping-cough, and then constitutes an exaggerated degree of one of the usual phases of the paroxysm, in which the deep inspiration, which should succeed the convulsive expiratory efforts constituting the coughing fit, fails to take place.

The disturbances observed in laryngismus stridulus consist in a more or less prolonged cessation of the respiratory movements, the muscles concerned in the latter being immobilized in the attitude of extreme expiration, with closure of the glottis, tonic spasm of all the expiratory muscles, and relaxation of the diaphragm. The face is congested and, perhaps, cyanosed; the veins of the neck are turgid. This condition may be so prolonged as to cause death by asphyxia; or it may terminate favorably in a deep inspiration or in a series of short, jerky inspirations, which are considered pathognomonic indications of laryngismus stridulus.

This interpretation of the symptoms observed in such cases is in accord with what we know of the physiology of respiration. The vagus is at once a sensitive and a motor nerve. The muscles of the larynx are all animated by the centrifugal motor fibres contained in the recurrent nerves, with the single exception of the crico-thyroid muscles, which are innervated by branches of the superior laryngeal nerves. The latter are mainly sensitive or centripetal, and are distributed to the mucous membrane of the larynx. According to the experiments of Rosenthal, whose results have been confirmed by many other investigators, irritations of the superior laryngeal nerve cause inhibition of the inspiratory stimulus supplied by the respiratory centre in the medulla oblongata, and positive stimulation of the expiratory forces. The results of such an experimental irritation are closure of the glottis, tonic spasm of the expiratory muscles, and relaxation of the diaphragm. *Spasm of the diaphragm* has been supposed to occur in some cases of laryngismus. Such a disturbance would, however, not be in accord with the teachings of physiology, nor would the deep, sonorous inspiration, which is said always to announce the termination of the paroxysm and the re-establishment of normal respiration, be possible, were the diaphragm already in a state of spasmodic contraction.

A disease to be carefully distinguished nosologically as well as clinically from laryngismus is *stridulous laryngitis*, commonly called "croup" or "false croup." The latter consists merely in a laryngo-tracheal catarrh, occurring in children several years old, and complicated by nocturnal paroxysms of transient laryngeal spasm. This form of laryngeal dyspnea, though often alarming to witness, is probably never fatal, and is readily relieved by Graves' method of treatment, consisting in sponging the throat with hot water, or else by an emetic dose of ipecac or apomorphia.

Dr. MORRILL, in reply to Dr. CURTIS, said that the symptoms in his case, however they might be accounted for theoretically, certainly resembled those present in thymic asthma. He was sure, however, that the case did not come under this head, as the child had never had a previous attack, nor had any occurred since the one referred to, a space of nearly a year. The symptoms were of most alarming character, and far more intense than those present in simple

spasm of the glottis, which is so readily relieved by the application of a hot sponge or the administration of an emetic. He felt quite sure that any delay in making an opening in this case would have proved fatal.

Dr. KNIGHT said that the question in diagnosis would be between spasm of the adductors and paralysis of the abductors of the vocal cords. He thought from the history of the symptoms and the rapid relief by the operation that Dr. Morrill was probably correct in his diagnosis of spasm, though this case recalled one which he had seen in the practice of Dr. J. G. Blake, and which had been reported to this society, in which paralysis of the posterior crico-arytenoid muscles occurring in a case of diphtheria was quickly relieved by tracheotomy. Dr. Knight, *apropos* of spasm of the glottis from irritation of the sensitive nerve of the larynx (superior laryngeal), said that he had observed a mild form of spasm in the laryngeal catarrh of old people.

Dr. BLODGETT showed a rare monstrosity. The child still-born, had, to all external appearances, but one body with two heads, one hydrocephalic, the other anencephalic. The case will be published in full.

Dr. CUSHING reported a case of oily urine.¹ At a previous meeting of the society Dr. Cushing had shown a specimen of this urine, which was covered by a thick layer of oil. The patient, having since died he was now able to describe the post-mortem appearances, which fully explained the presence of oil in the urine. In connection with the case the reader showed a very efficient apparatus, devised by himself, for moving the patient, a heavy and helpless woman, from the bed to the chair and back.

In answer to a question by Dr. J. J. PUTNAM as to the form of spinal sclerosis in this case, Dr. CUSHING said that the spinal cord had not yet been subjected to microscopical examination, but that the movements of the patient were not the abrupt incoördinate efforts of locomotor ataxia, and that the case was considered one of multiple sclerosis.

Dr. T. B. CURTIS remarked that Dr. Wm. Roberts, in his treatise on renal and urinary diseases, had devoted a paragraph to the subject of fatty matter in the urine, in which it was stated that several instances of a discharge of oil from the bladder had been recorded. One such case was reported by the late Mr. Turner, two others by Mettenheimer. In all these cases the patients were taking cod-liver oil. No explanation of this extraordinary phenomenon is offered. Roberts states, however, that dogs and cats, eating abundant fatty food, often pass an oily urine.

Dr. FORSTER briefly mentioned the case of a young girl whom he saw who passed oil in the urine in considerable quantity.

FEBRUARY 7, 1881. Dr. DWIGHT reported a case of recovery after a large dose of laudanum.

The patient, a middle-aged man, had taken two and one fourth ounces of laudanum eight hours before he was seen by Dr. Dwight. Shortly before taking the poison he had a light meal of bread and beer. For six of the eight hours since the ingestion of the laudanum he had slept quietly. Dr. Dwight found him slightly cyanotic, but able to tell his own story. In Dr. Dwight's presence he vomited quite profusely for the first time. The vomitus consisted of half-digested food reeking

¹ See page 242 of this number of JOURNAL.

with laudanum. Further vomiting was induced by ipecac and warm water, and finally coffee was administered. He made a good recovery. The reporter called the attention of the society to the long retention and non-absorption of the laudanum in a not overloaded stomach, which should encourage us to use emetics even long periods after the ingestion of poisons.

DR. ELLIS said that the presence of food in the stomach would retard the absorption of any drug.

DR. BUCKINGHAM thought the long non-absorption of food in this case would indicate that the stomach was disinclined to absorption of any kind.

DR. FORSTER read a paper upon Two Cases of Anomalous Gout. Both patients were drinking men, and both were similarly attacked by tonsillitis, accompanied by some fever. In one of the cases there was much œdema of the uvula and neighboring parts. These local symptoms yielded but slowly to topical applications, and were immediately followed by manifest gouty attacks in the small joints of the toes. This leading to the recognition of the nature of the affection colchicum was administered with speedy relief to the symptoms. Dr. Forster, in looking up the subject, had found tonsillitis mentioned as a rheumatic manifestation, but could nowhere find it ascribed to gout.

DR. LANGMAID said that he thought most practitioners would be ready to state their belief in the fact that tonsillar inflammation is a not infrequent gouty manifestation. Another symptom of gout which he has noticed and never seen mentioned is a lameness of the muscles of the pharynx. This will sometimes last for some time with but little redness of the fauces. He has been in the habit of using salicylic acid in these cases.

DR. T. B. CURTIS remarked that several authors had mentioned *cyanche tonsillaris* or *tonsillitis*, among the numerous disorders to which gouty subjects were specially predisposed. Certain inflammatory affections have been observed to occur with unusual frequency, sometimes repeatedly, in persons presenting the usual signs of the gouty or lithæmic habit. Such is the case, for instance, with lobar pneumonia, from which disease, Sir James Paget tells us, in his clinical lectures, that he has suffered seven times. This unusual susceptibility of his lungs he attributes to a rheumatic or gouty constitution. Chronic catarrh of the fauces is by general experience a very common complaint in gouty persons. Of course it is not to be understood that every case of tonsillitis or of pneumonia is to be considered as significant of lithæmia, but that these affections, when taken in conjunction with other concurrent evidence, or when recurring repeatedly in the same subject, testify in a certain measure to the existence of the constitutional state which we call gouty.

DR. ELLIS said that it would be interesting to know the comparative frequency of gout in England as compared with this country. He thought gout comparatively rare here, while these throat affections are common. From their very frequency you would expect them sometimes to coincide with gouty attacks without necessarily supposing any connection to exist between the two.

DR. CURTIS was reminded by Dr. Ellis's allusion to the differences of constitution or of morbid tendency observable in Englishmen and Americans of a remark made recently by Dr. Edes in his very interesting lectures on Bright's disease, which seemed to throw

some light upon the nature of these generally recognized differences. It is commonly agreed that *over-eating*, that is to say, the habitual consumption of more food, mainly nitrogenous, than the organism requires, or can, under the existing circumstances, properly disassimilate in the form of completely oxidized products, — namely, urea, carbonic acid, and water, — is the main cause of the gouty state, in which the system is kept constantly more or less charged, not to say poisoned, by arrears of imperfectly oxidized products of disassimilation. In order that this surplus of nitrogenous materials may accumulate and undergo imperfect combustion in the blood and tissues, it is obviously an indispensable condition that digestion and absorption should first take place on a sufficiently large scale to keep the system supplied with the necessary excess of nutriment; in other words, there must exist in such cases a considerable appetite and capacity for food, and a certain kind and degree of digestive power. But the habitual over-eating and under exercise which, under such eupeptic conditions keep the blood over-charged with nitrogenous materials, and thus engender the gouty state, may, under other circumstances, simply result in what Dr. Edes calls "the more obvious and perhaps safer dyspepsia of the *primæ viæ*," — safer in the same way that, in cases of poisoning, emesis is safer than absorption; safer because less damage, or, at any rate, a different kind of damage, is occasioned by an undigested meal than by the excess of nutriment which results from complete digestion and absorption. Now may it not be that, with the increased comfort and luxury attending on the present state of civilization, over-eating has become a common, almost universal cause of disease both in England and in America; in the former country, however, highly developed powers of digestion being, for some reason or other, the rule, and gouty derangements the result; while with us, on the contrary, pure dyspepsia without gout — "the more obvious and perhaps safer dyspepsia of the *primæ viæ*" — is the national disease?

DR. GARLAND said that his own case would militate against the idea that dyspepsia is a prophylactic to gout. He had gout in the toe come on after a long exhausting siege of dyspepsia with diarrhœa. At the present time a heavy meal is almost always followed by dyspepsia with simultaneous gout. He is not troubled with tonsillitis, and three members of his family of gouty tendencies are free from it.

DR. CURTIS remarked further upon the infrequency of true "ulcerated sore throat." The opinion has even been expressed by some specialists that such a condition occurred only as a result of syphilis. A great majority of the cases commonly spoken of, both in and out of the profession, as "ulcerated sore throat," and very many of the cases called "diphtheritic sore throat," to frequent recurrences of which some patients are said to be liable, and many cases unequivocally asserted to be diphtheria are simply cases of herpetic angina, — the *angine herpétique* of the French, the *angine couenneuse commune* of Bretonneau, Trousseau, and Gubler. This acute affection, which is apt to recur frequently in the same subject, is sudden in its onset, and often attended by much pain, distress, and fever. It is characterized in its earlier stage by a crop of herpetic vesicles which form upon the mucous membrane of the fauces; these soon coalesce and break, leaving a raw, desquamated surface, upon which a loose, soft, grayish false membrane is liable to be de-

Not uncommonly *herpes labialis* accompanies or follows the other symptoms, and is then diagnostic of their real nature. The disturbances attending herpes of the pharynx are often very severe, much more so than in incipient cases of diphtheria, where the onset is mostly gradual and insidious, with little pain, fever, or distress.

DR. LANGMAID said that he knew the appearances described, but had never been able to make them out as herpetic. He called attention to the frequency with which attacks of angina are to be traced to bad drainage.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

THE TREATMENT OF EXTRA-UTERINE GESTATION.

At a stated meeting of the society held February 28th, Prof. William T. Lusk read a paper on the above subject. In commencing, he alluded to the fact that extra-uterine pregnancy was a condition which existed much more frequently than was formerly supposed to be the case, and stated that for its present knowledge of the subject the profession was greatly indebted, first to the late Dr. John S. Parry, of Philadelphia, and, secondly, to Prof. T. G. Thomas. As cases of this kind were now known to be comparatively common, the question of treatment, therefore, assumed a high degree of importance.

The natural termination of tubal and interstitial pregnancy was by rupture of the sac, hemorrhage, peritonitis, and death; although there was a certain number of spontaneous recoveries on record, either through the mummification of the fetus or the formation of a fistulous tract through which it was gradually discharged in small portions. In ovarian and abdominal pregnancies the death of the fetus might take place either prematurely or at full term, and in the majority of cases it resulted in suppuration, which was almost sure to be followed by peritonitis and the death of the mother. Occasionally, however, the latter survived, and a fistulous opening was established into the vagina or rectum, or through the external abdominal walls, by means of which elimination took place. But this process of elimination was ordinarily a very slow one, and in the greater number of instances the patient required active interference on the part of the medical attendant, or else death would eventually ensue from blood-poisoning or exhaustion. Again, in a certain proportion of cases the fetus after its death became coated with a bony or earthy crust, and remained as a comparatively innocuous tumor during the rest of the woman's life. Its presence under such circumstances did not prevent the occurrence of pregnancy subsequently.

The treatment of extra-uterine gestation, Dr. Lusk continued, varied according to the stage of pregnancy. In cases of early gestation the indication was plainly to destroy the life of the fetus, and in order to accomplish this without injury to the mother a number of methods had been suggested and practiced. One of the most simple was the puncture of the sac, and this could usually be easily effected by means of a trocar introduced through the walls of the vagina or rectum. It was true that a number of recoveries were on record in cases where this plan was adopted, but the results, as a rule, were unfavorable. The second method mentioned

that of injecting poisonous solutions into the sac, by means of the hypodermic syringe. The first used was one fifth of a grain of sulphate of atropia in a small quantity of water; but Friedreich had substituted the fifth of a grain of morphia for this, and had reported two successful cases under its use.

The third method was that resorted to by Thomas, namely, the use of the galvano-cautery. One case barely escaped resulting fatally in his hands, however, and in the latest edition of his work on diseases of women (which contained a chapter on extra-uterine pregnancy) he recommended Paquelin's cautery. It was to be employed only after the pregnancy had given rise to symptoms of trouble. The fourth and last method considered was the use of the faradic current. It was to be kept up for from five to ten minutes through the seat of the product of conception, and repeated from time to time, if necessary, for one or two weeks, until the shrinkage of the tumor left no doubt that the passage of the current had produced the desired effect. Dr. Lusk then related in detail the history of a very interesting case in which he had called Dr. Thomas in consultation, and in which the faradic current had been employed with complete success. The use of the faradic current, in this connection, he continued, the profession owed to Dr. James G. Allen, of Philadelphia, who reported two cases successfully treated by it in 1872. This method, Dr. Lusk considered, offered a much better chance of recovery than any other, and one great advantage of it was that it was accompanied by no drawbacks. So far as he knew, it had now been resorted to in nine cases, and in every one of them the result had been successful. When it was remembered that in one hundred and fifty cases collected by Hume there were only seventeen recoveries, the advance that had been made could be better appreciated. The subsequent treatment was that for peritonitis.

The second class of cases was that in which gestation was in an advanced stage and the fetus was still living. Here symptoms of exhaustion finally came on, and the patient was in great danger. Laparotomy in such cases, Dr. Lusk thought, ought to enjoy the highest confidence of the surgeon, provided its performance did not increase the jeopardy of the mother. Parry had reported twenty cases of primary operations, with eight children and six mothers saved; but after a careful study of these cases he had found that five out of six of the maternal recoveries ought really to be stricken out. The great and unavoidable danger in such operations was the difficulty or impossibility of removing the placenta.

Finally, he considered the class of cases in which gestation was prolonged after the death of the fetus. Under these circumstances it was a well-established rule not to operate during the continuance of labor pains. The fetus might at length become converted into a hard, innocuous mass, as mentioned at the outset; but this was the exception, and not the rule. Most commonly it underwent maceration, and the patient sooner or later began to suffer from exhaustion and symptoms of septicæmia. In some cases a fistulous opening was formed into the vagina, into the rectum, through the abdominal walls, or even into the bladder. Under such circumstances the treatment consisted in the enlargement of the fistulous tract, and the extraction of the fetus piece-meal through it.

Secondary laparotomy was a justifiable operation, and out of thirty-three cases reported there had been

nineteen recoveries. Of the two great dangers of the primary operation, hemorrhage and septicæmia, the first was very greatly diminished by the death of the fœtus and the changes ensuing upon it, and the second could be avoided to a considerable extent by the judicious use of the antiseptic precautions now at the surgeon's command. When circumstances permitted, therefore, it was advisable to delay operative procedures until obliteration of the maternal vessels had taken place. Whenever the operation was demanded by the condition of the patient, however, antiseptic surgery offered a fair chance of success.

The paper being before the society for discussion, Dr. Jacobi remarked that he had had but one case of extra-uterine pregnancy in his own practice. This occurred some time ago, and he had not treated it by the method so highly recommended by Dr. Lusk, although he was happy to say that the result had been a favorable one. The patient was probably at the beginning of the third month of gestation, and he had punctured the sac through the vaginal walls. He had also made a second puncture two days afterward. Half a year later, when he examined the patient, he had found a hard substance to the left of the uterus which to the touch reminded him of cicatricial tissue in any other part. Even to this day, although it was seventeen years since the operation, the fundus of the uterus was drawn over to the left by means of the contraction that had resulted, while the cervix pointed decidedly toward the right. With his present knowledge of the subject, and especially after listening to the results mentioned by Dr. Lusk in his paper, he would undoubtedly employ the treatment by the faradic current if he were to meet with another similar case.

Dr. Rockwell stated that he had successfully employed electricity in the treatment of three cases. The first was that of Dr. McBurney, which had been alluded to by Dr. Lusk, and which, having been published in full in the *New York Medical Journal*, was well known to the profession at large. The correctness of the diagnosis had been disputed in some quarters, but he did not propose to discuss this point. The second case was that of Dr. Billington, also mentioned in the paper of the evening, and the third he had seen quite recently. Dr. Lusk had spoken particularly of the use of the faradic current, but it seemed to him that the galvanic current would prove the most efficient in destroying the fœtus. In Dr. McBurney's case this was employed, and two applications were made. Before it was resorted to Dr. Thomas, who was one of the consultants, asked him if he could kill the fœtus in this way without doing injury to the mother, and he replied that he thought he undoubtedly could. The result, as was well known, was entirely satisfactory. In Dr. Billington's case he had made but a single application of electricity, and did not know how many had been made subsequently. In the third case there had been but one application — of the galvanic current — altogether, and the recovery had been as successful as in the other instances. These three cases constituted all his experience in regard to this interesting subject, but they at all events went a considerable distance towards settling the point that the fœtus might be destroyed without injury or danger to the mother.

DR. BILLINGTON said that in his case a positive diagnosis was made by Dr. Thomas, whom he called

in consultation, and that he had made four applications after the first one by Dr. Rockwell. The first three times he employed fourteen or fifteen cells, but the last time he used the full strength of the battery, thirty-six cells.

DR. MUNDÉ had seen three cases of extra-uterine gestation altogether. The first was in the service of Scanzoni, and was fatal. It was a case of ventral pregnancy, and the patient went beyond full term. The second occurred in Braun's clinic. The pregnancy had originally been either interstitial or tubal, and the fœtus at length escaped into the abdominal cavity. The woman was in a very cachectic condition, and it was decided to wait till her death before operating for the purpose of saving the child's life. As soon as she expired laparotomy was performed, but the child, which weighed nine pounds, was asphyxiated. The third case occurred in his own practice, and the circumstances were peculiar, the fœtus escaping through the uterine canal, as in Dr. McBurney's case. Before he met with it he had been disposed to doubt the accuracy of the diagnosis in the latter, as he could not understand how the fœtus could pass through the undilated uterine canal. Now, however, he was quite willing to take back all that he had said upon this point, for the case in his own experience had completely convinced him that such a thing was quite possible. In this case he had sounded the uterus with the probe and found it empty, and yet twenty-four hours afterward he found the uterine cavity occupied by the fœtal mass, while the tumor which had previously existed above the uterus had entirely disappeared. In this instance bimanual examination was unusually easy, and there could be no doubt whatever of this latter fact.

It seemed to him that Dr. Rockwell was correct in his view that the galvanic was to be preferred to the faradic current in these cases. There were two reasons that occurred to him why the galvanic was preferable. First, the faradic current had the effect of causing a contraction of the muscular fibres of the tube, and, second, while the faradic current might kill the fœtus by the shock it produced, the galvanic had the additional advantage of decomposing the amniotic fluid.

In Dr. McBurney's case Dr. Emmet had made a suggestion, which he thought might prove of service in a certain proportion of instances. "Why not dilate the uterine cavity," said he, "and extract the fœtus in this way?" This might, perhaps, be a bold and difficult procedure, but, in the hands of an operator as skillful as Dr. Emmet, could no doubt be successfully accomplished in some cases of tubal or interstitial pregnancy. When rupture of the tube had taken place, he believed it to be quite justifiable to perform laparotomy, as proposed by Kiwisk, and, with all the resources of modern surgery now at one's command, he thought that the prospect of success would be as good as in many bad cases of ovariectomy.

In concluding the discussion, Dr. Lusk remarked that the galvanic current had been proposed in the treatment of extra-uterine pregnancy as early as 1857. At first its introduction in this field of surgery was hailed with great enthusiasm; but afterwards the plan was abandoned because the operators found that they did not obtain as good results from it as from simple puncture of the sac. It was after the use of the galvanic current had been given up that Dr. Allen resorted to the faradic current, and up to the present time (as

he had mentioned in the paper) nine cases had been reported in which it had been successfully employed without the occurrence of a single bad symptom. Or, leaving out Dr. McBurney's case, in which he had been under the impression that the faradic current had been used, until corrected by Dr. Roehrig, this evening, there would be eight successful cases on record.

PROPOSED LAW TO REGULATE THE SALE OF PATENT AND PROPRIETARY MEDICINES.

Dr. H. G. Piffard presented for the consideration of the society a bill which an effort was now being made to have passed by the legislature, and which he said combined some very objectionable features with some that were really excellent. It was in five sections. The first provided that all patent and proprietary medicines should have their exact composition printed upon the exterior of the bottle, box, or package in which they were sold; the second, that three commissioners, the chairman of whom should be the president of the county medical society, should have the power of examining all such medicines, and, if necessary, the process of their manufacture, when, if they found nothing injurious in their ingredients, they should be required to furnish a certificate to that effect; the third provided that such commissioners should receive pay at the rate of ten dollars a day for all time actually spent in the performance of their duties; the fourth provided that certain penalties should be inflicted for infringements of the law; and the fifth, that the act should go into effect immediately.

The first and fourth sections, Dr. Piffard said, were altogether unobjectionable and their enforcement, he believed, would be of great service to the profession and the community at large; but the second and third were unnecessary and were open to very serious objections. If the second section were passed by the legislature, all patent medicines that were examined and favorably reported upon by the commissioners would be advertised and offered for sale as endorsed by the medical profession. In regard to the third section he remarked that a work of this kind would take all the time of the commissioners, and that probably no one occupying the position of president of the county medical society would be willing to give up his practice for ten dollars a day. Moreover, as the bill was now constructed, the office of commissioner was apparently for life; no definite time being specified for its continuance. On motion of Dr. Piffard, it was decided that after sections two and three had been stricken out, and one or two slight alterations made in the others, the president and secretary should be authorized to endorse the bill on behalf of the society.

Recent Literature.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-minded Persons. Session: Barre, Mass., June, 1880.

The subject of the care of the feeble-minded, though to the philosopher and the physiologist it presents problems of the highest interest, has not yet made itself attractive to physicians at large, even so much as that of the care of the insane. It is, therefore, all the more important that we should take advantage of these yearly meetings of superintendents to take notice of the work

that is being done in this direction and express our recognition of its value.

The first fact, and certainly the most important one, that strikes us in looking over this pamphlet descriptive of the fifth annual session of the Association, is that this unfortunate class have many warm friends among us and are being cared for as well as circumstances permit. The next is that the strictly scientific work done by the Association is of but trifling amount. There is no use in dwelling on this too obvious fact, nor of spending too much time in deploring it. The character of men's work is usually determined by circumstances, and so it is in this case.

The only urgent demands that have hitherto been made are: first, that our idiots should be well looked after and kindly treated; second, that they should be taught to become decent members of society; and we have only to congratulate ourselves that these demands are being so well met. The rest will come in good time, after the need of better scientific training is recognized for this department, as it is coming for the department of insanity, and in proportion as opportunities are afforded to superintendents and assistants for its accomplishment.

The first of the four communications is from the late Dr. E. Seguin on the Training of the Idiotic Eye and Hand, and through them, of course, the mind. Though couched in the peculiar, half French, half mystic language of the writer, it is of interest as pointing the way towards a method by which laurels may undoubtedly be reaped and much good done, by any one who has the patience and skill to pursue it.

The second is an able statement by Dr. H. B. Wilbur, of the opinion, which but for his quotations we should not have supposed needed demonstration, that in idiocy the instinctive faculties, so far from being predominant, as has been claimed by Carpenter, Maudsley, and others, suffer with the intellectual faculties, and for similar reasons.

The third, by Dr. George Brown, of Barre, denominated Occult Epilepsy, is a rather crude pathological study.

The fourth, on the etiology of idiocy, by Dr. J. N. Kerlin, consists of a table of one hundred cases grouped in a manner to bring out a number of important facts in the causation of this state. The entire investigation aims at embracing one thousand cases, and will no doubt prove of great interest. No analysis is here attempted, and we waive further notice of it till the whole work shall be complete.

The Microcosm and other Poems. By ABRAHAM COLES, M. D., LL. D. New York: D. Appleton & Co. 1881.

The microcosm, the leading poem of this collection, was first published in 1866, in connection with an address delivered at the same time by the author, as president, before the Medical Society of New Jersey, at its centennial anniversary. It is, as the author tells us, an Essay on Man, in verse, whose scope, unlike that of Pope's, is physiological rather than ethical. The other poems were written for the most part many years ago.

The author makes no apology for their religious character; he is glad he has not outgrown Christianity, and prefers a humble faith to a conceited agnosticism. Dr. Coles is the author of *Dies Ire*, in thirteen ver-

sions. Whittier said of the *Microcosm*, when first published: "The idea of the poem is novel and daring, but it is marked out with great skill and delicacy." The volume is a very handsome specimen of the publisher's work, and contains five artetype illustrations.

Hand-Book for Coroners, containing a Digest of all the Laws in the Thirty-eight States of the Union, together with a Historical Résumé. A Guide to the Physician in Post-Mortem Examinations, and Valuable Matter never before collated. By JOHN G. LEE, M. D., Coroner's Physician of the City and County of Philadelphia. Philadelphia: Published by William Brotherhead. 1881. Pp. 228.

The almost simultaneous agitation in the direction of a change in the inquest laws of the States of New York, Louisiana, North Carolina, Indiana, and other States of the Union, would appear to show that the recent action of the Old Bay State has awakened a wide-spread interest in the subject. If it is desirable to perpetuate in the United States that old relic of Saxon barbarism, the coroner system, the Coroner's Hand-Book has appeared in good season. Let us hope that it will be used for a better purpose. Part I. of this book is worthy the perusal of the medical examiner or of the medical coroner. The first chapter constitutes an excellent contribution to the history of forensic medicine, being a compilation of the principal facts relating to the history of the primary investigation of crimes from the earlier centuries of English history down to the present time.

For the benefit of such State governments as have not yet determined to abolish the entire system the following passages may be commended as an entering wedge: "A lawyer, or a private individual, if handed a watch which had suddenly ceased to go, either from a fall or from any unknown cause, would not be expected to state the cause of its stoppage. Yet this is what the *non-medical* coroner is expected to do with the thousand times more intricate piece of machinery, the human body." "We consider our position impregnable, when in behalf of the community at large and in the interest of public safety we urge that the office of coroner, in this country as well as in England, should be filled by an intelligent and thoroughly educated medical man, of inflexible principle and irreproachable morals." The author, whose volume is dated 1881, scarcely recognizes the medical examiner system of Massachusetts. His arguments favor the continuance of the ancient coroner system, with this single advance, that the office should be filled exclusively by medical men. The medical examiner law of this commonwealth is dismissed with a notice of four lines in length on page 30, and an allusion of similar length on page 171. This is very like Hamlet with Hamlet left out.

On page 54 the author states: "In England and the United States forensic medicine is in its infancy." True enough, and what has kept the nursing so long in its cradle but this same old coroner system, which the author seeks to perpetuate, with its useless juries, whose verdicts have so often brought ridicule upon the system and hindered the progress of thorough medical investigation? In those countries where forensic medicine has made the most rapid strides—Germany, France, and Italy—coroners and their juries are unknown, and it is chiefly upon the laws of those conti-

nental nations that the Massachusetts medical examiner system has been modeled and adapted to the wants of a New England people.

Chapter II. is devoted to the *Coroner's Physician*, and contains many suggestions which are available for the medical examiner or medical coroner. Especially commendable are the remarks on expert testimony, the conduct of the medical witness, the details of autopsies, and suggestions in regard to the exhumation of bodies.

Chapter III., entitled *The Aspects and Surroundings of Death*, contains valuable information relating to the diagnosis of wounds inflicted before and after death. The signs of death are also treated somewhat after the style of Casper, though more briefly. Cadaveric rigidity and cadaveric spasm are also fully treated, with illustrations from Brinton,¹ Rossbach, Kiessmaul, and others. Post-mortem staining and ecchymoses are also briefly treated. The chapter closes with some very useful directions as to the preservation of blood-stains, and also the solidification of foot-prints in soil and in snow.²

No better argument against the coroner system could be found than the following statement on page 107: "Unfortunately, in this case permission could not be obtained to make an autopsy, the privilege of making the same being waived by the coroner."

Part II. contains a digest of the existing inquest laws in all the States of the Union. A perusal of these ancient statutes reveals the fact that while the old coroner system is at present employed in nearly every State, the coroner laws of all the States differ from each other in many points, prominent among which are the modes of election or appointment, the number of men required for a jury, the fees of officers, of juriesmen, etc., etc.

The physician who performs an autopsy at the direction of a coroner in Minnesota receives the sum of six dollars, while in Mississippi he receives for a like service fifty dollars, and in a case of exhumation one hundred dollars. In Indiana the coroner's jury has been abolished. In New York any citizen may demand that a jury shall be summoned, and in the same State there is a law forbidding the disturbance or removal of any body which has suffered a violent death. In South Carolina every fatal case of rattlesnake bite requires the services of a coroner. In Connecticut and in Vermont the office of coroner does not exist, but is supplied by a justice of the peace. The same custom has also a temporary existence in other States in districts where no coroner has been appointed. It is a curious fact that one of the old English usages relating to the coroner's office should have been incorporated into the laws of many of the States,—that of serving occasionally in the vicarious capacity of sheriff. Fortunately, our new medical examiner law of 1877 was shorn of this useless incumbrance.

It is presumed that the author has intended to cite correctly the laws concerning inquests now in force in the various States, but we find on page 170 a poor guarantee of his accuracy. Under Massachusetts he gives us, not chapter 200 of the Acts of 1877, creating the medical examiner and abolishing the coroner more than three years before this book was printed, but an imperfect abstract of some of the provisions of law under which the now extinct race of coroners

¹ American Journal of the Medical Sciences, January, 1870.

² Hugoulin. Annales d'Hygiène Publique, vol. xlv., p. 429.

acted before July, 1877. The only Massachusetts law of recent date relating to inquests which he has stumbled upon is a verbal amendment to the general railroad law requiring corporations to notify "medical examiners" instead of "coroners" concerning casualties on their lines; and this citation is made in such a way as to convey no notion whatever of the import of the act cited. Such an omission, we are sorry to say, tends to discredit the trustworthiness of the author's other citations.

A dozen pages of humorous anecdotes close the volume, and form not the least of the numerous arguments against the coroner's jury.

The author has had a large and varied experience in medico-legal autopsies. A volume comprising a compilation of his medico-legal work, with a selection of such cases for publication as are of special medico-legal interest, would form an important contribution to the literature of forensic medicine. S. W. A.

Syphilis and Marriage. Lectures delivered at the St. Louis Hospital, Paris. By ALFRED FOURNIER, professeur, etc., médecin, etc., membre de l'Académie, etc. Translated by P. ALBERT MORROW, M. D., etc. New York: D. Appleton and Co., 1, 3, and 5 Bond Street. 1881. Pp. 251.

The thanks of the medical profession and of the community are due to Dr. Morrow for his excellent translation of this invaluable book, which emanates from perhaps the first syphilologist of the world, and treats, in a masterly way, of one of the very most important subjects in medicine, one hitherto, moreover, almost entirely ignored. In this volume the relations of syphilis with marriage have been exhaustively studied, and the practical questions, medical and social, growing out of it, been discussed in a thoroughly systematic and comprehensive manner. Special prominence is given to the moral obligation imposed upon the physician as regards public prophylaxis, and rules are formulated to guide his conduct in dealing with the various complex and difficult problems which may arise. The book supplies a want long recognized in medical literature, and is based upon a very extended experience in the special hospitals for syphilis of Paris, which have furnished the author with a rich and rare store of clinical cases, utilized by him with great discrimination, originality, and clinical judgment. It exhibits a profound knowledge of its subject under all relations, united with marked skill and tact in treating the delicate social questions necessarily involved in such a line of investigation. The subject naturally divides itself as follows: (1.) What conditions ought a syphilitic person to fulfill medically to justify us in permitting him to marry? Or, conversely, under what conditions will it be our duty to defer or even to absolutely interdict marriage? And (2), when syphilis has been introduced into the conjugal bed by the consummation of marriage, what medical indications are to be then fulfilled in order to lessen or avert the dangers of such a situation? In other words, what is, under such circumstances, the proper rôle of the physician either before or after marriage? To the former division of the subject Fournier devotes eleven chapters, to the latter five. The eleven chapters treat of preliminary questions; direct contagion; syphilis by conception; paternal heredity; mixed heredity; maternal heredity;

personal dangers of the husband; conditions of admissibility to marriage; prolonged period of immunity; sufficient specific treatment; conclusions. Part II. considers the problems of,—husband syphilitic and wife healthy; husband syphilitic, wife healthy but encephalic; husband syphilitic and wife recently contaminated; husband syphilitic, wife syphilitic and encephalic; dangers to society, social prophylaxis. Some very interesting notes and illustrative cases are appended, for example, eighty-seven observations of syphilitic husbands who never affected their wives while begetting one hundred and fifty-six absolutely healthy children; case of syphilis causing seven abortions; statistics of hereditary influence of maternal syphilis; cases of syphilis contracted before but first appearing after marriage; five cases of syphilis, due to the husband's syphilis, with death of a strange nursing; father and child infected, mother apparently not, but presenting, six years later, an accident of tertiary syphilis (case); inaptitude for life as a hereditary consequence of paternal syphilis. The entire volume is full of information, mnemonically condensed into axiomatic "points." It is a book to buy, to keep, to read, to profit by, and to lend to others. E. W.

Food for the Invalid. By J. MILNER FOTHERGILL, M. D., Edinburgh, and HORATIO C. WOOD, M. D. New York: Macmillan & Co. 1880.

The introduction to this little book is an excellent epitome of the present application of physiological knowledge to the kitchen, and many of our readers will be pleased to catch at a moment's glance certain hints which would require the study of several hours devoted to modern works on the physiology of digestion. The "recipes" or receipts for cooking are too hurriedly put together to form a useful cookery-book. We should hardly be satisfied with the method proposed for making "beef juice for the sick": "Cut one pound of beef in small pieces, put it into a bottle, and cork it up," etc. Any one who has had a juicy piece of beef cooked slowly for ten minutes, scored and squeezed by one of the modern iron beef squeezers, would not relish the insipid liquid prepared by Dr. Fothergill's process. Most of the other receipts are valuable for the sick-room.

— Small-pox is still raging in Chicago. The number of hæmorrhagic cases is large, forming a considerable proportion of all the cases. The department of health is having a hard time to ferret out and find all the cases and take care of them. The disposition to hide cases from the department, and even from the profession, seems to be growing. Several cases have been discovered only after the death of the patient, and hence after all possible opportunity has existed for spreading the disease.

The obstruction is owing to the prejudice against the small-pox hospital and against being forcibly taken there. The prospect now seems good for the appointment of a medical man to take charge of and live at the hospital. A small appropriation for his salary is likely to be appropriated by the city council. This is a step in the right direction, and if the choice falls upon a good man the institution may be conducted hereafter without offense to the public.

Medical and Surgical Journal.

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THE PROPOSED PHARMACEUTICAL LAW FOR MASSACHUSETTS.

A LETTER on another page of this number of the JOURNAL draws attention to a proposed law for the regulation of the practice of pharmacy. The principal features of the bill, which was brought before the legislature under the approval of the Essex County Druggists' Association, are as follows:—

Section 1 provides for the appointment by the Governor, with the consent of the council, of three men of long experience in the business of retailing drugs and chemicals and compounding physicians' prescriptions, to be Commissioners of Pharmacy, to hold office for one, two, and three years respectively; thereafter one commissioner to be appointed annually to hold office for three years.

Their duties shall be to examine all who may apply, and if qualified to give them certificates which shall entitle them to carry on the business of pharmacy in this commonwealth.

Section 2 provides for the registration without examination of all persons now actually doing business as pharmacists, provided they apply for registration within ninety days, and for the keeping a registry, to be always open for inspection, in the office of the Secretary of the Commonwealth.

Section 3 provides for a penalty of not less than one hundred nor more than five hundred dollars for engaging in the business of selling drugs and compounding physicians' prescriptions without certificate.

The act further provides for fees of five dollars for examination and of three dollars for the registration of those already engaged in the business. The sale of proprietary and domestic remedies is simply left without interference, except that domestic remedies shall be marked with the label of a registered pharmacist, and the dose given thereon. The commissioners are also charged with the duty of prosecuting violations of the act. Fines are to be paid half to the informant, half to the Commonwealth.

The absence of any *ex post facto* regulation of existing affairs ought to commend the bill to the general public; whether the public is yet ready to surrender its inalienable right of each individual citizen to sell drugs in the future, if at any time he chooses to exercise that right, without showing his fitness for the business, remains to be seen. The bill has already excited much opposition and has been the victim of great misrepresentation. That the public would be

greatly benefited by limiting the business to those able to discriminate between good and worthless drugs there can be no question. One of the chief arguments against the bill is based on the small number of fatal accidents that are reported from druggists' mistakes. The immense number of worthless drugs sold the public cannot appreciate, nor do physicians themselves seem to be fully aware of the vast number of inert prescriptions furnished. Much of the skepticism in regard to the action of drugs may be due to this very cause. The present condition of the drug business is compelling many physicians to carry about with them a certain number of drugs, and obliges them to discriminate between certain apothecaries whom they know to be qualified and certain others of whose qualifications they are ignorant.

The National Pharmaceutical Association is trying to bring about the regulation of the trade throughout the union, and, as our correspondent shows, has succeeded in introducing laws more or less valuable in several States. The working of the Rhode Island law is interesting in one particular. It has led to the establishment of a class for the study of pharmacy in the polytechnic school attached to the public evening schools in the city of Providence.

The medical profession will fully approve of the object of the proposed law. The agitation in regard to it will have at least one good effect. It will familiarize the community with the idea that special fitness is necessary for certain positions connected even remotely with the public health, and may also assist in teaching the public that pretensions to special knowledge are by no means a warrant of the actual possession of such knowledge.

THE COMPUTATION OF DEATH-RATES AS ILLUSTRATED BY BALTIMORE.

As our readers are aware, weekly mortality tables made up from the local returns of various cities throughout the country are published in the *Bulletin of the National Board of Health* and in the JOURNAL. The table of the *Bulletin* includes all the cities in the United States in which burial permits are required, that of the JOURNAL includes only a certain number of the largest cities outside and the cities and towns within Massachusetts. The *Bulletin's* tables are made up from returns sent by local health officials or registrars to the national board; the JOURNAL's tables from similar returns sent to the Massachusetts Board of Health. In the *Bulletin* the death-rates per thousand of the individual cities is given; in the JOURNAL this has not been done, except in a general way for the total population of the cities and towns of Massachusetts. We have been asked at times why we do not give the death-rate, by readers who would like to be able at a glance to determine the relative sanitary condition of the cities in different parts of the country.

The reason has been, hitherto, that these death-rates have been utterly valueless for a large number of the

principal cities, except, possibly, for comparing the mortality in the same place from week to week. Before the completion of the last census the death-rates were made up upon the basis of estimated populations. The diverse methods and degrees of care which prevail in different localities in the returns and registration of vital and mortality statistics make their absolute or comparative value sufficiently uncertain, but when to this was added the outrageous inflations of estimated population for purposes of local self-glorification the value of death-rates was not worth their calculation. This may be seen by comparing the estimated populations of some of the chief cities prior to the publication of the census with those resulting from the census: Philadelphia estimated 901,380, census 846,984; St. Louis estimated 500,000, census 350,522; Baltimore estimated 393,796, census 332,190; Cincinnati estimated 280,000, census 255,708. Prior to the census, if any remonstrance was made at the improbability of the accuracy of these swollen populations of competing cities, accompanied by a proposal to calculate death-rates upon a more reasonable basis, the answer from the local officials was, if anything of the kind is attempted no more returns will be sent.

It was supposed that this source of inaccuracy might, for a time at least, be escaped after the publication of the results of the late census, but Baltimore, as represented by her health commissioner, and the secretary of her health department, takes the earliest opportunity to correct any such delusion. She is not going to quietly submit to the decapitation of 60,000 of her population at one stroke by a bungling census-taker. Nor will she allow any unauthorized person, as her secretary takes pains to assure the public in a late number of the *Sanitary Engineer*, such as the secretary of the National Board of Health for example, to lay sacrilegious hands upon the sum total of her citizens. If the city cannot have a favorable report upon her hygienic condition from sanitary inspectors destitute of the fitness conferred by local pride, she shall at least have a favorable death-rate of her own in spite of it all. The secretary of the Baltimore Health Department is, however, a very conscientious person; he is, as he states in the letter from which we quote, "equally opposed to the alteration of his figures by unauthorized parties, or to the changing of them even by himself until fully convinced and satisfied that they are not correct." He professes to entertain the highest opinion of, and the utmost confidence in, the able superintendent of the national census, and that of course affords something to work on, otherwise we should say there was but little chance of convincing a person of error who arrives at his statistical conclusions by the peculiar method set forth in the following extracts from the letter to the *Sanitary Engineer*:—

The *Sun's* local states that "Mr. Carter makes up his report upon a basis of an estimated population of 393,796, which he claims the city has, in accordance with a calculation made with reference to the number of houses in the city."

This is only a partial statement of my basis of calculation. The secretary of the National Board of Health requested me to make my estimate as follows: whole population, 332,190; white, 278,487; colored, 53,703, which he stated was "official, as fur-

nished by the census department." This request, after consultation with the commissioner of health, I respectfully declined to comply with, as our estimate is: whole population, 393,796; white, 338,384; colored, 55,412; and we are satisfied that these figures are much nearer the correct population of Baltimore than those furnished by the national board. I have the very highest opinion of, and the utmost confidence in, General Walker, the able superintendent of the census, and am sure that his earnest desire is to have the census absolutely correct; but as far as the census of this city is concerned, I am fully convinced that it was incorrectly taken, as hundreds of citizens can testify to the incomplete character of the work done by the census agents.

It is a curious coincidence that our estimate of the colored population (our estimate, 55,412; official figures, 53,703) should so nearly approximate the figures of the census department, and our estimate of the white (our estimate, 338,384; official figures, 278,487) so widely differ from the official count. There are 80,000 registered legal voters in Baltimore; five inhabitants to a legal voter is a fair and reasonable allowance, which would make the population 400,000. The census taken by the police, for our school board, of children between the ages of six and twenty-one years, gave 86,961. This would be a fair estimate of one fifth of our population, making the same 434,805. Wood's "City Directory"—than which none more perfect or carefully compiled can be found in this country—gives, after deducting all firms, companies, and institutions, 84,596 white, and 13,853 colored, names. It is perfectly fair and reasonable to assume four inhabitants to each name, which would give our present estimate, 393,796.

Again, there are 90,000 houses in Baltimore. Deduct 10,000 for manufacturing establishments, warehouses, stores, and unoccupied dwellings, and estimating five inhabitants to each house (a very low estimate) our population would be 400,000. I am, therefore, fully satisfied that without any "statistical manipulation," or any attempt "to so cook the figures as to delude the citizens," the census of Baltimore, if correctly taken, would give her a population of fully 400,000.

As Hamlet puts it, when discussing with Luertes the mortality of Ophelia, we could accompany the secretary "upon this theme until our eyelids will no longer wag;" for example, again, there are in Baltimore one thousand streets; deduct two hundred streets occupied by stores, warehouses, etc., and allowing five hundred inhabitants—clearly a very moderate number—to each of the remaining eight hundred streets and we easily have a total population of four hundred thousand souls; etc., etc., *ad infinitum*.

When one consults the mortality tables published by the English or German government bureaus he finds death-rates whose relative and absolute value can be estimated and relied on, but the death-rates of our cities as given by the National Board of Health are of but very little value to any one unless based on the census returns. If each civic sanitary official is to have his own pet methods of computing population, and each city a numerical aspiration to be attained at all hazards, the farce of computing death-rates may as well be given up altogether, and the clerk of the local board may more profitably devote himself to composing paragraphs for the local press after this fashion: "Healthy Smithville! There is no doubt that if the death-rate of Smithville were properly calculated during the past three months it would prove to average 11.3. In London, Paris, and Berlin, during the same period, it has been 20, 23, and 25, respectively; this proves the advantages which Smithville enjoys over those other great cities, and is another indication that it will soon surpass them in wealth and population."

The intelligently ambitious city first increases the population to lower the death-rate, and then increases it still further because the death-rate is low.

MEDICAL NOTES.

NEW YORK.

— There is an effort being made at present by the State Charities Aid Association to get a bill passed by the legislature which will confer upon the officers of the Association the power to visit, inspect, and examine any of the State charitable institutions, county poor-houses, town poor-houses, and city almshouses within the State; but inasmuch as the State Board of Charities, which is already thus empowered, is a very efficient organization, the adoption of such a measure is not regarded with favor by those best qualified to form an opinion in such matters. There seems to be no reason whatever for establishing two corporations in the State, both of which have practically the same objects in view, when one of them can accomplish the work desired, and it is to be feared that in case the bill should pass, the recommendations made by the State Board and the Aid Association in regard to legislation deemed necessary might sometimes prove conflicting, so that a constant dispute might perhaps be kept up between the two bodies.

— A sub-committee of the State Board of Health, consisting of Mr. Erastus Brooks, Dr. J. S. Delavan, and Dr. Elisha Harris, is at present engaged in making an investigation of the effluvium nuisances in the vicinity of Hunter's Point and New York. The committee was appointed at a meeting of the State Board of Health, February 9th, at the request of the New York Sanitary Reform Association, and at its first session Mr. Pellet, of the latter society, presented a petition signed by many of the most influential citizens of New York asking for action on the part of the State board, since the seat of the nuisances was without the city limits, and therefore beyond the control of the local board of health. Dr. Elisha Harris pointed out the location of the phosphate manufactories, chemical works, oil refineries, and other sources of offensive odors in East Brooklyn, Greenpoint, and Long Island City; and a number of letters from physicians in regard to the injurious effects of the latter were read. Thus, Dr. C. R. Agnew wrote; "They both create and increase disease from causing windows and other ventilators to be closed, and so depressing the general tone of health and increasing liability to disease; also making people who are deficient in self-control — the majority of the inhabitants of the district — fret and worry, and making them apprehensive of disease. I consider a bad stench a source of disease, because it in many ways vexes the nervous system of sensitive people."

PHILADELPHIA.

— The most recent interesting event was the inauguration of Dr. William Pepper as Provost of the University of Pennsylvania. The exercises were held on Washington's birthday, at the Academy of Music, a large and brilliant audience witnessing the ceremony. A number of distinguished invited guests, among whom was President Eliot of Harvard, occupied seats upon the stage. The exercises were most

interesting and impressive. Governor Hoyt, of Pennsylvania, who is ex-officio a member of the Board of Trustees, made an opening address in which he referred to the history and progress of the University of Pennsylvania, and considered the requirements of the position to which Dr. Pepper had been called, and presented the new incumbent with the keys as the insignia of his office. An address of welcome to the new Provost was then delivered by the Vice-Provost, Rev. Dr. Krauth, on behalf of the Faculties, and concluded with a fitting tribute to the late Provost, Dr. Charles J. Stillé, to whose tireless energy and devotion the institution owes mainly its present position. At the conclusion of these remarks Dr. Pepper made a temperate and able address containing much of general interest and of more than a local application.

The new Provost conferred the degree of LL. D. upon President Garfield.

WASHINGTON.

The National Board of Health has had the funds at its command materially diminished by a clause in the Civil Appropriation Bill as discussed and passed February 23d. This clause reads as follows: "National Board of Health: For salaries and expenses of the National Board of Health, to carry out the purposes of the various acts creating the National Board of Health, \$75,000 or so much thereof as is necessary, *provided* that \$25,000 of the appropriation made by act of June 2, 1879, entitled An Act to Prevent the Introduction of Contagious or Infectious Diseases into the United States, shall be applied to the same purposes, and no more money shall be expended for the above purposes out of any appropriations heretofore made or by virtue of any previous law."

Mr. King, of Louisiana, in discussing this action, stated there was a balance of \$180,000 left out of the first appropriation, and also that the cost of one epidemic alone of yellow fever to the city of New Orleans was not less than \$12,000,000. Mr. Blount, of Georgia, who represented the committee on appropriations in the discussion, stated that the act creating the board of health was not to continue in force for longer than four years, yet a system had been adopted of building expensive and permanent quarantine stations, and contracts were made looking to the permanency of the board. Further that the treasury department had decided that the board could use the whole of its fund in a single year, therefore Congress now decides specifically what moneys might be used during the current fiscal year. Mr. Young, of Tennessee, considered Mr. Blount as not having the slightest information on the question, being without knowledge of the items and estimates submitted by the board. He then referred to these items and estimates as given by the board in asking for \$203,000 in addition to the unexpended appropriation remaining on hand, to be used in guarding the inlets of our southern coast and keeping up the quarantine stations, and compared the appropriation in the same bill of six or seven hundred thousand dollars for the Life

Saving Service, whose last report showed some ninety lives as saved, with this, referring to the loss in 1878 of some thirty thousand lives from the pestilence in the Mississippi Valley.

Mr. Goode, of Virginia, commended the board as showing no disposition to be wasteful or extravagant, the total appropriation being \$625,000, out of which but \$364,000 have been expended. He then referred to the advantages accruing from a quarantine station at Hampton Roads as protecting Richmond, Alexandria, Fredericksburgh, Baltimore, and Washington.

CHICAGO.

—The annual commencement of Rush Medical College was held February 22d. The number of ordinary graduates was 172. Two honorary degrees were conferred.—on Dr. Allport, the noted dentist, and on Dr. S. D. Jacobson, of the Cook County Hospital staff.

The attendance at the college during the college year just closed was 505 students. The secretary's report showed that the proportion of students who had received an academic education before entering the college was steadily increasing. During the past winter session there had been delivered 700 didactic lectures and 1080 clinical lectures; during the previous spring session the number of didactic lectures had been 400, and of the clinical lectures 256.

The doctorate address was delivered by the president of the faculty, Dr. J. Adams Allen. It was largely devoted to a review of the past history of the college, and showed plainly that the institution has since its establishment, forty years ago, made a large advance in the amount and character of the instruction given annually to its classes and in the requirements for a degree. The opportunities of acquiring a thorough medical education at this college now were shown to be many times as great as they were at the beginning, and in nothing was the change more apparent than in the amount and character of clinical instruction offered.

In the evening the faculty of the college entertained the alumni, old and young, at a banquet at the Tremont House, where there was the usual feasting and toasts.

—The epidemic of gastro-intestinal catarrh (called by the newspapers winter cholera) has not entirely ceased. The enemies of good water have about ceased attributing the cases to the drinking of our hydrant water, since it is found that many cases have occurred in rural villages in various parts of the Northwest. This fact, too, makes it likely that we cannot in any great degree charge the epidemic to our bad sewerage. Indeed, our sewerage is as good as it has been at any time, and sewer gas has not this winter been any more prevalent in the houses of the people than formerly. This whole subject has been extensively discussed in the daily press of late, and it is leading to one very good result, namely, to impress people that to construct a house with water-closets and sewers within its walls, and without offense and without harm to the

atmosphere, is no easy thing, and that if people living in such houses would conserve the healthfulness of their habitations they must occasionally pay some slight attention to the condition of the sewerage thereof.

—The question of ventilating the main sewers by perforated covers for the street openings has again been brought to the attention of the public by the recommendation of the commissioner of health that a sufficient appropriation be made for this object to give the measure a fair trial and make it a success. Last year the measure was undertaken but the appropriation was insufficient, and so in most places it was only half carried out; as a consequence, in quarters where the ventilators were far apart, the emanations from each at times gave to the passer-by an unpleasant odor. This never in any case amounted to a real inconvenience to any one, yet it was enough to frighten some into the belief that they were being poisoned with sewer gas, and that therefore the ventilators ought to be closed. Even some intelligent members of the profession have become possessed of this delusion. Let us hope that all the sewers may be ventilated into the middle of the streets instead of into the houses. Chicago has breezes enough to dilute sufficiently any quantity of sewer gas thus delivered into the open air; she has no better facilities than other cities for taking care of it when set free in her houses.

—Another new measure the commissioner has asked an appropriation for, with strong probability of success, is to place a resident physician in charge of the small-pox hospital. Heretofore all the patients at that institution have been left in charge of the nurses and steward during the absence of the city physician, who has never made more than one hurried visit each day; frequently his visits are only once in two days. When we consider that sometimes as many as forty patients are in the hospital at once, many of them desperately sick, it is a wonder the public has not before made complaint of this real neglect of the sick.

—The Woman's Hospital Medical College held its commencement on March 1st. Seventeen ladies received the degree of doctor of medicine. This is by far the largest class ever graduated from this institution. The college is to be commended for the thorough work it is doing. Its graduating classes have uniformly passed final examinations as creditable as those in any of the colleges for men. All parties in and out of the profession are agreed that, whether it is a good thing or not for women to study medicine, if they do study and practice they should be thorough in their preparation for the work.

—The epidemic of small-pox continues and the health department has issued a proclamation that all people who have not been successfully vaccinated within seven years must be vaccinated forthwith. Although several people will probably fail to obey this requirement, it nevertheless will have a good effect, as we are told this gives the warrant of law to the health inspectors (physicians) in compelling people in the near neighborhood of cases of variola to be vaccinated, which they did not before have authority to do.

PHARMACEUTICAL NOTES.

—The *Druggist*, of Chicago, reports a serious blunder through which two children of that city recently lost their lives. Muriate of morphia was given them for muriate of quinia. The mistake was charged to the attending physician, who laid it upon the apothecary, and he fell back on the manufacturing chemist with the statement that the drug was dispensed from a bottle bearing the manufacturer's label, and marked plainly muriate of quinia. — *Louisville Medical News*.

Miscellany.

THE PROPOSED PHARMACY LAW.

MR. EDITOR, — Allow me to call your attention to the pharmacy law now before the joint committee on public health in the legislature, and give a few reasons for its passage.

For several years past much interest has been manifested by many in the drug trade arising from the need of a law regulating, as far as possible, the *education* of those engaged in the preparation and sale of medicines. The large increase of retail drug stores, set up many times by those who have not passed through the requisite course of experience, under an impression that the business is more lucrative than any other, or used as a cloak for other business not as respectable, has many times brought the legitimate business into disrepute; and the alarming increase of accidents caused in part by the ignorance and carelessness of apothecaries has led the *public* to feel that a law should be passed for their prevention. In view of these two conditions, it is believed that some law could be framed which, while it would protect the public, at the same time would be of benefit to the apothecary by elevating the status of his profession.

The American Pharmaceutical Association, composed of 1200 of the best pharmacists from Maine to California, and from Canada to Panama, have discussed the matter of pharmacy laws, and have put on record their opinion of the same. The origin of the Association was the need of a law to prevent the importation of spurious drugs; as a natural consequence to this was the question of home adulterations and the education of pharmacists. In all these matters they have been opposed by those who now oppose the passage of a pharmacy law.

The Association has corresponded with the governors of all the States, has published a valuable amount of information in their Proceedings, and through their influence have induced twenty of the States to pass pharmacy laws; and we have evidence from the States of New Hampshire and Rhode Island that they have been productive of good.

The opponents of the law claim that as there are not a large number of fatal cases caused by the mistakes of apothecaries, a law is not needed. This is not the point at all, and only serves to cover over the real cause of opposition. It is the unheard-of and unknown mistakes of apothecaries caused by *ignorance*, *carelessness*, and *cupidity* that are the most dangerous. For if a physician is prescribing a powerful remedy to a very sick patient, and expects a certain effect from a small dose, which he does not get if the article prescribed by him and put up by the apothecary is not

up to the standard, what reason can be given why the apothecary is not responsible for the failure.

It is the custom of many apothecaries, particularly those who live at a distance from the great centres of trade, in purchasing their goods, to make out several lists and send to different stores to be priced, and then order at the lowest price in each list; and when it is known that the price of some of the articles, the same by name, varies at wholesale from twenty cents to two dollars a pound, the appeal to the *cupidity* of an *ignorant* apothecary is too great for his *conscience*.

In the simple article of *laudanum*, for instance see the difference in manufacture; opium quotations vary ten to twenty per cent.; when used moist instead of in powder, a loss of thirty to forty per cent.; then the difference in using avoirdupois instead of troy weight ten per cent. more, making fifty to seventy per cent. difference in price, and of course a corresponding difference in quality. And here the public are no better off, for they have to pay the same price, for the same cupidity which influenced him in the purchase will influence him in the sale. In these cases the apothecary makes no mistake; oh no, of course not, only an "error in judgment," but the patient dies. L.

Boston, March 5, 1881.

LETTER FROM WASHINGTON: SURGEON
GEORGE A. OTIS.

MR. EDITOR, — On Wednesday, February 23, 1881, died of apoplexy, at his residence in this city, George A. Otis, Surgeon and Brevet Lieutenant-Colonel United States Army. He was born in Boston, November 12, 1830, graduated with degree of A. B. and A. M. from Princeton, subsequently took up the study of medicine, and attended lectures at the University of Pennsylvania, receiving his degree of M. D. in 1850.

He then went to Europe, and spent several years in the medical institutions of London and Paris. Returning home he settled in practice at Richmond, Va., where he acquired a good business, and was one of the editors and assisted in conducting the *Virginia Medical Journal* in 1856, 1857, 1858, 1859. It was chiefly through the recommendations of Dr. Otis that Brown-Séquard, one of the most eminent physiologists of the time, was induced to accept a professorship in the Medical College of Richmond.

Having early acquired a preference for surgery, and become very familiar with the literature of this branch of medicine, he was led to seek a residence where there was more practice in this line of his profession. The extensive manufacturing establishments of Springfield, Mass., and the rapidly increasing population of the town, induced him in 1860 to take up his residence there. Here he rapidly acquired business and reputation.

Of great culture, retentive memory, and with a remarkable facility of expression, he was, as a compiler and writer, conscientious in his analyses, giving his deductions from the facts before him with modesty, but decision. With such a record it is needless to speak of his zeal, his ambition, or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament. He died while devoting himself to the preparation of the third and last

Surgical Volume (now more than half completed) of the Medical and Surgical History of the War.

From his settlement in Richmond, Va., he was a frequent and able contributor to the prominent medical journals of the country. His scholarly and professional attainments prominently pointed to him as eminently competent to edit the surgical volumes which have been issued by the surgeon-general on the surgery of the late war, the first of which was *The Surgical Report, Circular 6, S. G. O., on The Nature and Extent of the Materials available for a History of the War; on Amputation at the Hip-Joint; on Excision of the Head of the Femur; on Surgical Cases in the United States Army; on A Plan for Transporting Wounded Soldiers by Railway; on The Transport of Sick and Wounded by Pack Animals; also, A Check List of the Anatomical Section of the Army Medical Museum at Washington; and lastly two volumes, constituting volume II. of Part I. and Volume II. of Part II. of The Medical and Surgical History of the War of the Rebellion.* These two volumes place Dr. Otis prominently before the profession of the world as an able writer and a man of extensive reading and accurate knowledge of surgical history, and of the methods and procedures which have been practiced and are now deemed the best. A few of the most notable of his medical journal articles are: *Memorandum of a Case of Reamputation at the Hip, with Remarks on the Operation,*¹ *Observations on some Recent Contributions to the Statistics of Excisions and Amputations at the Hip for Injury,*² *Wounds and Operations, after Newberne, March 14, 1862.*³ Dr. Otis was for many years in close and frequent exchange of views with the leading surgeons and histologists in our own and foreign countries. He was a ready and graphic writer, but was not fluent as a speaker.

At the solicitation of Mr. Johnson, proprietor of Johnson's Universal Cyclopædia, Dr. Otis prepared the article on *Surgery* which is given in that work, and is an admirable *résumé* of the history and condition of the art up to the present time. Dr. Otis had a fondness for ethnology, and had all throughout his professional career been in correspondence with the leading ethnologists of the world. He was also on intimate terms of friendship with Jeffries Wyman, the leading ethnologist of our country since the death of Morton. Dr. Otis has left extensive manuscript notes on these subjects, and a remarkably complete anatomical cabinet and manuscript sketches of the various races of men collected from every part of the known world. He endeavored also to collect crania from the oldest burial places in our own and other countries. He was so methodical in his work that it is quite probable that his studies and manuscript will be found to be in such condition as to be utilized by others.

Appointed surgeon 27th Massachusetts Volunteers, September, 1861, he held this position until appointed surgeon, United States Volunteers, August 30, 1864. After the close of the war he entered the medical corps, United States Army, as assistant surgeon, February 28, 1866; became captain and assistant surgeon July 28, 1866; major and surgeon March 17, 1880, having received the four brevets of lieutenant-colonel of volunteers, captain, major, and lieutenant-

colonel, United States Army, for meritorious services during the war. While surgeon of the 27th Massachusetts Volunteers he served in Virginia, North and South Carolina, and was on special duty in charge of the hospital steamer *Cosmopolitan* in the Department of the South. Assigned to duty in this office July 22, 1864, he was curator of the Army Medical Museum, and in charge of the Division of Surgical Records until his death.

He was a member of the Virginia Medical Society, and represented it in 1852 and 1853 in the American Medical Association. He was also a member of the Massachusetts Medical Society, which he represented in the American Medical Association in 1860, and represented the United States Army in the same Association in 1865, 1868, and 1870.

He was a member and vice-president of the Anthropological Society, and member of the Philosophical Society, both of Washington, D. C. I regret that I am unable to give the names of the foreign societies of which he was a member.

Dr. Otis was not only a man of culture and social instincts, but always interesting and instructive, and one of the most delightful companions.

During the years that he has been identified with the Army Medical Museum he has frequently been consulted by our leading surgeons and pathologists in difficult and obscure cases, and was always courteous, and able to point to specimens and to the history of cases to illustrate his opinions, and of great help to the practicing physician and surgeon.

The doctor was married September 14, 1850, to Pauline Clark Baury, daughter of the Rev. Dr. Alfred L. Baury, of Boston; they had two children, daughters, who survive him, as does his mother.

His death, which was not entirely unexpected, was nevertheless sudden, as only last Saturday evening he attended the meeting of the Philosophical Society, and appeared to be in his usual health. His friends are numerous, and all have a kindly word of admiration for the man who so devotedly worked for the honor and elevation of the profession of medicine. His funeral took place from St. Matthew's Church, and was largely attended by the profession and by officers of the army and navy. His remains were deposited in Mt. Olivet Cemetery.

T.
WASHINGTON, D. C., February 26, 1881.

VALUE OF SCARS IN VACCINATION.

MR. EDITOR. — In your editorial of February 24th you quote Seaton's statement that those who have one or two good marks of vaccinia need revaccination much more than those with three or four. No distinction is made here, nor in Marson's table, between multiple primary marks, and those produced by successful revaccinations.

I have learned to distrust the practical value of scars, whether typical or not, as a guide to susceptibility to vaccinia in the individual. Indeed, the presence of several typical scars, resulting from successive vaccinations, might fairly be held to indicate a constitutional tendency to get rid of protective influences rapidly. Several instances of such idiosyncrasies have come to my knowledge. One is of a lady who has had four successful vaccinations at long intervals, with typical vesicles and scars. An infant was experimentally vac-

¹ *American Journal of the Medical Sciences*, Philadelphia, 1871, vol. lxi, p. 111.

² *American Journal of the Medical Sciences*, 1868, vol. lvi, p. 125.

³ *Boston Medical and Surgical Journal*, 1862, vol. lxxvi, p. 237.

minated from the last, with perfect result. The lady has had measles twice, and scarlatina three times.

Seaton's rule not to wait for an epidemic is good as far as it goes, but remembering that from atmospheric or some other influence the chances of success, in both primary and repeated vaccination, are much greater when an epidemic is present or impending, I believe it to be wise to take advantage of this influence and of awakened public attention to make protection as complete as possible. The objections quoted are not valid at the present day, in this country at least.

NORTON FOLSOM, M. D.

COLORED SIGNALS.

THE following note from a well-known professor of physics in one of our New England universities appeared in the *Boston Daily Advertiser* of March 8:—

As bearing on an important subject now being urged on the attention of the public, allow me to state a personal experience. I am "color-blind" to green, a defect of vision which in my case is slight, and might easily, with ordinary prudence, have been kept a profound secret. I have, indeed, more than once baffled

the off-hand investigation of scientific friends, though Dr. Jeffries, by means of Holmgren's worsted test, readily discovered both the nature and the degree of the imperfection. The following incident will show how utterly this slight degree of color-blindness unfits me for judging as to colored signals:—

I stood the other night waiting for a horse-car. One with a green light passed, going, however, in the wrong direction. I followed it with my eyes, the impression of the greenness of its lights remaining persistent. Approaching from a distance I now saw a car coming with what appeared to be red lights. The green lights and the red passed each other about fifty rods from where I stood, and, critically comparing them when side by side, I was convinced that one pair was green, the other red. When the approaching car had shortened the distance to about twenty rods, I suddenly observed that its light was green, as was indeed the fact.

Now it seems to me reasonable to insist that either colored signals are useless complications, and should be abandoned, or no one should be permitted to run a railway train who cannot interpret them better than can

Yours truly,

E. W. B.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 5, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	717	286	18.27	19.80	7.39	4.46	.28
Philadelphia.....	846,984	381	135	22.83	6.56	3.67	2.10	12.86
Brooklyn.....	566,689	244	100	21.31	17.62	15.16	2.87	.41
Chicago.....	503,304	189	89	21.16	15.87	10.58	.53	2.27
Boston.....	362,535	188	78	19.68	15.96	11.17	.53	—
St. Louis.....	350,522	138	50	15.94	17.39	1.45	.73	—
Baltimore.....	332,190	150	47	16.67	6.00	8.67	4.00	—
Cincinnati.....	255,708	99	37	13.13	21.21	2.02	6.01	—
New Orleans.....	216,140	94	28	21.28	1.06	2.13	9.57	—
District of Columbia.....	177,638	79	34	7.60	18.99	5.06	—	—
Pittsburgh.....	156,381	87	40	31.03	14.94	3.45	19.54	—
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	35	18	17.14	5.71	5.71	8.57	—
Providence.....	104,850	35	6	11.43	25.71	5.71	2.86	—
New Haven.....	62,882	29	7	13.80	13.80	—	—	—
Charleston.....	49,999	30	10	13.33	10.00	3.33	3.33	—
Nashville.....	43,461	18	5	33.33	16.67	11.11	—	—
Lowell.....	59,485	20	6	25.00	10.00	10.00	—	—
Worcester.....	58,295	21	10	33.33	14.29	9.52	9.52	—
Cambridge.....	52,740	24	4	12.50	25.00	12.50	—	—
Fall River.....	49,006	21	11	19.05	—	—	—	—
Lawrence.....	39,178	20	3	35.00	10.00	—	—	—
Lynn.....	38,284	11	1	—	9.09	—	—	—
Springfield.....	33,340	11	3	—	72.73	—	—	—
Salem.....	27,598	14	2	14.29	14.29	7.14	—	—
New Bedford.....	26,875	11	3	9.09	9.09	—	—	—
Somerville.....	24,985	10	3	50.00	—	30.00	—	—
Holyoke.....	21,851	8	3	12.50	25.00	12.50	—	—
Chelsea.....	21,785	8	4	25.00	—	25.00	—	—
Taunton.....	21,213	5	1	—	20.00	—	—	—
Gloucester.....	19,329	9	5	11.11	—	11.11	—	—
Haverhill.....	18,475	4	1	25.00	25.00	—	—	—
Newton.....	16,995	4	1	25.00	25.00	—	—	—
Newburyport.....	13,537	5	2	—	20.00	—	—	—
Fitchburg.....	12,405	5	2	20.00	20.00	20.00	—	—
Twenty-two Massachusetts towns..	167,869	59	16	8.47	18.64	8.47	—	—

Deaths reported 2783; 1048 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 530, consumption 433, lung diseases 408, diphtheria and

croup 199, scarlet fever 95, small-pox 55, diarrhoeal diseases 39, typhoid fever 28, cerebro spinal meningitis 26, measles 22, whooping-cough 21, malarial fevers 21, erysipelas 16, puerperal fever eight. From diarrhoeal diseases, Chicago 10, New York nine

Philadelphia five, New Orleans four, Brooklyn, Boston, and St. Louis two, Baltimore, Cincinnati, Pittsburgh, Somerville, and Newton one. From *typhoid fever*, Lawrence six, Philadelphia four, Boston three, Pittsburgh, New Haven, and Lowell two, New York, Chicago, St. Louis, New Orleans, District of Columbia, Providence, Worcester, Salem, and New Bedford one. From *cerebro-spinal meningitis*, New York eight, St. Louis four, Fall River three, Philadelphia and Chicago two, Brooklyn, Boston, New Orleans, Milwaukee, New Haven, Charleston, and Haverhill one. From *measles*, New York six, Boston five, Nashville four, St. Louis three, Baltimore, Cincinnati, Pittsburgh, and Charleston one. From *whooping-cough*, New York six, Boston three, Philadelphia, St. Louis and Worcester two, Brooklyn, Chicago, Baltimore, Pittsburgh, Lowell, and Fall River one. From *malarial fevers*, New York 12, Baltimore three, New Orleans two, Chicago, St. Louis, Cincinnati, and District of Columbia one. From *erysipelas*, Brooklyn three, New York and St. Louis two, Philadelphia, Chicago, Boston, Cincinnati, New Orleans, Pittsburgh, New Haven, Lawrence, and Somerville one. From *puerperal fever*, St. Louis four, Philadelphia two, Cincinnati, and Pittsburgh one.

Twelve cases of small-pox were reported in Brooklyn, 27 in Chicago, and 10 in Pittsburgh.

In 41 cities and towns of Massachusetts, with a population of 1,085,780 (population of the State 1,783,086), the total death-rate for the week was 21.99, against 22.79 and 22.17 for the previous two weeks.

For the week ending February 12th, in 149 German cities and towns, with an estimated population of 7,872,235, the death-

rate was 25.5. Deaths reported 3857; 2045 under five: pulmonary consumption 542, acute diseases of the respiratory organs 427, diphtheria and croup 150, scarlet fever 67, whooping-cough 64, typhoid fever 61, measles and röteln 60, puerperal fever 18, small-pox (Königsberg two, Lübeck, Munich, Aachen three) seven, typhus fever (Grandeuz, Posen, Magdeburg, Berlin) four. The death-rates ranged from 13.8 in Wiesbaden to 45.2 in Aachen; Königsberg 29.1; Breslau 27; Munich 30.5; Dresden 24.1; Berlin 22.5; Leipzig 18.5; Hamburg 27.5; Hanover 22.9; Bremen 19.5; Cologne 24.1; Frankfurt 24.3; Strasburg 30.9.

For the week ending February 19th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 22.4. Deaths reported 3267: acute diseases of the respiratory organs 364, whooping-cough 75, scarlet fever 68, small-pox (London 55) 56, fever 38, measles 35, diarrhoea 29, diphtheria 14. The death-rates ranged from 17.5 in Newcastle-on-Tyne to 28.5 in Sunderland; Birmingham 18; Sheffield 20; London 22; Bristol 23.1; Leeds 25.8; Liverpool 25.9; Manchester 28.3. In Edinburgh 24.3; Glasgow 25.1; Dublin 38.5.

In the 20 chief towns in Switzerland, for the weeks ending February 12th and 19th, estimated population 522,856, there were 40 and 42 deaths from acute diseases of the respiratory organs, diphtheria and croup 10 and 11, diarrhoeal diseases nine and 11, typhoid fever nine and eight, small-pox nine and five, scarlet fever three and one, measles two and none, puerperal fever one and one, whooping-cough none and one.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M. *	7 A. M.	2 P. M.	9 P. M.	Duration. Hours.	Amount in inches.
1881.																				
Feb. 27	29.997	43	53	21	89	72	92	84	S	W	SW	7	6	6	O	F	G	—	—	
" 28	29.506	43	55	35	100	100	100	100	SE	SW	N	13	6	10	R	G	G	—	—	
March 1	29.224	38	41	34	100	100	100	100	N	W	NW	7	3	12	G	G	R	—	—	
" 2	29.702	33	37	29	100	100	100	100	NW	NE	NE	12	22	24	R	R	S	—	—	
" 3	29.948	34	59	32	90	90	100	93	NE	NE	NE	15	16	22	T	O	S	—	—	
" 4	29.559	36	40	32	100	100	100	100	E	E	E	23	27	3	R	R	G	—	—	
" 5	29.511	36	46	31	89	51	79	73	S	SW	NW	11	8	4	F	F	F	—	—	
Week.	29.635	38	55	21				94										73.55	4.06	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 5, 1881, TO MARCH 11, 1881.

Browns, H. E., captain and assistant surgeon. Relieved from duty at Fort Duncan, Texas, to accompany battalion first infantry to Fort Davis, Texas, and on arrival there report to the commanding officer for duty as post surgeon. S. O. 35, Department of Texas, February 26, 1881.

Grandy, captain and assistant surgeon. Assigned to duty at Fort Verde, A. T. S. O. 23, Department of Arizona, February 26, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting will be held on Monday next, March 21st, at eight o'clock, at the hall, 19 Boylston Place. Reader, Dr. J. Orne Green. Subject, Desquamative Inflammation.

A. T. CABOT, Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Rhode Island Twenty-Seventh Report upon the Births, Marriages, and Deaths in the State of Rhode Island for the Year ending December 31, 1879. Prepared by Charles H. Fisher, M. D.

Constipation plainly Treated and Relieved without the Use of Drugs. By Joseph T. Edwards, M. D. Philadelphia: Presley Blakiston, 1881. (A. Williams & Co.)

The Pharmacopœia of the Hospital for Diseases of the Throat and Chest (Golden Square) based on the British Pharmacopœia. Edited by Morell Mackenzie, M. D., Senior Physician to the Hospital. Fourth Edition. Philadelphia: Presley Blakiston, 1881. (A. Williams & Co.)

Fifteenth Report of the Board of Trustees of the Connecticut Hospital for the Insane. 1881.

Surgical and Medical Report for the Year 1880 of St. Mary's Hospital, Quincy, Ill., under the charge of the Sisters of the Poor of St. Francis.

Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London. Volume the Sixty-Third. 1880.

Annual Reports of the State Board of Health of Colorado for the Years A. D. 1879 and 1880.

Hemiplegia: Mechanism of its Causation on the Theory of Total Decussation of the Optic Nerve Fibres in the Optic Tract at the Chiasma (Optic Commissure). By William Dickinson, M. D. (Reprint.)

Annual Announcement of the Medical College of the Pacific, being the Medical Department of University (City) College, San Francisco.

A Manual on Diseases of the Eye and Ear for the Use of Students and Practitioners. By W. F. Mitterdorf, M. D. Fully illustrated with Colored Lithographs and Wood-Cuts. New York: G. P. Putnam's Sons, 1881.

Students' Aid Series. Aids to Diagnosis. Part I. Semiology. By J. Milner Fothergill.

Lectures.

ABSTRACT OF A LECTURE BY DR. GEORGE M. BEARD.

MESMERIC TRANCE.

On Monday evening, January 10th, Dr. George M. Beard delivered a lecture before the New York Academy of Sciences on Trance (so-called Hypnotism or Somnambulism); its Nature, Symptoms, and Varieties, with Special Reference to Mesmeric Trance; during which the phenomena of catalepsy, ecstasy, rigidity, and apparent death, partial and hemi-anæsthesia, aphasia, suspension and exaltation of mental and muscular force, and all the special senses, trance speaking and the Maine "Jumpers" were experimentally illustrated and explained. These experiments were conducted on a class of human subjects who had been under Dr. Beard's training, and with especial reference to the errors of prominent European observers.

Having spoken of the unreliability of inductive evidence and the necessity of deduction in such scientific questions, he stated that trance, properly defined, was a morbid functional condition of the nervous system in which all the nervous activity was concentrated in some special direction, with corresponding suspension in other directions. Nothing was super-added to, and nothing was taken away from, the natural powers of the subject; but, by reason of this concentrated nervous energy, results could often be obtained during the trance-state which were quite remarkable, and, to the ignorant observer, little less than miraculous. For convenience, and irrespective of its physical symptoms, he divided trance into four special types, — spontaneous, self-induced, emotional, and intellectual. It might be caused, he said, by the action of the mind on the nervous system, by disease of the brain, by exhaustion or starvation, by injuries to the brain, or by certain drugs, such as ether, chloroform, opium, and alcohol. The predisposition to this peculiar functional disturbance was either inherited or acquired; most cases of the spontaneous form having the former origin. He then illustrated the theory of the trance state by means of a chart containing three diagrams representing the human brain, each divided into three compartments. The first, or normal state of the mind, presented the separate compartments indicated by the numbers 50, 30, and 20 respectively; the second, the condition of sleep, in which the powers were reduced to 30, 15, and 10 respectively; while in the trance state two compartments became obliterated, and the third, intensified by the combination of all the normal faculties, was represented by the sum 100. If there were 100 units of force in the brain, all would be active in the natural state. In sleep they would be less active, and in mesmeric trance all activity would be suspended, except in one direction, in which all the nerve-force would be concentrated. The true explanation of the many and strange phenomena of trance, he continued, was one of the scientific questions of the hour. Its present prominence had been caused by two recent events in Europe, the march of Slade through England and the continent, carrying men of science with him into the domain of spiritualism, and, following, the careful investigation of trance by the European men of science. With regard to mesmeric trance — the type that had attracted most attention from the scientific world, and

which the Academy of Sciences in France had several times investigated without arriving at any satisfactory conclusion — he did not believe that any so-called animal magnetism or nervous influence emanating from the operator was concerned in its induction, but that it was purely a subjective condition, in the first instance, and that it was essential to the success of the operator that the subject should possess a sufficient basis of faith in him to admit of being affected or acted upon, not by the operator's nervous influence or aura, but by his own subjective emotions when his attention and expectation were concentrated upon any special matter. It was Dr. Baird, of Manchester, who had first proved that the phenomena of mesmeric trance are entirely subjective, and not objective; and this was the most important discovery ever made in this branch of science. For forty years the French Academy and men of science in other parts of Europe had been trying to find a satisfactory explanation of the subject, and had not yet succeeded; since they still clung to the idea that the cause was objective, and that bright buttons to fascinate and certain manipulations on the part of the operator were necessary to put the subject in the trance condition. The fact was that it was merely necessary for the operator to tell the subject that he was to go into this or that form of trance, and if the conditions were right, he would do so at once, even if the operator were to go and drown himself. It was by the action of the mind of the subject alone that the desired object was accomplished.

Infant prodigies, such as Shannon, the boy-orator, often went into a state of intellectual trance, and great orators and actors were also frequently in trance while before an audience. Beecher and Salvini were examples of this. The case of the Rev. Mr. Marshland, the Connecticut preacher, who disappeared from home and found himself a month later hired out as a workman in a different State, was one of spontaneous trance. When a modest and retiring individual came in contact with one energetic and bold, a reaction sometimes took place between them which might be compared to that which occurs among chemical elements and which resulted in the trance state. Thus, George Eliot, whom he had had the opportunity of meeting while abroad, was modest and retiring, while Lewes was her opposite, yet, although she was his intellectual superior, his influence over her appeared in a very remarkable manner in her writings. Emotional trances were the most common, and were produced by sentiments of fear, expectancy, wonder, or reverence. Alarms of fire and spiritualistic *séances*, therefore, were very potent as trance producers. Trance could also be induced in animals by means of fear.

The scientific value of the mesmeric trance was, that we could handle, test, and experiment with it, and by this means expose the secrets of all the other varieties. The facts had been known for a thousand years; but it was only now that we were beginning to get at the proper interpretation of them. Trance had often been confounded with sleep, and especially in a series of discussions which were carried on at Cambridge. In sleep, however, the activity of the nerve-force was lowered in general, while in trance, as had been previously stated, it was entirely suspended, except in one direction, in which it was correspondingly intensified. To further illustrate the theory of trance, Dr. Beard pointed out an analogy between the human brain and a gas chandelier. When all the lights were burning

freely, it represented the intellectual powers in their normal correlation and activity; when all were lowered, it represented natural sleep; and when all were turned down low but one, and that turned on in full force, it represented the trance state. When an individual was in trance we could do three things with every function that was under the control of the will—we could take it away, intensify it, or modify it in any way desired. The best subjects for mesmeric trance were modest, retiring, and sensitive persons, and aptness for the trance state was no evidence, whatever, of intellectual weakness. He then called attention to the faces of his class, explained that they were all strong and healthy and stated that so far from the trance condition being in any way injurious, he believed that it was positively beneficial to the physical organization.

During the foregoing remarks and after their conclusion Dr. Beard made a large number of very striking experiments upon his class of subjects, who had previously been under training to a greater or less extent. They were eight in number, and their ages varied from sixteen to fifty-five years. To a person in the trance state, he said, everything appeared different from what was ordinarily the case, and if one of his class was in the gallery and he were to point his finger at him, the subject would instantly leap over the railing in the attempt to reach him. For whatever the person in the trance state did, therefore, the operator was responsible; and the courts had to some extent so decided in certain cases of somnambulism. To show that the effect was psychological, and not physical, he had only to point his finger at one of the subjects, when the latter would follow wherever it led, even if it took him through fire or water. The subject might then be said to be fascinated, and all that was necessary to produce such a condition was that he should feel that the operator had a certain amount of power over him. Every one in the audience, he explained, could no doubt put some one else in a trance, and some of his assistants were more skillful than himself in exerting this power; though no one succeeded in all instances. In order that a satisfactory result might be obtained, it was necessary, as had been mentioned, that the subject should have a natural aptitude for the condition.

The counting and slight passes over the face used in producing the trance state were explained to be merely convenient methods of fixing the attention. Two of the subjects were then put into ecstasie trance, and gazed wonderingly up towards the ceiling, where, as they believed, a vision of angels appeared to them. In a third catalepsy of one side was induced, so that the arm would remain in whatever position it was placed, while in a fourth a state of complete muscular rigidity was produced. While in this condition he was carried about the platform like a log, and was then placed between two chairs, with the occiput resting upon the edge of one and his heels on the edge of the other. Finally, he was put in a perpendicular position against the wall, with his head resting on the floor and his feet up. This trance, Dr. Beard stated, though like death in its superficial aspects, could not be mistaken for it, since the respiration and action of the heart went on as usual, the latter, indeed, being usually considerably accelerated. The explanation was simply that the muscular structures were absolutely charged with an energy which was not subject to volition. Another experiment was now made to illustrate the muscular energy in the trance state. Taking up a

spring scale capable of indicating a weight of fifty pounds, Dr. Beard requested the youngest of the subjects, a slender lad of sixteen (then in his natural condition), to pull upon it at arm's length, when five pounds were registered by the index. He was then put in the trance state and told to pull. The effort made by him was not so perceptible this time as before, but no less than thirty pounds was registered on the scale. Hence, it could be seen that both quantitatively and qualitatively the muscular power might be modified while the subject was in this condition. It could be suspended, exalted, or modified at the will of a second person. The experiments in local anesthesia and hyperesthesia were also very successful. In one of the subjects Dr. Beard marked out just beneath the eye a spot about the size of a dollar, which he informed the young man he would render completely insensitive, while the rest of the face would be hypersensitive. Accordingly, it could be pinched between the fingers and pricked with pins until the blood came, without the slightest involuntary movement denoting the presence of sensation, while in the skin a hair's breadth beyond its boundary there was marked hyperesthesia. This test was also made by Professor Post, who pronounced that sensation was completely extinguished in the area designated. One of the strongest tests in this connection was the production of absolute anesthesia of the conjunctiva and cornea at will, and this had been repeatedly made at Dr. Beard's office by such well-known ophthalmologists as Professor Roosa and Dr. Webster. "As to anesthesia," Dr. Beard continued, "a subject while in the state of muscular rigidity just now exhibited might be chopped in pieces without feeling it." The eyes of one of the subjects were rather weak and extremely sensitive to light in the natural condition. The sensitiveness of the retina was very evident when a strong beam of light was thrown upon it from the ophthalmoscopic mirror. The pupil instantly contracted powerfully, and the utmost self-control was required on the part of the subject to prevent involuntary closure of the lids. When, however, he was put in the trance state not the slightest instinctive tremor of the eyelids or contraction of the pupil was noticeable when the intense beam of light was projected upon a retina which, as had just been seen, was abnormally sensitive under ordinary conditions. In the same way one eye could be rendered insensitive while the other remained in its natural state, and then the condition of the two eyes could be made exactly the reverse. Subjects were also rendered color-blind, first in one eye, then in the other, and finally in both eyes.

The tests in regard to the senses of smell and taste were equally satisfactory. When an unstoppered bottle of strong ammonia was held under the nose of one of the subjects he endured it with great composure, and said he thought it was cologne. In like manner he was not at all unpleasantly affected by the horrible odor of bisulphide of carbon while in the trance state, but when the same was held under his nose after he had been brought out of the latter his disgust was very amusing. The same subject drank tincture of gentian and other strong bitters supposing them to be syrups, and took cayenne pepper with evident pleasure under the idea that it was sugar.

The sense of hearing could be destroyed or modified with equal facility. Thus, one subject was rendered so deaf that he could not hear the sound of a large bell

ring or the report of a pistol discharged immediately at his ear, and another could hear only when sounds were produced near the back of his neck.

Trance speaking was fully illustrated in several of the subjects, who were quite incapable of making an extemporaneous address when not in a state of trance, but who when in this condition would speak fluently upon any topic suggested to them. In connection with this the instantaneous production of artificial aphasia was strikingly shown. When Dr. Beard would strike the subject lightly upon the back of the neck, or merely pass his hand downward in front of his face, the power of articulation would be instantaneously and absolutely suspended, in the very middle of a sentence or word, and the man would be unable to speak a syllable until the tap on the back of the neck was repeated or the operator's hand was waved in an upward direction before him, when the flow of language would be as instantaneously resumed at the exact point where it had been interrupted.

Further experiments were then made to test the perfection of the anæsthesia which could be produced in individuals in the trance-state, and they were certainly as convincing as any one could have desired. One of the subjects had previously agreed to allow the application of the actual cautery to his hand, and while the white-hot iron was in contact with it he stood calmly and unconcernedly without the slightest evidence of feeling it. Another subject, who had had the removal of three teeth previously advised by a competent dentist, had them extracted entirely without pain while in the trance state, and the dentist remarked that in thirty years' experience he had never before known an instance in which a tooth had been drawn without the patient's wincing, unless under the influence of an anæsthetic. Many other interesting experiments were shown which it is impossible to enumerate, and the final ones were in reference to the phenomena observed in the Maine "jumpers." After an allusion to "mind-reading," which he explained was merely muscle-reading, Dr. Beard concluded by saying that science always advanced at the expense of delusions. In this way astronomy succeeded to astrology, chemistry to alchemy, and physiology and pathology to witchcraft, while at the present day neurological science was fast superseding the delusions of animal magnetism, spiritualism, and mind-reading.

Original Articles.

A CASE OF DIPHTHERIA FATAL ON THE THIRD DAY FROM CARDIO-PULMONARY THROMBOSIS AND (PERHAPS) EMBOLISM.¹

BY HALL CURTIS, M. D.

L. B., eight years of age. A strong and healthy child of emotional temperament, living on the bank of Charles River in a house whose drainage had been arranged last summer by Colonel Waring, was taken Saturday evening, February 12th, with sharp pain in the left ear. Sunday she complained of a sore throat, and remained in bed. The throat becoming more painful, she was seen by me at three p. m. The left tonsil was then quite red and swollen, with a patch of grayish membrane on its posterior half. There was also a decided glandular enlargement, with tenderness, below

¹ Read before the Boston Society for Medical Improvement, March 14, 1881.

the left mastoid. Respiration 28; temperature 101.8° F.; pulse 133.

Treatment: Ice-bag encircling throat; three grains of chlorate of potassium and ten minims of tinct. ferri muriatis in a teaspoonful of glycerine and water every two hours. She frequently of her own choice gargled her mouth with a solution of chlorate of potassium. The throat was painted every three hours with compound tincture of benzoin, while milk was to be given freely. At bedtime Dover's powder, five grains.

Monday, February 14th. During the night the child was restless, but at visit seems bright and cheerful. The pharynx is generally congested. The left tonsil is entirely covered by a grayish-white membrane. The glandular enlargement on this side has decidedly increased, while a similar adenitis has commenced under the right mastoid process. The temperature had fallen a degree, being 100.8° F.; respiration 21; pulse 125.

Four p. m. Has had a comfortable day, and taken milk and beef tea fairly. Ice-cream was refused, but champagne taken. Inhalations of steam were attempted, but, annoying child, were discontinued. Temperature 100.2° F.; respiration 26; pulse 116.

Tuesday, February 15th. The night was quiet; the patient in good strength and spirits. The periglandular swelling has now extended entirely round throat from ear to ear. The pharynx and tonsils are extremely congested, the latter much swollen and concealing the uvula. A thin film of membrane has extended from tonsil over left side of hard palate. Temperature 99.8° F.; respiration 20; pulse 100.

11.30 A. M. The film is rapidly extending on the roof of mouth. The membrane on left tonsil is thicker, but has become detached from the upper and anterior half of the gland. As it is hanging loosely, flapping to and fro in respiration and annoying patient, it is removed, followed by a slight sanious oozing. Membrane has formed on right tonsil.

Four p. m. Seen by Dr. T. B. Curtis in consultation. Looks pretty well, cheeks rather rosy; not flushed nor very pale; not sallow. Strength seems quite fair; is bright and cheerful; not prostrated; not irritable nor impatient; makes little complaint; docile. Pulse fairly strong, 100, even, regular. Respiration quiet and easy, not accelerated. Voice pure. Pain in pharynx increased by deglutition. Considerable enlargement of glands, especially over and under mastoid rather than under angle of jaw, bilateral, but most marked on left side. Puffy tumefaction of cellular tissue (periadenitis) encircling throat. Skin over swelling natural in appearance and color; little or no tenderness.

Fauces. Tonsils considerably enlarged, especially left. Membrane white, pearl colored, and grayish, extending up pillars on to velum. Uvula swollen and shiny, not coated.

Nares. No visible discharge, no redness of nostrils, no excoriation. Air passes on both sides with slight snuffling. Uses handkerchief more than usual. No epistaxis. No preauricular adenitis. Temperature 100° F.; respiration 24; pulse 100. Takes food, milk, beef tea, wine fairly.

Urine. Specific gravity 1030; acid; albumen absent. Nitrate of urea in albumen test of marked amount, that is, febrile.

Treatment continued. Brandy substituted for champagne, which the child now complained of, the carbonic acid gas troubling it in deglutition. Dr. Curtis advised

washing the throat every two hours with the fountain syringe, using an alkaline solution.

9.30 p. m. The throat has been washed without difficulty, the child assisting. Discharge from nose has increased. Child is now sleeping quietly and breathing easily, though she requires more pillows than heretofore. The pulse is good.

February 16th. Patient had a very restless night. Vomited Dover's powder, and complained of difficulty in breathing. Now seems tired and dull, unwilling to make any exertion, and inclined to doze. Has retained food, medicine, and stimulants. The face is rather pale, and a dark semicircle surrounds lower lid. Though the discharge from nose has increased the nasal cavities are clear. The membrane has become thick on right tonsil, and has extended over all the roof of mouth. The collar-like swelling of throat is unchanged. The temperature has fallen two and a half degrees; is now 97.5° F.; respiration 20; pulse 105, weaker.

12.30. Has had two slight struggles for breath, considered by her governess, who saw them, to be of a nervous character purely. Now sitting up in bed, the neck slightly stretched forward, the mouth open, and breathing with some little exertion, the nostrils dilating. No retraction at root of neck or at epigastrium. Voice slightly muffled from tonsular engorgement. Was interested in the washing of throat and nose, at times using the tube of the douche herself.

Four p. m. Dr. T. B. Curtis in consultation. False membrane size of quarter dollar on right tonsil. The membrane has partly disappeared from left side of fauces. Discharge from nose a little increased, but air passes; little or no snuffling. Epidermis of nostrils intact. No cough. No hoarseness. Voice pure (says 441 in loud, clear, unbroken tone); whispers to avoid pain in pharynx. A moderate degree of *dyspnoea*, with slow, labored breathing, with open nostrils, and no tirage is noticed. Patient is cheerful. Not anxious nor depressed; little evidence of prostration. Takes nourishment fairly well. Erythema over adenitis on left side of neck. Pulse 104, steady, even, regular, but not full nor strong; temperature 99° F.

Pacies as before. Mouth open, and moderate, not depressing *dyspnoea*. No *stertor*. No *stridor*. No signs whatever of *laryngeal* or other obstruction.

4.40 p. m. Sudden alarm. Just after Dr. T. B. Curtis and I had left the patient, we were summoned back from the drawing-room to the bedside of the child, who was said to be suffocating. We find her sitting up in bed, resting on her hands, the arms stiffened to their utmost, gasping for air, with labored inspiration, not very accelerated; pale and scared looking, signifying by gestures a wish to be fanned, eyes wide open and imploring; mouth opened to its utmost; *speechless*; no *tirage*; labored but *noiseless* respiratory movements. Soon violent contortions, generalized; patient throwing herself about, straightening out her back and legs; convulsion; opisthotonos; eyes staring open, with dilated pupils; pallor, soon ashy, then blueness of lips; pulse feeble, but regular. Respiration then ceased, and body and limbs became relaxed, the child sinking from the arms of her governess; pulse continuing, but growing rapidly more and more feeble.

Efforts were made to stimulate respiration, the mouth was opened, the tongue depressed and drawn forward with handle of spoon; chest bared and slapped with wet towel; artificial respiration by compression

of thorax and abdomen attempted, but without avail. At long intervals three or four inspiratory gasps were visible in the abdomen. The pulse gradually faded away; the heart silent. Death at 4.45 in the space of a few minutes (three to five).

There are many interesting features in the case just described. Symptoms usually found in the more advanced stages of the disease here appeared early.

Otalgia, the initial symptom in this case, depends on the propagation of the inflammation of the nasal cavities through the Eustachian tube, is therefore as a rule consequent to the disease in the pharynx. Trousseau¹ mentions a case where the child complained of excessive pain in the ear, particularly on coughing. He says in a large number of cases pharyngeal diphtheria spreads into the auditory canal by the Eustachian tube at the same time that it advances in the nose.

The *early glandular swelling*, when the corresponding tonsil only was invaded, may also be considered in a degree unusual. Jacobi² states when the tonsils are affected by the disease there is frequently little or no swelling of the neighboring glands.

Finally, death itself closed the scene rapidly and most unexpectedly by the formation of *cardio-pulmonary thrombi*, at the end of the third day of illness, instead of from the tenth to the twenty-first day, thus advancing the time of their usual appearance by seven to fourteen days.

Nothing in the child's condition gave any warning of the sudden end. Her strength had not been sapped, her spirits were good. Nourishment and stimulants were taken in fair amount; there was no prostration; the pulse gave no evidence of asthenia; no *epistaxis*; very little *fætor*, but no sign of septic poisoning. The voice was clear, breathing was not hurried nor accompanied by *stertor* or *stridor*; no pallor; no *tirage*. She died of asphyxia, but with open air tubes; not from want of air in the pulmonary vesicles, but from want of blood in their walls.

In the words of your president, respiration requires a rendezvous of air and blood in the lungs; either may fail at the rendezvous, and the phenomena of asphyxia are similar in both cases; with the exception of the absence of symptoms of destruction of air-passages, such as *stertor*, *stridor*, etc. The phenomena of asphyxia as described by Michael Foster are especially graphic:—

"As soon as the oxygen in the arterial blood sinks below the normal, the respiratory movements become deeper, and at the same time more frequent; both the inspiratory and expiratory phases are exaggerated, and the supplementary muscles are brought into play. As the blood becomes more and more venous the respiratory movements continue to increase both in *force* and *frequency*; very soon the *expiratory movements* become more marked than the inspiratory. Every muscle which can assist in expiration is in turn brought into play, and at last almost all the muscles of the body are involved in the struggle. The orderly expiratory movements culminate in expiratory convulsions. These convulsions, through which *dyspnoea* merges into asphyxia, are due to a stimulation of the *medulla oblongata* by the venous blood. Every intervening step may be observed between a *simple slight expiratory move-*

¹ Trousseau. Clinique Medicale de l'Hôtel Dieu de Paris, vol. i. p. 368. Paris, 1868.

² Jacobi. A Treatise on Diphtheria. New York, 1880.

³ Michael Foster. Text-Book of Physiology. London, 1879.

ment of normal respiration and the most violent convulsion of asphyxia. An additional proof that these convulsions are carried out by the agency of the medulla is afforded by the fact that convulsions of a wholly similar character are witnessed when the supply of blood to the medulla is suddenly cut off by ligating the blood-vessels of the head. In this case, the nervous centres, being no longer furnished with fresh blood, become rapidly asphyxiated through lack of oxygen, and expiratory convulsions quite similar to those of ordinary asphyxia, and preceded like them by a passing phase of dyspnoea, make their appearance.

"Such violent efforts speedily exhaust the nervous system, and the convulsions after being maintained for a brief period suddenly cease, and are followed by a period of calm. The calm is one of exhaustion. The pupils dilated to the utmost are unaffected by light. All expiratory active movements have ceased, the muscles of the body are flaccid and quiet, and though from time to time the respiratory centre gathers sufficient energy to develop respiratory movements, these resemble those of quiet normal breathing in being, as far as muscular actions are concerned, almost entirely inspiratory. They occur at long intervals, like those after the section of the vagi, and like them are deep and slow. The exhausted respiratory centre takes some time to develop an inspiratory explosion. As time goes on these inspiratory efforts become less frequent; their rhythm becomes irregular, long pauses, each one of which seems a final one, are succeeded by several somewhat rapidly repeated inspirations. The pauses become longer, and inspiratory movements shallower. Each inspiration is accompanied by the contraction of accessory muscles, especially of the face, so that each breath becomes more and more a prolonged gasp. The inspiratory gasps spread into a convulsive stretching of the whole body, and with extended limbs and a straightened trunk, with the head thrown back, the mouth widely open, the face drawn, and the nostrils dilated, the last breath is taken in. The heart beats are at first quickened, but speedily become slow, while at the same time they acquire great force. . . . The heart continues to beat for some seconds after the respiratory movements have ceased, the strokes at last rapidly failing in frequency and strength."

It is only within a few years that cardiac thrombosis and pulmonary embolism have been recognized and described as the cause of sudden death in fevers, in rheumatism, in diphtheria, and in the puerperal state.

Playfair's¹ account of the latter is strikingly descriptive. He writes, "The symptoms can hardly be mistaken. . . . In a large proportion of cases the attack comes on with appalling suddenness, which forms one of its most striking characteristics. Nothing in the condition of the patient need have given rise to the least suspicion of impending mischief, when all at once an intense and horrible dyspnoea comes on; the patient gasps and struggles for breath, tears off the coverings from her chest in a vain endeavor to get more air, and too often dies in a few minutes, long before medical aid can be had, with all the symptoms of asphyxia. The muscles of the face and thorax are violently agitated in the attempt to oxygenate the blood. The extreme embarrassment of the circulation is shown by the tumultuous and irregular action of the heart in its endeavor to send the venous blood through

the obstructed arteries; soon it gets exhausted, as shown by the feeble and fluttering beat. The pulse is thread-like and nearly imperceptible, the respirations short and hurried, but air may be heard entering the lungs freely. The intelligence is unimpaired during the struggle, and the dreadful consciousness of impending death adds not a little to the patient's sufferings and to the terror of the scene."

Pannum (quoted by Playfair) says (page 622), "The heart continues to beat after all (other) signs of life have ceased."

Labadie Lagrave,² in his monograph of one hundred and twenty pages on the cardiac complications of croup and diphtheria, recognizes two forms of attack, and makes a division into rapid thrombosis and slow thrombosis, according to the rapidity or slowness of its formation.

Rapid thrombosis. In the case where the cardiac clot has promptly attained a large size, and distends the heart walls now powerless to sweep it out or break it up, the symptoms are sudden, violent, unexpected, terrible. The little child raises itself up, is agitated, and throws aside its clothing; its face becomes pale, its features haggard, and the eyes express the deepest anguish. The skin is colorless, ashy, death-like. It seems as if all the peripheral circulation has at once and entirely ceased. The cardiac contractions, at first noisy and tumultuous, little by little grow confused, obscure, dull, irregular, and intermitting. It seems as if the heart, tired with its vain efforts, is ready to cease its fruitless work. The child's countenance bears the stamp of utter fatigue and exhaustion. The respiration is short, rapid, and panting, though the violent efforts of inspiration peculiar to mechanical dyspnoea are not found. Nor do the auxiliary muscles contract with energy. It is not air that is wanted by the lungs, but blood. The pulse is thready, feeble, at times hardly perceptible, irregular, and unequal. As the dyspnoea increases the limbs grow cold, a deadly pallor spreads over the body, and the child dies suddenly, or lingers in anguish during two to six hours. Fitz's³ cases are mostly of this kind.

Slow Thrombosis. When the clot is formed slowly, or when it is still small, the same symptoms may be observed, but in a much less striking manner. The difference in the intensity of the cause gives a different aspect to the disease. Still here, as in rapid thrombosis, the diagnosis must be formed from the symptoms taken collectively.

In this form, we again find the same pallor of the face, the same expression of fatigue, the same general ashy hue of integument, joined to an agitation often excessive. Dyspnoea is also very marked, but not from fault in the air-passages, the tirage is but little marked, the laryngo-tracheal whistling is feeble or nil. If tracheotomy has been performed there is no relief to the dyspnoea, you do not find the canula blocked by false membrane. Nor will the stethoscope show any pulmonary cause for the disturbance. It is impossible to find the slightest rational sign of asphyxia.

The fever of the commencement of the illness has now abated; in fact, is replaced by a certain amount of collapse, which may become more and more profound. The pulse is rapid, 136, 140, 158, but faint and feeble. The sounds of the heart are confused,

² Labadie Lagrave. Des Complications Cardiaques du Croup et de la Diphtherie. Paris, 1873.

³ Fitz. Sudden Death from Embolism. The Boston Medical and Surgical Journal, vol. xvi., January 25, 1877, No. 4.

¹ Playfair's Midwifery. Philadelphia, 1880.

hesitating, at times reduplicated. Usually the first sound is muffled and somewhat prolonged. The general pallor becomes more and more marked, the chilling of the extremities extreme, and the respiration extremely rapid. The agitation of the first day, or of the first hours, gives way to depression and torpor, while death takes place in twenty-four or forty-eight hours; sometimes more tardily, in three or four days.

Picot and D'Espine¹ in their admirable *Manuel Pratique des Maladies de l'Enfance*, subject, Diphtheria, write that the heart is healthy in a large number of cases. At times it presents important lesions which have during the past few years attracted some attention. The most frequent is thrombosis; here the cavities of the heart, especially the right, are found filled with *organized colorless clots* adherent to the endocardium. *Endocarditis* is rarely found. *Fatty degeneration* of the cardiac fibres, often only very slightly marked, is found at times in children who die *while convalescing*.

The cardiac complications are difficult to diagnose. The accidents most often observed may be attributed to *thrombosis*, or more probably to a fatty degeneration or a paresis of the heart. They appear usually, but not always, at the beginning of convalescence, when all local symptoms have disappeared, and often in the course of a diphtheritic paralysis.

The symptoms are the same as those given by the writers before quoted.

Beverley Robinson² has written the most complete monograph on Cardiac Thrombosis in Diphtheria, published in Paris, 1873. He states that Werner,³ of Linz, in 1842, was the first to describe sudden death in diphtheria caused by heart clot. Winkler,⁴ in 1852, reported three. In England, Richardson,⁵ in 1856, was the first to portray the difference between an obstruction in the circulation and one in the respiratory tract. Barry,⁶ of Tunbridge Wells, in 1858, reported cases of fibrinous coagula, all of which were in the cavities of the heart. The following year Smith⁷ expressed his convictions that in certain cases of croup the symptoms must be referred to an embarrassed action of the heart, rather than to any obstruction in the larynx. Thompson,⁸ in 1860, considered cardiac thrombi *the most frequent causes of death* in diphtheria. Meigs,⁹ in 1861, also published observations on death following heart clot. Millard,¹⁰ Garnier,¹¹ and Gerlier,¹² in turn, furnished other examples. These cases were diagnosed before death, and the diagnosis was confirmed at the autopsy.

Robinson founds his paper on twenty post-mortem examinations made by him on children dying with diphtheria at the Hôpital Sainte-Éugénie from January 1 to June 1, 1872. He found coagula in seventeen cases in the right side of the heart, and gives a minute de-

scription of them. He is confident that they were not post-mortem coagula, nor formed during the death struggle.

The death struggle is characterized by asphyxia, which Claude Bernard and other distinguished physiologists consider especially unfavorable for cardiac clot forming.

These coagula were of a whitish color, in the right ventricle were fibrinous, and were not easily pierced by the finger. They were somewhat elastic and contained but little serum. Although resistant they were easily torn. Frequently they were formed by successive deposits of fibrine arranged in concentric layers. They showed the impressions of the *auriculo-ventricular opening* and its valves. Robinson believes that the *symptoms* show the *precise moment of this formation*, which without doubt depends on some pathological change in the blood, grows by successive deposits, and corresponds exactly to the troubles in the respiratory and circulatory system so constantly observed.

He gives an analysis of several cases:—

CASE I. Child in an advanced state of croup; vesicular respiration is heard, and resonance is good, but the child is asphyxiating; the trachea is opened without relief; the child is agitated; its cheeks, lips, and hands faintly livid. The next day he is fatigued; the pulse is feeble, at times irregular, but respiration is quiet. The next day the child is cyanosed and excited. The heart-beats are weak without souffle; not intermitting; area of cardiac dullness increased. The pulse becomes more frequent, is very small, still there is very little irregularity in its force or rhythm. The skin of the trunk and extremities is very pale, contrasting strongly with the cyanosed finger ends, the cheeks, and lips. Pulmonary resonance at the base is still good; almost increased. In a few hours the child is dead.

CASE II. Tracheotomy; the same evening oppression; the canula was changed without relief; symptoms of cardiac asphyxia; though the heart-beats were strong the pulse was almost imperceptible; the child was rational, but died in a few minutes.

CASE III. Tracheotomy followed by relief; the next morning the skin was cool, pulse small but regular, inspiration silent and full; shortly after the visit the child became agitated, and in three hours was dead.

CASE IV. The night following tracheotomy was poor; the next day the face was pale; pulse and breathing rapid; but vesicular expansion sufficient. That evening the child became restless, seeking apparently a more easy position for breathing and sleep; gradually failed and died in twelve hours.

CASE V. The sixth day after tracheotomy everything seemed to be doing well; the child eating freely, breathing normal, wound healthy, no albaumen; when at four p. m. the pulse became rapidly feeble; the child sitting up pale and restless; breathing rapid but regular; at four the next morning the child died, after an extremely agitated night, but rational to the end.

CASE VII. Child four years old with diphtheritic coryza and pharyngitis, *died almost instantly* on the seventh day of his illness. The day before his death the lesions were confined to the nose and pharynx; vesicular breathing throughout chest; that evening the skin became ashy. Early the next morning the child asked for drink. Being raised into a sitting posture, he

¹ Picot et D'Espine. *Manuel Pratique des Maladies de l'Enfance*. 1860.

² Beverley Robinson. *De la Thrombose Cardiaque dans la Diphtherie*. Paris, 1872.

³ Werner. *Gazette des Hôpitaux*. Linz, 1842.

⁴ Winkler. *Die Blutklumpen dann der Hautige Braune*. Wien, 1852.

⁵ Richardson. *Medical Times and Gazette*, March 8, 1856. *British Medical Journal* February 16 and April 7, 1860.

⁶ Barry. *British Medical Journal*, July, 1858.

⁷ Smith. *Medical Times*, vol. ii., 1859, p. 617.

⁸ Thompson. *Medical Times*, vol. i., 1860, p. 23.

⁹ Meigs. *The American Journal of Medical Science*, April, 1861.

¹⁰ Millard. *Thèse de Paris*, 1878.

¹¹ Garnier. *Thèse de Paris*, page 62. 1860.

¹² Gerlier. *Thèse de Paris*, No. 155. 1866.

grew waxy pale, settled down, fell back; there was no struggle, no convulsion, a few feeble and intermitting beats of the heart, a few incomplete inspirations, and all was over.

CASE VIII. A little girl, six years old, after two days' illness was admitted, with a history of cough oppression, and false membrane on the posterior wall of the pharynx. On the eleventh day became alarmingly pale, and would not eat; still there was nothing abnormal to be detected. That evening she died quite suddenly, without any convulsive movement. One hour before death the pulse was small and thready; the heart sounds muffled; the body extremely pale; respiration frequent but without stridor.

Why a thrombus should at times cause death rapidly and at others slowly is easily understood. The clot is not always formed in the same place, nor in the same time. The cardio-graphic examinations of *Chauveau* and *Marey* prove that the heart may contain bodies of considerable size in its cavities without recognizable symptoms.

Richardson also says coagula may be formed very slowly, layer by layer, and many days may pass without their presence being revealed by a single physical sign.

In these cases the circulation becomes embarrassed by degrees, the valves continue to work for some time, and death follows after a long struggle. At other times the coagula may form slowly at first, but rapidly towards the close. In these cases the existence of the thrombus may not be revealed for some hours or days, though finally and suddenly we become aware of it by the restlessness, anxiety, and anguish, which continue without break to the end.

Sanné,¹ in his *Treatise on Diphtheria* (Paris, 1877), is the only author who denies the fact that death is caused by thrombi. He denies that the clots have the characteristics of those formed during life; he affirms that they are formed in other fatal diseases, where there have been no cardiac symptoms, and where they are traced in patients dying with diphtheria they are always associated with pulmonary lesions. He acknowledges that the symptoms arise from the heart; the præcordial pain, the pulse variations, the tendency to syncope, and the heart-beats indicating the cardiac origin. He believes these cases are very rare, and attributes them to a diphtheritic paralysis; for they never occur at the commencement of the illness, but from the tenth to the twenty-first day, when convalescence is fully established.

Other authors, as *Oertel* in *Ziemssen's Cyclopædia*, *Lorain* and *Lépine* in the *Nouveau Dictionnaire*, *Sennator*, on *Cynanche Maligna*, in *Volkmann's Clinical Lectures*, say nothing of thrombosis.

Cause of Death: *Virchow*² attributes it to syncope, depending on stoppage of the cardiac contraction. *Panum*,³ on the other hand, contests this view, maintaining that the heart continues to beat even after all signs of life have ceased. His theory is that death is the result of *cerebral anæmia*. To this view agree *Michael Foster* and also *Wagner*. *Wagner*, in his *General Pathology*, states that sudden death in severe embolism of the pulmonary artery depends upon the want of blood-supply to the brain and medulla oblongata. In this it is a question neither of suffocation

nor of paralysis of the heart. In extensive embolisms of the pulmonary artery, the first quite constant phenomenon is the extreme paleness of all visible parts of the body (conjunctiva, gums, lips). The white brain-matter is entirely empty of blood. The veins and venous sinuses of the brain are filled with blood. This paleness is immediately followed by constant titanic extension of the limbs, involuntary evacuations of the urine and feces, and very deep inspiratory movements.

Diagnosis. *Playfair* states that in twenty-five cases of sudden death after delivery, in which careful post-mortem examinations were made, seven gave evidence of true embolism. In these death occurred late, in none before the nineteenth day.

In fifteen cases death occurred before the fourteenth day, often on the second and third days. In these cases there was no embolism, but a thrombosis. He believes that spontaneous thrombosis and true embolism may be divided from each other by a clear line of demarcation, depending on the period after delivery at which a fatal event takes place.

*Picot*⁴ and *D'Espine* consider the cardiac complications difficult to diagnosticate. They appear usually, but not always, at the beginning of convalescence, when all local symptoms have disappeared, often in the course of a diphtheritic paralysis.

Maurice Raynaud,⁵ article *Cœur*, *Nouveau Dictionnaire de Médecine et de Pratiques Chirurgie*, vol. viii. p. 574, remarks on the Diagnosis of Cardiac Thrombosis and Pulmonary Embolism, that the differential diagnosis between cardiac coagula and pulmonary thrombi, or emboli, presents almost insurmountable difficulties, and can be based only on probabilities.

Robinson lays stress on the resonance, at times hyper-resonance, of the chest.

Richardson states that in children especially you find marked symptoms of emphysema, without any sign of congestion or hepatization; he considers this an evident demonstration of the existence of the thrombus.

Hope,⁶ *Richardson*, and *Robinson* all draw attention to the peculiar dyspnoea; that is, dyspnoea with open air-passages, asphyxia without obstruction of respiration, only to be explained by its cause, — the thrombus. It takes place not because the movements of the chest are fettered, not because the access of air to the lungs is checked, — for the respiratory murmur is distinctly heard, — but because the quantity of blood furnished by the pulmonary artery is diminished.

Robinson. The diagnosis of intra-cardiac coagula must rest on the general and local symptoms observed with care. Of the first are the chilling of the extremities, the pallor, the prostration, anxiety and agitation, the feeble pulse, and characteristic dyspnoea. The local symptoms are the dull, muffled, weakened heart pulsations and the emphysema of the lungs. He draws the following conclusions: —

(1.) That cardiac thrombosis is a frequent complication of diphtheria.

(2.) That the elastic fibrinous coagula entangled in the valves, or adhering intimately to the walls of the heart, are formed before death.

(3.) That they are formed often before the death struggle.

⁴ *Picot* et *D'Espine*. *Manuel Pratique des Maladies de l'Enfance*. Paris. 1889.

⁵ *Raynaud*. Article *Cœur*, *Nouveau Dictionnaire*, page 565.

⁶ *Hope* and *Richardson*, quoted by *Robinson*.

¹ *Sanné*. *Traité de la Diphtherie*. Paris. 1877.

² *Virchow* and *Panum*, quoted by *Playfair*.

³ *Virchow* and *Panum*, quoted by *Playfair*.

(4.) That they cause symptoms of the gravest nature.

(5.) That their prognosis is important both for treatment and prognosis, since on the one hand their presence renders a fatal issue almost certain, and on the other renders the operation of tracheotomy useless and needless.

(6.) That the polypoid-shaped clots are often the proximate cause of the serious state of the patient, and not the result of that condition.

(7.) That death may occur suddenly, immediately after its formation, or after a stage of anxiety and of anguish, lasting for a longer or shorter time.

RECENT PROGRESS IN INSANE ASYLUM MANAGEMENT AND CARE OF THE INSANE.

BY WALTER CHANNING, M. D.

AN ENGLISH ASYLUM.

THE Twenty-Eighth Report of the Derbyshire County Lunatic Asylum is one of a good class of English reports, and worthy of mention in a review of literature. The asylum contained, at the end of the year 1879, 414 patients; with this large number the superintendent, Dr. J. Murray Lindsay, was able to do the usual routine work of supervising and building, and, in addition, some excellent scientific work. The number of admissions was large (180), and yet he received the assistance of only one medical officer. It is hard to understand how he could accomplish so much, unless the steward and others managed more of the asylum affairs than is common in this country. The asylum contained the large number of 74 epileptics, and, what is unusual in America, several idiot children. Dr. Lindsay states that hereditary predisposition was ascertained in nearly twenty-five per cent. of the admissions, but this per cent. does not, in Dr. Lindsay's opinion, represent to the full extent the part heredity plays in the causation of insanity. Intemperance was the assigned cause in eighteen per cent. of the cases.

The percentage of recoveries was forty-five on all admissions; forty-six males recovered to thirty-five females, which is regarded as a remarkable feature of the year, and certainly still more remarkable in contrast with our asylums, the proportion being quite as great in favor of the females. The same unusual feature presents itself in the preponderance of deaths in the females. The general mortality is so high that it at once arrests attention, there having been 70 deaths out of a total of 602 treated. Comparing these statistics with those of other hospitals, we find that at Danvers of 875 under treatment 63 died; at Taunton of 752, 48 died; at Worcester of 656, 36 died; at Northampton of 535, 23 died. At the California State Lunatic Asylum, the twenty-eighth annual report of which has just come to hand, there were treated during the year 1241 patients, and of these 72 died. While the Danvers percentage approaches somewhat nearly that of the Derbyshire Asylum, those of the other hospitals are little more than half. The asylum is about six years older than the Northampton Hospital; this would ensure more deaths from old age and chronic diseases, but on the whole a smaller mortality than if it received a greater number of acute cases. We find that there are nearly three times as many deaths at

the former as at the latter, though treating only sixty-five more patients a year. One third of the deaths were caused by paralysis and consumption.

It is pleasant to turn to the scientific work performed at this asylum. The American reader will be struck by the fact that 65 autopsies were made out of 70 deaths! In this country, owing to public feeling and professional inertia, the number would not be more than one third as great. Under the heading of Medical Notes and Statistics a number of interesting experiments were made. Trials of *sumbul*, potassium bromide, zinc, arsenic, amyl nitrite, and nitro-glycerine in cases of epilepsy were made. The number of cases was forty, many of an unpromising nature, and all accompanied by mental alienation. *Sumbul*, arsenic, and zinc were found, on the whole, to produce no effect in diminishing the frequency or severity of the fits. Amyl nitrite was found of benefit in a few cases, particularly in well-marked anæmic cases, where potassium bromide was not as useful. The amyl nitrite was prescribed in half to three minim doses three times daily, in an ounce of water. "A trial was made of nitro-glycerine, on the suggestion of Crichton Browne, of a one per cent. solution in alcohol. On the whole it did little or no good, and even made some cases worse." Potassium bromide alone was found to be of certain and rapid benefit. It is stated that there were several deaths in the epileptic status, and these led to the trial of chloroform for the purpose of preventing the recurring convulsions and deepening coma. In the case reported it was successful.

In the sixty-five autopsies made during the year the condition of the osseous system, with special reference to the fragile, brittle, or softened condition of the ribs and sternum, was carefully noted as follows: "The ribs and sternum were noted as abnormally fragile and weak in eight males and sixteen females, — in some cases so weak and soft as to break or bend (green-stick fracture) with very slight pressure. The influence of the nervous system over bone-nutrition and the frequency of a diseased condition of the osseous in the insane, as bearing upon the liability of fracture, are very important in a medico-legal point of view, for broken ribs do occasionally occur in asylums, and it is popularly supposed that extreme violence on the part of attendants or others is always necessary to produce them."

Brain weights had been taken during eight years in 120 cases. The average weight of the brain in 250 male lunatics was 47½ ounces, about two ounces less than the healthy average, according to Quain. The average weight of the female brain was 43¾ ounces, or one quarter of an ounce less than the healthy brain. The largest brain was that of a general paralytic, and weighed 60 ounces, and the smallest was that of a female epileptic idiot, and weighed 25 ounces. These results accord with those of Dr. Boyd, Dr. Thurnam, and Mr. Crochley Clapham. Dr. Crichton Browne finds a greater difference in the male and female brain, and agrees with Broca that the smaller size of the female brain depends as much on her intellectual as on her physical inferiority. Dr. Lindsay finds the left hemisphere the heavier in the proportion of five to four. Brown-Séquard and Dr. Boyd agree with this view, but Dr. Crichton Browne, Dr. Thurnam, and Prof. Wagner, find the right the heavier.

I cannot close this long review without referring to the cost of the tobacco, beer, and wine used at this

asylum. The cost of these articles so far exceeds that of our American insane hospitals that one is struck by the contrast. The tobacco and snuff bill for the year was £93. The cost of the beer, ale, and wine £666 16s. 6d., or only £80 13s. 6d. less than the cost of the butter, cheese, bacon, and eggs. In the list of provisions meats come first, flour second, and tobacco, beer, ale, and wine third. In this country but little beer or wine is used, brandy and whisky being the staple articles. These are generally put down under the head of "drugs" or "medical supplies." Looking at the Massachusetts hospital reports for 1879 we find no mention of liquors or wines, but the total cost of medical stores in the five hospitals was only \$5265.03, or about £1053. Here it must be stated that "wines, spirits, and porter" are, in the Derbyshire Asylum report, called "extras for the sick." Adding the cost of these to the above cost, of "ale, beer, and wine" found under the heading of provisions, we get a grand total of £795 4s. 6d. Adding still further the cost of "drugs and instruments," which is £105 2s. 7d, we find that the difference between the cost of medical stores and stimulants at an English asylum having in the course of a year 602 patients under treatment is within £150, in round numbers, of the cost of the same articles for 3240 patients in Massachusetts. If we leave New England and go toward the West, we find stimulants more used; for instance, at the Northern Hospital for the Insane at Winnebago, Wisconsin, their whisky, wine, and gin bill, which comes in under the head of "drugs and medical supplies," amounted in 1879 to \$1226.70 for a total of 757 patients.

CURABILITY OF INSANITY.

Dr. D. Hack Tuke, of London, has an important article on Tabulating Recoveries from Insanity, in the *Journal of Mental Science* for October, 1880. He reaffirms the conclusions arrived at by Dr. Earle, that the number of recoveries reported in asylum statistics is far from correct, and gives rise to much misconception as to the actual number of persons who recover from insanity. Dr. Tuke states that he does not object to superintendents making as good a showing as possible; repeated cures of the same patient often show great skill of treatment, but some better system of figures is necessary, as the public are now made to believe that "100 recoveries represent 100 persons enjoying the use of their reason, instead of, in too many cases, oscillating between the world and the asylum. Then in their ignorance of the tendency to the recurrence of insanity, they are astonished at the ever-increasing demands for new asylums and the conclusion, out of all proportion to the fact, that there has been an increase of insanity." Speaking in another place of the great number of relapses, Dr. Tuke says: "Taking the recoveries from the first attack at the York Retreat, up to a certain date, as many as sixty-five per cent. relapsed, some of course recovering again. The cures at first were fifty-three per cent.; then after deducting relapses they were only eighteen per cent., while allowing for recures the latter number was raised to eighty per cent."

Dr. Earle, in his annual report of the State Lunatic Hospital at Northampton for 1880, again devotes considerable space to the subject of the curability of insanity. As an illustration of the mistake which may result by drawing inferences from statistics, under the head of "instructive statistics" he gives some re-

markable information regarding 118 cases of insanity which have been treated in American hospitals, and the statistics of which have been published in the annual reports of those institutions. Dr. Earle says: "If Dr. Todd's well-known group of 23 cases at the Hartford Retreat, and Dr. Galt's group of 13 cases at Williamsburg, Va., were sufficient in number to justify the inferences in regard to curability which were drawn from them, and which were largely influential in establishing a prevailing belief, then may we safely be permitted to derive some inferences from this group, which is more than three times as numerous as both of them." Four tables Dr. Earle gives, one being *age on admission*; one, *age on first admission*; one, *occupation*; and one, *results of treatment*. We find from these tables that insanity prevails only among females; that under forty-five years it is very rare, but prevails to its greatest extent among those of from forty-five to sixty years; that first admissions occur oftenest from forty-one to forty-five years, and least frequently from twenty-six to thirty years; that of all females the wives of manufacturers are the most prone to become insane; that insanity in females is one of the most curable of all diseases, 102 out of 118 recovering, or 86.44 per cent.; that of the 118 patients only one died, or eighty-four one hundredths of one per cent. We learn further that all these patients were married, the inference of which would be that mental disorders are apparently unknown among unmarried women. The explanation of these wonderful statistics is that these 118 cases of insanity relate to three persons, all of the unmarried women! These three women were admitted to hospitals 118 times and discharged as recovered 102 times. One of them died insane in a hospital; another died insane at home; and the third at the age of seventy-five years has entered an almshouse.

RESTRAINT.

Dr. Brosius, editor of the *Irenfreund*, in numbers 2, 3, and 4 for 1880, discusses fairly and candidly the question of non-restraint. He strongly urges the use of seclusion as a substitute for restraint. He proposes large, comfortable seclusion rooms (*zellen*), with which should be connected large yards, in which the secluded patients could be allowed to wander freely. As a further means of non-restraint there should be a set of perfectly trained attendants, who should, "*leidenschaftlos mit Entschiedenheit und Klugheit die ärztlichen Anordnungen ausführen.*"

After enumerating the various forms of disease where seclusion will be beneficial, Dr. Brosius says that it should not be continued too long. The patient forms bad habits, and sometimes acquires delusions which can only be broken up by removing him from the seclusion. He can then be carried back to the other patients, or kept apart in the corridor connected with his room, which should be pleasantly furnished and entertained by his attendant. In certain cases, however, restraint will be necessary; "even Connolly himself speaks of exceptional cases." Particularly when the patient shows a determination to harm himself by injuring his flesh, picking the finger nails, pulling out the hair, etc., Dr. Brosius recommends the occasional use of gloves. He criticises those persons who use gloves and yet do not call them restraint; it would be more proper to say they could not get along without restraint. "In cases of chronic propensity to self-injury, manual restraint continued

for months is not possible, and it would be a much worse and more unbearable form of restraint than gloves. The patient bears these with comfort, goes where he will, and has free motion, whereas the attendant who holds him is a constant burden, who irritates him, and is irritated by him, and with whom he creates so much confusion that it is better for him to remain away from the other patients, among whom his gloves would not have seemed at all strange." As a very important means of keeping patients quiet, Dr. Brosius dwells at some length on good food. "The kitchen and the wine cellar are of much greater importance and influence than the apothecary shop. Liberal diet and a fine strong wine are on the whole better and a more adaptable form of quieting medicine to the system than the various narcotics, such as chloral, potassium, bromide," etc.

In the *Centralblatt für Psychiatrie* for January, 1881, Dr. Rahow reviews a paper written by Billod and presented at the recent International Congress at Amsterdam, on Restraint and Non-Restraint. Billod says the English and French hold much the same views on the subject; but restraint—especially the camisole—is often employed in France. In Holland, also, but very little restraint is used. Billod accounts for this by the different characters of the different countries. Then, too, in England and Holland food, liquors, or beers and tobacco, are extensively used. It is a well-known fact that food is one of the most important means of producing quiet. In England, too, the fear and respect in which state officials are held exerts a strong influence in promoting quiet.

Dr. F. Pritchard Davis, superintendent of the Kent County Asylum, writes a short article in the *Journal of Mental Science* for January, 1881, on the subject of Chemical Restraint and Alcohol. He believes that a change in the use of chemical restraint is following mechanical restraint. In the asylum over which Dr. Davis presides there are over 1200 patients, and among them cases of every variety of insanity, but for fifteen months no quieting medicine at all has been used. The results have been so good that probably none will be used in the future. Part of this success is probably owing to the disuse of alcohol, none having been used except with the very old and feeble. In speaking of the use of drugs Dr. Davis goes so far as to compare the use of hyosciamine to that of the garrotte, and asks if one plan of treatment would not be as admissible as the other. Chloral is anything but an unmixed blessing and has probably thrown back the rational treatment of insanity several years.

CRIMINAL LUNACY.

In the January number of the *Journal of Mental Science* there is a Review, continued from the October number, of papers and discussions on this subject presented at the International Congress of Mental Medicine. Dr. Auzouy discusses the risk of discharging homicidal and epileptic criminal lunatics. He recommends that criminal lunatics should be tried like ordinary lunatics, and sentenced and confined in special asylums for a term at least equal to that of the imprisonment they would have suffered if responsible. Dr. Dagonet refers to the frequency of epilepsy in criminals, and regards its occurrence as of the greatest importance. He thinks that so-called criminal lunatics ought not to be any more than any other lunatics subjected to constant confinement, merely because they

have committed a criminal act. Their having been dangerous once does not necessarily imply that they would be so a second time. Dr. Lanier does not think there is as much difference between those who became insane before commitment and those who became insane in prison as might be thought.¹ He thinks that one quarter, at least, of the convicts found insane in the prisons were so at the time of being condemned.

He thinks it improper to commit criminal lunatics to ordinary asylums; they should be treated in special asylums, but convict lunatics he considers it more convenient to leave under the care of the penitentiary administration in a special building.

The reviewer, in considering the various papers, thinks Dr. Dagonet expresses too great confidence in the freedom from second attacks. Particularly should we guard against epileptics (in the reporter's experience the most dangerous class of insane criminals). The reviewer says that "rather than admit that chances of peril (from epileptics) are so improbable, we always, on the contrary, believe, with Delasiauve, that 'on passing by an epileptic we elbow one who might be an assassin.'" So, also, is it in the highest degree necessary to be on the lookout for the maniacs who "exhibit no intellectual disorder to indicate a threatening danger of the outbreak of fierce violence."

GHEEL.

Under the title of The Town of Gheel in Belgium and its Insane, Dr. William J. Morton writes an instructive as well as a fresh paper in the *Journal of Nervous and Mental Diseases* for January, 1881. He visited Gheel last summer, and made a careful examination, and presents details which have not been so thoroughly gone into by previous writers. Our old-fashioned idea of Gheel was a rather small town, composed chiefly of peasants, in which the insane were farmed out under little medical supervision; if violent, fastened with chains, and generally largely at the mercy of the peasants. The case now, however, is different, and, as bearing on the question of provision for the insane, is worthy of notice in this report.

Gheel is twenty-four miles from Antwerp, and is easily reached in one hour. Its inhabitants are Flemands intermixed with Germans and Gauls. The population of the town is 12,000, chiefly centered in the town, though there are some outlying hamlets. The insane population has steadily increased, being, in 1868 1035, in 1880 about 1600; 1400 of these are Belgians, the rest Hollanders, Germans, French, and English. Two hundred are paying patients. All cases not of a violent or dangerous character are received. Up to 1851 there was no organized medical service. At that time Gheel was placed under the control of the central government. The administration rests in the hands of a "superior commission;" added to this commission there is a secretary. He is, it might be said, the steward or clerk, and makes reports, conducts the correspondence, receives and disburses funds for the patients' maintenance, and has charge of the books. The real working portion of the commission is its permanent committee, composed of five members.

¹ The reporter wishes to call special attention to this statement as being contrary to what is often asserted by those who have not had large numbers of both classes under treatment. Those who have, fully endorse what Dr. Lanier says.

All persons desiring to keep patients must be registered on the list authorized by the permanent committee. Those receiving paying patients are termed "hosts," and those receiving paupers "nourriciers." Both classes must be of good moral character, and cannot receive more than two patients. The size of the room, the quantity and quality of the food, the ventilation, clothing, bedding, and furniture are all definitely prescribed. Care is taken to place patients in families in like social circumstances, and the labor of patients is carefully regulated. To guard against abuse there are "section guards," whose duty it is to visit the various patients continually and unexpectedly, and make daily reports.

The medical service is under the charge of a "medical inspector;" at present Dr. Peeters, successor of Dr. Bulkens. He is saved from attending to matters of financial detail by the secretary.¹ His headquarters are at the infirmary, to be shortly mentioned. He is assisted by three physicians, who have charge of the three sections into which the town is divided. These physicians reside in these sections, and engage in general practice. Each one must visit the curables at least once a week, and the incurables once a month, and both classes oftener if needs be. The physician's visit is entered in a book kept by the nourricier or host, and he makes a monthly report to the inspector. The infirmary is like an ordinary asylum. Its purpose is to afford the usual hospital treatment to patients attacked with incidental diseases, to care for the very infirm, and to take brief charge of cases becoming suddenly excited. But the patient's stay is expected to be temporary, and from the small number under treatment (thirty-seven) it must be so.

A peculiar classification is made of the insane at Gheel, which serves as a basis of payment to the nourriciers or guardians. There is first, the dirty class; second, the half dirty class; and third, the clean class (gateux, semi-gateux, and propres). For the first class about nineteen cents per day is paid; for the second, eighteen, and for the third sixteen. Some private patients pay six hundred dollars yearly.

Escapes are very rare, ranging from only seven to twelve annually. Acts of violence are also rare, only three being on record, and only one of these a homicide, in 1840.

There have been three suicides since 1875. In a half century scarce a half dozen pregnancies have occurred.²

Dr. Morton found only one patient in restraint in the form of a camisole, the use of which had been sanctioned by a section physician.

In 1879 three hundred and thirteen patients were admitted, of whom seventy-one were incurable. The proportion of cures from 1853-70 was twenty-four per cent. In estimating cures, the large number of chronic patients received must be borne in mind.

In speaking of the feasibility of the Gheel system in America, Dr. Morton truly says, "the Gheel of to-day is the product of tradition, superstition, religion, and long custom. Gheel was not born fully equipped for its service, it grew. . . . Gheel in its entirety is probably an ideal that can never be produced in any other country."

Hospital Practice and Clinical Memoranda.

SOME SURGICAL CASES AT ST. JOHN'S HOSPITAL.¹

SERVICE OF JOHN H. GILMAN, M. D., LOWELL.

FRACTURE OF FRONTAL BONE OF SKULL NEAR JUNCTION WITH RIGHT PARIETAL, FRACTURE OF RIGHT RADIUS AND ULNA AT MIDDLE THIRD AND AT WRIST; COMPOUND FRACTURE OF LEFT RADIUS AND ULNA AN INCH AND A QUARTER ABOVE WRIST JOINT. RECOVERY.

October 30, 1880. J. E. J., a lad fourteen years of age, during the dinner-hour of the operatives of the Merrimack Mills, with a few boys about his own age, interested himself in the new mill in process of construction in the yard, more especially in an apparatus for raising bricks and mortar to the upper story. To the end of the long rope, that aloft ran over a pulley, a stick was fastened which J. E. J. got astride, and was drawn up forty-eight feet, when the stick broke, precipitating the unfortunate boy to the ground, striking on his head and hands. Two hours after the accident he was brought to St. John's Hospital in an insensible condition from concussion of the brain, and presenting altogether a hideous appearance, with bloody visage, black swollen eyelids, gaping wounds, and broken limbs. The fractures of the right forearm were reduced, and appropriate splints applied; but it was found quite impossible to reduce the compound fracture of the left forearm without sawing off half an inch of the protruding radius, which being done, reduction was effected, and an exterior or dorsal splint, extending from near the elbow to the end of the fingers, was applied and retained in place by strips of adhesive plaster carried around the arm at proper intervals, leaving the wound on the anterior aspect uncovered, which was dressed with absorbent cotton wet with a solution of carbolic acid 1 to 32, and then the whole forearm was bandaged. There was considerable depression of the vault of the frontal bone at the seat of the fracture of the skull, but it was deemed best not to resort to any operative procedure to raise the bone unless there should arise symptoms of compression. The hair was cut short, and compresses wrung out of ice-water were applied to the head. He was confined to a milk diet. The life of the patient hung, as it were, by a thread for the next few days, but he gradually recovered consciousness and strength, so that at the end of a week he appeared to be quite in possession of his mental faculties and in a fair way to recover. About this time the swelling of the eyelids had so far subsided as to enable the patient to open his eyes, when the right eye was found to be blind; though previous to the accident the sight was normal in that eye. The patient mended steadily till November 13th, two weeks from time of the accident, when he complained of headache, was irritable in temper, and had less mental vigor than on the previous day. A purgative enema was given without any marked benefit. The next day, about seven o'clock in the morning, the patient became suddenly convulsed, one convulsion following another in rapid succession. Upon arrival at the bedside, shortly after eight o'clock, I found the patient still in convulsions,

¹ Is he? All American insane hospitals have stewards and clerks, but the superintendents still have numberless business details to look after.

² Lettres Médicales sur Gheel, etc. J. H. Peeters. Gheel. 1879.

¹ Read before the Middlesex North District Medical Society, January 26, 1881.

insensible, and nearly pulseless. About two drachms of ether was poured upon a handkerchief and administered by inhalation; this quantity speedily stopped the convulsions, and they did not return afterward. The respirations were slow, shallow, and halting, the expirations being prolonged, so that it was necessary for an attendant to stand by and give the chest an occasional jog for nearly two hours, after which the respirations became more regular and went on unassisted. Meanwhile an enema of an ounce of brandy in a pint of warm milk had been given, a jug of hot water put to the feet, and cold applications made to the head. These measures had the effect to increase the force of the pulse. During the day the patient passed his motions and urine in bed. In the evening the patient was found in a semi-unconscious state, with his general condition rather improved; was less drowsy; would make some kind of reply when loudly spoken to; could swallow, and was given milk punch. November 15th, morning, the patient was found to be much better and quite sensible, though unable to call persons or things by their right names; for instance, he said a man standing by was his dear mother, a bunch of keys was a chair, etc. From this time the patient progressed satisfactorily, recovering complete sensibility and correct expression in a few days, and at the end of six weeks from date of accident was considered to have recovered from his injuries, but, owing to sickness in his family, was not discharged from the hospital till December 30th, just two months from the time of admission.

Ophthalmoscopic examination of right eye, made soon after leaving the hospital, revealed the optic disc much swollen, with retinal veins somewhat enlarged, and the arteries but slightly diminished in size. On recent examination the optic disc is still somewhat bulging, its outline well defined, and whitish gray in color. Pupil of right eye movable and of the same size as the left. The sight of the left eye is normal.

The fractured and depressed frontal bone appears to have risen to some extent, so that the depression is not now very marked.

The grasp of the right hand is not quite so powerful as the left, and so is pronation and supination somewhat restricted in the right, but with this exception perfect use of both has been recovered.

COMPLETE OBSTRUCTION OF THE RECTUM BY CANCER RELIEVED.

November 25, 1880. Mrs. E. K., aged thirty-six, residing in the southern part of the State, entered St. John's Hospital with the following history: About two years ago began to be troubled with what her attending physician called bleeding piles, and subsequently more or less with diarrhoea, the last attack of the latter disease occurring two weeks ago. Ten days ago increased pain in defecation and distention led to the calling in of another physician who made a digital examination, and stated that the bowel was obstructed with a fibrous tumor, and advised her to go to some hospital and have it removed by an operation. On admission to St. John's the patient's abdomen was enormously distended, having had, as she said, no movement of the bowels nor passage of wind for eight days. Exploration of the rectum revealed a nodulated cancer (scirrhus) completely encircling and obstructing the intestine, situated about an inch above the anus. The distress and suffering of the patient

being great, it was thought best to make an effort to pass a tube through the stricture; but owing to the nodulated character of the tumor it was found difficult to decide which of the several depressions was the right entrance to the way through the dense mass; the one, however, near the centre seemed the most promising, and after some difficulty a No. 10 catheter was passed, being instantly followed with a prolonged discharge of flatus, with great relief to the patient. Dilatation was continued till the forefinger was passed, and then a rubber tube, somewhat larger, rounded at the end was introduced, a bougie being used as a director, and through the tube two quarts of warm water was injected and retained a while to liquefy the fecal accumulation, and allowed to flow off, being assisted by an exhausting syringe; then more water was injected, and withdrawn again. By this proceeding the intestines were completely relieved of pent-up flatus and fecal matter, and the operation was performed twice while the patient remained in the hospital. Owing to the resiliency of the cancerous stricture, the obstruction of the bowel was found as complete twenty-four hours after dilatation as before, and as a more permanent method of relief the patient was advised to undergo the operation of colotomy, as a good result could be confidently anticipated, and by it life would be prolonged and rendered comparatively comfortable till terminated by the malignant disease; but she refused to submit to any operation which did not include the removal of the cancer. The operation for excision of the cancer, however, was not deemed justifiable on account of the extent of the disease of the rectum and the involved adjacent parts; so the patient left the hospital December 4th, and returned to her home improved in general health and, temporarily, at least, relieved of suffering from obstruction. In this case the symptoms were remarkably insidious and deceptive, so that only a few days before complete obstruction took place was attention directed to the diminished calibre of the bowel, which led to an examination being made. The tendency to diarrhoea and the existence of symptoms referable to hæmorrhoids and dyspepsia probably caused the real nature of the disease to be overlooked during the two years' illness of this woman.

SEVERE CONTUSION, AND FRACTURE OF THE LOWER END OF THE TIBIA AND FIBULA OF LEFT LEG.

October 5, 1880. P. F., aged thirty-eight, while engaged at his work in the Lowell Machine Shop, was struck by a pulley in rapid revolution, falling from a height of ten or fifteen feet, and weighing four or five hundred pounds. The force of the blow was received on the left leg behind the ankle joint, knocking the man down and resting on the limb. The weight was lifted off by fellow-workmen, and the injured man brought to St. John's Hospital. On examination a contusion was seen extending from the heel to a point just above the ankle-joint. The fractured tibia and fibula were reduced and padded, lateral splints applied, and to the contusion a piece of absorbent cotton wet with a solution of carbolic acid 1 to 32 in strength. Considerable tumefaction followed, which subsided in the course of a week, leaving behind the joint a dark discoloration of the integument which sloughed off in the course of two weeks, leaving a healthy granulating surface which rapidly healed, so that at the end of five weeks complete cicatrization of wound and perfect union of both bones had taken place.

MECHANICAL ATRESIA VAGINÆ.

ABOUT two years since I was consulted by a woman, not far from twenty years of age, who had been married six months. She gave me the following history of her case, which became more and more interesting to me as a continued treatment developed all its peculiarities.

Her husband was possessed of strong passions and wished for sexual commerce very frequently. Upon her part each sexual act caused the most intense suffering, and she had come to dread his approaches more and more until for the past few weeks the intolerable anguish which she suffered had led her mate to advise her to consult a physician.

A vaginal examination disclosed the following: The vagina was somewhat elongated, its diameter was less than three fourths of an inch, indeed I was unable to introduce my finger for more than an inch, and the slightest inward pressure caused my patient to cry out from pain the most acute. I discovered, by the means of a small speculum, that a prominent ridge extended the entire length of the vagina upon its anterior surface. This ridge was hard and fixed. The whole vaginal tube seemed to be entirely undilatable, while the lining membrane was in a state of active inflammation, no doubt from forcible congress. I asked her history as to her disease and she said as follows: "When I was about ten years old I went with other girls after berries. In our course we reached a stone fence upon the further side of which there was a fringe of alder stubs, about two feet high, with sharpened extremities. I was the last to get over, my foot slipped, and as I fell one of the sharp sticks entered my vagina, and I fainted from pain and fright; they carried me to the nearest house, called my mother, and one physician after another was called till three of the best in town were with me. They found a piece of splintered and knotty wood in my body and it was more than two hours before they could extract it. It was eight inches long and had passed up the vagina into the cavity of the abdomen between the womb and bladder, lacerating the vagina through its whole extent. I was confined to the house for over two years." The result of this terrible injury was a firm cicatrix upon the anterior wall of the vagina, fastening the tube to the bladder very rigidly. The patient wished to be cured if possible, and indeed I had learned before this stage of the examination that she was well advanced in pregnancy, so an operation was in the highest degree necessary. I called a neighboring physician to aid me in administering ether, and when she was anesthetized I proceeded to operate, and with my knife blade and handle, etc., I at length succeeded in separating the cicatrix from the adjacent tissues, then dilating the tube I packed it carefully and firmly with lint well saturated with antiseptics. I continued this plugging till the wound was well healed and, that too, with no contraction of its normal diameter. I forbade any intercourse till a year after labor, supposing all went well up to that time. Soon after the favorable issue of this treatment I lost sight of my patient.

A year or so after this I received a letter from her in which I was informed that she was the mother of a healthy boy, that the labor was favorable, with no laceration, and then came many expressions of gratitude for her deliverance from so grave a complication.

MANLIUS.

New Instruments.

URETHRAL SYRINGES.

BY EDWARD L. PARKS.

In the number of the JOURNAL for March 3d two separate instruments for the treatment of gonorrhoea are represented by plates and descriptive articles. Neither of them seem to me superior, at least, to a simple instrument which I devised a few years ago and presented at a meeting of the Suffolk District Society.

One of my instruments is now before me, made by Messrs. Leach and Greene, and they promised to sell single ones for seventy-five cents. An ordinary English plastic catheter of 22 F. calibre is cut off at about three inches (less would be better) from the inserting extremity. The cut end is surrounded by a metal flange (simply a perforated disc) and an ivory mouth-piece added. This is to be used with a syringe. Also before me I have what I believe to be the most suitable syringe — one for the eye and ear — a small rubber bulb with a nozzle, but no connecting tube.

The patient is to insert the catheter as far as it will go, and then, filling the bulb as many times as directed, by inserting the nozzle of the syringe in the mouth-piece of the catheter he throws the fluid through the catheter.

In this way a large quantity of fluid can be injected, though the instrument enters the urethra but once, being retained in position. The fluid returning outside the catheter (as experience justifies me in believing it does) unfolds the rugæ of the mucous membrane already evenly distended by it. This is a simple instrument, and if your instrument-maker does not have one he can readily make it. It is easy to select a catheter whose eyelet will not engage the mucous membrane.

Boston, March 9, 1881.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

MARCH 14, 1881. DR. T. B. CURTIS presided.

DIPHTHERIA.

DR. HALL CURTIS reported a case of diphtheria, fatal on the third day from cardio-pulmonary thrombosis and (perhaps) embolism. Vide page 267 of this number of the JOURNAL.

DR. FITZ thought the cause of the rapidly fatal suffocative symptoms was rather to be attributed to cardiac paralysis than to thrombosis or embolism, in the absence of other causes of suffocation. He had made but one post-mortem examination where sudden and unexpected death had occurred as a result of diphtheria. The case was that of a child who had apparently recovered from the immediate effects of the disease, but died while being removed from a carriage after her return from an airing. A general and extensive fatty degeneration of the heart was found.

The sudden termination of cases of diphtheria in the manner reported was not to be regarded as an extremely rare occurrence. One such instance had taken

place under his own observation, the patient dying unexpectedly on the fifth day of the disease with symptoms of asphyxia, while air freely entered the lungs. The literature of the subject contained numerous reports of similar cases.

The diagnosis of cardio-pulmonary thrombosis as a cause of the fatal asphyxia is opposed by the absence of thrombi where post-mortem examinations have been made by thoroughly competent observers appreciative of the suggestion of such possible condition. It is further opposed by the usual condition of the blood in diphtheria, namely, a thin fluid with but little tendency to form firm or voluminous clots.

The mechanism of death would be the same were a paralysis of the heart the immediate cause, while the nutritive changes taking place in this organ, the effects of septicæmia, and the progressive interference with the oxidation of the blood from the pharyngeal obstruction, offer a satisfactory explanation for the occurrence of such a condition.

The question raised by Dr. Reynolds regarding the difficulty of diagnosis in cases of tonsillar and pharyngeal inflammation during epidemics of diphtheria was one of great practical importance. Every physician must have felt himself in frequent doubt at such times, and, although the typical cases were readily classified, there were others whose nature was not made clear by the immediate symptoms. Even the diagnostic importance of albuminuria might be overrated. He recalled the case of a lady, of an extremely nervous temperament, subject to frequent and peculiar vaso-motor disturbances, whom he had treated during two attacks of tonsillar inflammation separated by an interval of a year or more. In both attacks the swollen and congested tonsils were partly coated with a gray and somewhat translucent membrane in which were numerous small flocculent spots. The urine was of a reddish-brown color, resembling diluted coffee, and contained a large quantity of albumen, numerous red blood corpuscles, and frequent blood casts. Not only were similar phenomena present in both attacks, but he was informed that the urine presented a like appearance whenever this patient suffered from sore throat, which was not rarely. Recovery was rapid and complete; the patches showed no tendency to spread, and they disappeared without ulceration of the mucous membrane.

It is well known that cases of apparently simple sore throat may be followed by paralytic sequelæ, and their relation to characteristic cases of diphtheria is such as to indicate the probability of a direct contagion from the latter or the simultaneous action of the same cause.

With such experiences it would seem that at times when diphtheria is epidemic all cases of sore throat should be regarded with suspicion, and should be treated with the view that sooner or later they may give evidence of a diphtheritic nature. At the same time undue fears should not be aroused, as the possibility in any given case often proves to be far removed from certainty.

Dr. CUTLER said that the only case of sudden death following diphtheria he had ever seen occurred rather late in the disease, and seemed to him to be due to the condition of the heart, which was markedly fatty. In a few other cases death was evidently due to septicæmia. In all the cases observed by him there had been few and loose clots in the blood. He had met with no reference to cases of death from embolism in those German authors he had at his command. The diagnosis made

by Dr. Curtis might be the correct one; the symptoms were strongly suggestive of it, and the only other tenable view, cardio-paresis, being apparently negatived by the general condition of the patient and the persistence of a good pulse till the last. He would not care, however, to make a positive diagnosis himself without an autopsy.

Dr. T. B. CURTIS said that as he had seen the case reported by Dr. Hall Curtis in conjunction with him, and had been present at the death of the patient, he would take the liberty of adding a few remarks:—

The case was, as far as his knowledge went, quite without precedent, on account of the precocity of the supervention, in the third day of diphtheria, of sudden and rapidly fatal symptoms, which consisted in asphyxia with unobstructed air-passages, and which seemed to him to be significant of, and only explainable by, cardio-pulmonary thrombosis and perhaps embolism. Owing to the relative simplicity of the conditions obtaining at the time of death in this case, and growing out of the early period at which the fatal disturbances occurred and the consequent absence of almost all complications,—there being no very marked evidence of malignancy or signs of general poisoning, few if any signs of asthenia, no implication even in the slightest degree of the air-passages or lungs, no cough, no impairment whatever of the voice; and, moreover, the period at which fatty degeneration and paralysis of the heart are usually observed being still quite remote,—taking into consideration all these facts, the case, even without an autopsy, which could not be obtained, seemed to afford evidence of the real existence of cardio-pulmonary thrombosis as a possible occasional complication of diphtheria.

The physicians in attendance were immediately struck, while witnessing the short death-struggle, by the absolute similarity of the phenomena observed to the symptoms which have been so often seen in lying-in women, in cases of puerperal thrombosis and embolism, as described by obstetrical practitioners. The speaker himself one night, when on duty as *interne* at the Hotel Dieu of Paris, witnessed the same sudden, terrible, and rapidly fatal asphyxia with open air tubes and unobstructed respiratory movements, in a recently confined woman.

In the entire absence of respiratory obstruction to account for the sudden asphyxia, the only other supposable agencies to be taken into account as possible causes of sudden death in this case are the cardiac complications of diphtheria, which are liable to incapacitate the heart from fulfilling its functions, and to cause death, more or less suddenly, by *syncope*. These causes of heart failure are fatty degeneration of the cardiac muscular fibres and paralysis of the heart.

Fatty degeneration or steatosis, probably resulting from myocarditis, is found once in every five cases of fatal diphtheria, according to Sanné. This lesion is common enough in many other diseases besides diphtheria, and often exists without any obvious disturbances of circulation. The symptoms attributed to it consist mainly in weakness and slowness of pulse accompanied by fainting fits, culminating in a more or less gradual, and occasionally sudden, fatal termination by *syncope*. It is mostly observed in cases which have lasted from ten to twenty-one days, in which convalescence has apparently been reached; in only one case, according to Sanné, has this alteration of the heart been found as early as the sixth day.

The *neuromparalytic* cardiac complication is asserted by Sanné to be the only acceptable cause and explanation of the puzzling sudden death occasionally observed in diphtheria. Paralysis of the heart, like the other paralytic sequelæ of diphtheria, usually comes on rather late in the disease, or after the disease. It represents, according to Sanné, the last phase of the extension of the neuromparalytic complications. These set in mostly during convalescence, from one to two weeks, or even longer, after the apparent recovery of the patient. The symptoms attending the implication of the cardiac innervation consist in slowness, often extreme, of the pulse, the latter being at the same time small, thready, and irregular. There is sometimes a moderate degree of dyspnoea, dependent upon the failure of the circulation; but the most conspicuous and significant symptom consists in a syncopal state, which becomes gradually more and more pronounced, and eventuates in death by *syncope*, without any marked respiratory struggle.

In the case reported by Dr. Hall Curtis, on the contrary, the conditions observed before and during the death struggle were very different from those just described. The pulse was fairly strong, regular, at 104; there was no evidence of asthenia, no faintness, no signs whatever of a syncopal tendency even. The death struggle, sudden and brief, was that of *asphyxia with open air tubes*, the patient making frantic efforts at aeration, gasping with open mouth, and, lastly, the heart was the *ultimum moriens*. This last fact, which was distinctly and unequivocally verified by both the physicians present after all respiratory movements had ceased, and the body and limbs, previously convulsed, had become relaxed, sufficed in their minds to negative the possibility of either of the cardiac complications of diphtheria, degenerative or neuromparalytic, which cause death more or less suddenly by *syncope*.

With regard to the fluid, syrupy condition of the blood, known to be so commonly found *post mortem* in cases of fatal diphtheria, it is evidently not the rule since so many exceptions have been recorded.

The question of the diagnosis of diphtheria in certain ill-marked, incipient, mild, or imperfectly developed cases, has been brought up. Evidently in many such cases the diagnosis cannot but be very obscure and, for a while, doubtful. The differences in the habits of diagnosis of physicians are, however, quite as great as those of the various types of disease. Practitioners may be broadly divided into two categories. Some physicians seem to meet with very few if any cases of simple "sore throat," especially at times when diphtheria is prevalent. On the other hand, they have, in their practice, a surprising number of cases of diphtheria, counting them by hundreds; moreover, it is observed that their therapeutic results are remarkably satisfactory, and that they have and express great faith in their methods of treatment, whether by chloride of potassium, forced stimulation, or potato poultices. The case of a young lady was recalled who was kept in bed for a number of days and isolated on account of an alleged "diphtheritic throat," while daily bulletins of her progress were being issued to a large circle of anxious friends; all the while she was steadily gaining weight, and her convalescence was short and rapid. The treatment in this case was remarkably efficient. The other category of practitioners comprises those who have in their practice comparatively few cases of diphtheria; who experience high rates of mortality

among them, and are extremely skeptical with regard to the real efficiency of medicinal treatment in such cases. Physicians of this class, on the other hand, see and treat successfully many cases of tonsillitis of various kinds, and also many cases of faucial angina, catarrhal or herpetic. Evidently the nosological term diphtheria is not always used with one and the same signification.

DR. GEORGE B. SHATTUCK referred to Guttman's experience with the muriate of pilocarpin in diphtheria, as published in the *Berlin klin. Wochenschr.* (No. 40, 1880), and asked whether this treatment of diphtheria had been tried by any gentlemen present. Dr. Vogel reported several cases lately in the *JOURNAL*. Dr. Guttman reported extremely favorable results, and had not encountered the ordinary depressing effects of this drug, or where such threatened to manifest themselves they were readily counteracted by small but repeated doses of stimulants.

DR. LANGMAID reported the case of a lady whom he was called to see with symptoms of swelling and some pain in the throat, but no fever. On examination he found a white membrane hanging down behind the soft palate, and on using the mirror he discovered that the whole surface of the right posterior nasal fossa was covered with a membrane which could not be detached by traction, and could not have been discovered without rhinoscopic examination, as it was localized there, not being present elsewhere. Simple syringing with permanganate of potash was employed and the whole thing disappeared in three days. He supposed that it was a diphtheritic membrane.

Recent Literature.

Diagrams of the Nerves of the Human Body. By WILLIAM HENRY FLOWER, F. R. S. Third Edition. Philadelphia: Presley Blakiston. 1881.

The reputation of Flower's Diagrams is so well established that we have little to do beyond welcoming a new edition of them. They are so clear, thorough, and well executed that their popularity is easily accounted for. We regret that in this edition Mr. Flower has not so modified the plan of the digital nerves as to show the dorsal offshoots from the palmar branches running towards the ends of the fingers. We could wish that the motor root of the submaxillary ganglion were more distinctly to be traced to the chorda tympani. Similar points for criticism might, no doubt, be found, but for the work as a whole we have nothing but praise.

T. D.

— A pharmacist was prosecuted recently in Paris for having caused the death of a girl by selling powdered oxalic acid in place of powdered Rochelle salt. He, in defense, stated that he sold what his wholesale druggist had furnished him with, and upon whom, therefore, the responsibility ought to rest, seeing that the substances in powder are not distinguishable by the eye or touch. The court, however, disallowed this plea, on the ground that every pharmacist, by virtue of the monopoly he enjoys, is strictly held to the duty of verifying every medicine which he offers for sale. He was condemned to a month's imprisonment, a fine of one thousand francs, and two thousand francs damages, payable to the father of the deceased girl.

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CONFLAGRATIONS IN INSANE HOSPITALS.

THE recent terrible fires in insane hospitals have so startled us in our fancied security that we are now led to ask, Are any such buildings strictly fire-proof? Glancing hastily back at the record of the past twenty-five years we find that there have been two fires at the Vermont Asylum; one at the New York State Lunatic Asylum at Utica, and one at the Kansas State Asylum, which, however, destroyed only a tolerably small portion of each of these institutions. But we find that the Ohio State Lunatic Asylum, the West Kentucky Lunatic Asylum, the Minnesota State Lunatic Asylum, and the State Lunatic Asylum at Danville, Penn., have been almost totally destroyed and a considerable number of lives lost. That more lives have not been lost may be considered almost providential; as, for instance, at Danville, where the patients were in the chapel, and consequently in a body, and easy to control. The money loss, too, though of trifling importance compared with the sacrifice of life, has been so great as to entail a heavy burden on the tax-payers. It may be safely asserted that the loss at the asylums, almost totally consumed, must have reached to two and one half millions.

We are aware that conscientious efforts have been made to render recent insane hospitals fire-proof, and we should say, from a casual inspection of the State hospitals at Morristown, N. J., and Middletown, Conn., that they might be classed as fire-proof; but can we say as much for our Massachusetts hospitals? The older institutions at Worcester, Northampton, and Taunton were fairly well up to the times at which they were built, and additions have, at various times, been made to their means of protection. In the new portion of the Taunton Hospital stairways are of iron, the party walls are numerous and well carried up. We find, also, from the last annual report, that the attic, which was continuous throughout the whole length of the building, has been divided by brick walls into twelve sections, which would have the effect of impeding or preventing the spread of fire, and, furthermore, connections have been made with the city water works, largely increasing the water supply. All of these old hospitals — especially Northampton — are well supplied with water, which is a very important fact when we remember that some of these fires are dependent for their extent on scarcity of water. These hospitals are, two of them, near large cities and one near a large town, which makes it possible to call

in outside aid with sufficient promptness to be of some service.

Turning to the recently erected hospitals at Worcester and Danvers, we find the former substantially built, attention having been given to protection from fire, and as a further safeguard hydrants and extra pipes are about to be put in (it must be remembered that this hospital is near a large city). At Danvers, unfortunately, the building is not so well built, or provided with fire-saving apparatus, and we find the trustees referring in each of their annual reports to their exposure to fire. In 1879 they asked the legislature for an appropriation for fire apparatus, and were given nine thousand dollars. They say, in their report for 1880, that that sum is not enough, but when expended the hospital will be partly protected. We understand that ladders for outside use have been made; that "automatic sprinklers" have been put in, and that full pressure can now be applied to the extra pipes for use in case of fire without fear of bursting, which was not the case before. All the arrangements will not be finished for some time, as a contractor is six months behind time.¹

Beside the inevitable modifications in structure which must be made in non-fire-proof buildings, there are certain precautions, which should be adopted at all large institutions, for the purpose of effective action when a fire breaks out. There should be, for instance, a well-drilled fire corps made up from the employees. Though the medical officers and attendants should have a knowledge of the use of the fire apparatus, in case the fire becomes at all general, their combined efforts will be required in controlling and managing the patients, who become so much excited at the sight of fire. At the Danville fire, the attendants, it is said, could do nothing but look after the patients. The various other employees, as the clerks, engineers, farmers, farm hands, cooks, etc., must be looked to to do the main portion of the work. There should be frequent and systematic drills of such a corps, and trials of the apparatus, and every employee, male and female, should have a place assigned him, and be ready to take it at a moment's notice. There should be entrances from both ends of all wards, outside fire-escapes, gratings in the windows that could be unlocked, ropes, axes, pails of water, and fire-extinguishers easy of access. At a hospital like that at Danvers, exposed on the top of a high, barren hill, and remote from even a small town, the outside fire service should be especially large. That is, there should be a good-sized hand-engine and two or more hose wagons ready for any emergency.

It is not easy to say what general measures ought to be taken, but perhaps it would be well to provide in some way for a State fire inspector, who should make frequent visits to the State institutions, and carefully examine into the construction of the buildings and the means of protection provided against fire. He should personally test the apparatus, and be present at or superintend drills of the fire companies, and in all ways

¹ About March 14th the legislature passed a resolve giving Danvers three thousand dollars to complete the fire apparatus, and specifying that this apparatus should be completed within ninety days.

satisfy himself that nothing was left undone. The expense of employing a competent person would involve a small additional outlay of money on the part of the State, but when we remember how much loss of both life and money can be saved by early, efficient, and continuous action in the event of a fire, it becomes our duty as citizens to consider any means which will afford a surer protection than we now possess.

TRICHINÆ AND CHOLERA IN THEIR RELATIONS TO THE AMERICAN PIG, AS NOTED BY CONSUL CRUMP.

VICE-CONSUL CRUMP, of Philadelphia, having produced a porcine panic in the English newspapers, from the *Times* downwards, by his picturesque and imaginative description of hog-cholera and trichinosis; and several of the continental countries, notably France and Austria, having prohibited the importation of American pork products, any additional light upon the viability of trichinæ is desirable. The *Lancet* gives an abstract of a late discussion of this subject at the Académie de Médecine (February 22d), and we are glad to see that the general opinion expressed was of a character somewhat reassuring to a great American industry, which between shrewd schemes of speculators and the stupid fears of consumers has had a hard time lately. Consul Crump will be relieved to know that even the most timid and cautious members of the French academy would not hesitate to use American lard, and according to most of the experiments referred to there is really no reason why he himself should not occasionally enjoy a little roast pork. It is really marvelous that with so many perils from pork on all sides of us in this pig-raising country we not only escape being all of us the constant victims of the effects of hog cholera, and tenements at their will of colonies of trichinæ, but, what is still more extraordinary, that evident cases of trichinosis should be so rare as to be gladly welcomed by the instructor when presenting themselves in our medical clinics. We have before us at the present moment a clinical lecture by Professor Da Costa, delivered to his class only two months since at the Pennsylvania Hospital, on Acute Trichiniasis, Marked by Continuous Fever and Severe Muscular Symptoms, and illustrated by a case, which begins as follows: "The case now before you is a striking one from more than one point of view. It presents a typical illustration of a disease which I have rarely had the opportunity of presenting before the class. It is instructive in the accuracy of which the diagnosis admits," etc. Again, Dr. Rauch, of the Illinois State Board of Health, informs us that there have been only twelve known deaths from trichinosis in the last ten years in that State.

It is evident that either the dangers of eating American pork products exist mainly in the minds of designing speculators and misguided consuls, or else that the American pork-packer is possessed of machinery for selecting all diseased animals for foreign export, but little, if at all, inferior in swift accuracy

and reliability to the ingenious apparatus used in the primary process of slaying and dressing the generic pig. It would seem as if the countries of Europe occupied toward us somewhat the same relation as that which his pastor bore to the Swiss peasant. It was this peasant's habit when he killed a pig to send as a present a selected piece to his good pastor, and if no bad results succeeded the pastor's indulgence he then eat the rest himself. Only our experiment *in corpore vili* is less satisfactory, for in the case of Europe it is difficult to distinguish between illness and pure fright.

We hope the opinions expressed by Messrs. Colin, Davaine, and Vallin were not unconsciously influenced by the fact that the meeting of the Academy took place on the anniversary of the birthday of the Father of this country, but as their remarks were mainly confined to the relation of the results of experiment and observation we think ourselves justified in leaving out of account any such perturbing influence.

The following is the *Lancet's* abstract of the meeting of the French Academy, to which are added some remarks of its own:—

The meeting of the Académie de Médecine of February 22d was devoted to the discussion of the viability of trichinæ, and opinions were expressed of a more reassuring character than those to which attention was called last week. M. Colin, of Alfort, has investigated the extent to which the process of salting renders meat innocuous, and he concluded from a number of experiments that the salting always finally destroys the trichinæ, but that it is impossible to determine the lapse of time necessary, and the danger from such food is greater the shorter the time since the salting. He also investigated the question of what amount of cooking is requisite to insure destruction. Boiling he found to be effective provided it is maintained for a considerable time, which varies in its necessary length according to the size of the pieces of meat. Roasting only killed the trichinæ when it had been carried beyond the point common for mutton or beef. Quick roasting or boiling, leaving the central parts of the meat red, was quite insufficient. He expressed the opinion that many cases of gastric and intestinal disturbance are the indications of slight trichinization. M. Davaine, however, mentioned that as low a temperature as 56° C. (134° F.) is sufficient to destroy them, and that in estimating the amount of time needed to cook a joint, thirty to thirty-six minutes should be allowed for each half kilogramme. The same question was considered also by M. Vallin, the results of whose experiments agreed with the statements of M. Davaine. He found that it was necessary that joints of less than six kilogrammes should be cooked for four hours, and that for larger joints boiling for at least five hours was required. The effect of salt in preventing the decolorization renders the tint, he thinks, an uncertain indication of the sufficiency or insufficiency of the cooking. M. Chatin maintained that salting does not necessarily kill trichinæ. Infested meat was preserved in salt and then given to guinea-pigs, and in several of the animals trichinæ in process of development were found. Moreover, in meat which had been heated to 111° F. the trichinæ were found perfectly mobile.

In spite of the doubt as to the exact temperature at which trichinæ die, and the uncertainty as to the efficacy of ordinary cooking for their destruction, there is a general disposition to rely upon the fact that trichinosis in man is a very rare disease, in spite of the importation of diseased pork. Mr. Mundella lately stated in the House of Commons that our importation is twelve times as great as that of France; and it is reasonable to conclude, therefore, that twelve times as many trichinæ come to us as come to France from America. What is their actual number cannot, of course be known, but it may be remembered that a single outlet has been found to contain a hundred thousand worms. The fact that no outbreaks have occurred in this country is probably to be ascribed not only to the influence of cooking, but to the process of salting, which, as just stated, if efficiently performed, seems to kill the parasite. Mr. Mundella intends to wait for an outbreak of trichinosis before following the example of the French government, and prohibiting the importation of American pork, and the Belgian government have formed a similar resolution. It would be more satisfactory to know that some measures were taken, by systematic examina-

tion of samples of the meat, to ascertain the reality of the danger to this country, for it must not be forgotten that outbreaks and deaths have occurred here in past years.

The disinterested testimony of the French Academy, the general immunity of our native population from contamination, and the energetic diplomacy of our Secretary of State, offer grounds for hope that the respectability of the American pig may soon be vindicated. In the mean time we shall continue, without a shudder, to offer the accustomed hospitality of our table to the spare rib, the broiled bacon, and the various products of the gridiron or frying-pan, leaving raw meat, whether fresh, salted, or smoked, to those who like it, and even they, we are inclined to think, may indulge their taste with considerable impunity when resisting the temptation to buy at half price.

MEDICAL NOTES.

— There is a man in Boston who thinks that the Board of Health of that city is a nuisance, and he has published a small pamphlet to that effect. He begins his indictment as follows: "They spend a very large amount of the people's money—about sixty-three thousand dollars the last year—and have spent a much larger amount some years. They send out twenty-five thousand or thirty thousand notices a year, keep the owners of real estate constantly annoyed, and cause them unnecessary expense. They act as auxiliaries to worthless tenants. If one is warned out for non-payment of rent, or wishes to move and injure the owner or damage his property, he goes to the Board of Health and complains that the house is damp or smells bad, and the board immediately orders the owner to abate the nuisance."

It seems evident that this is written by the owner of some of the poorer class of tenements, who has been compelled by the board to remedy the worst of the defects in his houses, so that they shall not threaten the health and life of his tenants and of the neighborhood. The wrath of such landlords at having their profits interfered with is common enough, but they very rarely rush into print with their grievances, and hence this wail of "Common Sense," as he signs himself, is quite a curiosity. — *Sanitary Engineer.*

— Mr. Holden in his recent Hunterian oration told the following story, which illustrates the state of anatomy in Europe before the reformation brought about by Vesalius and Fallopius. The physicians in attendance on the Margrave of Baden Durlach disputed among themselves as to the position of his heart in his thorax, one of them contending with Galen that it lay in the middle, the rest being bold enough to affirm that it was on his left side. As this unfortunate doubt assumed the aspect of a serious practical difficulty, when it came to determining the precise spot on which should be applied the plaster which was destined to relieve the sufferings of the Margrave, it was decided to appeal to nature. A pig was therefore brought into the royal chamber, and opened in the presence of the sick man. The position of the heart was demonstrated to him: if

in a pig, therefore in a prince.* His highness gave way before this argument, and the plaster was placed accordingly; while the physician, who still had the temerity to defend himself by drawing an anatomical distinction between man and pig, was dismissed from the court.

NEW YORK.

— The fortieth annual commencement of the medical department of the University of the City of New York was held at the Academy of Music on Thursday evening, March 8th, when the degree of M. D. was conferred upon 199 graduates. The Mott gold medal (for the best anatomical preparation) was awarded to S. C. Blaisdell; the first faculty prize (of \$500 for general scholastic standing) to Frank M. Donahue; and the second faculty prize (of \$500, for the best competitive examination in the same general departments) to Milton B. Titus. Joseph Clark Thomson was the valedictorian, and the address to the graduating class was made by the Rev. Henry W. Bellows, D. D.

— The twentieth annual commencement of the Bellevue Hospital Medical College was held at the same place on Thursday afternoon, March 10th, and this year the address to the graduates was made by one of the professors, which is rather an unusual thing at the commencements of the New York schools, although it is the rule in Philadelphia. Professor Austin Flint, Sr., was the orator, and the subject which he selected was American Medicine. His object, he said, was not to pronounce a eulogium upon the profession in this country, but simply to reply to certain animadversions which from time to time had been made upon American medical men and medical teaching by our own medical journals. Among the arguments that he advanced were the following: The papers of American writers were fully appreciated abroad, and American students were treated with great respect in European universities. It was often claimed that the profession was overcrowded; but the general law was the same in medicine as in other professions and walks of life,—the supply was regulated by the demand, and not only in quantity but also in quality. It would not be denied that those who have been graduated from a regular school were better qualified to practice medicine than those who had not had the same advantages; but if too many restrictions were placed upon our students the tendency would be to drive them into the irregular schools, since there was in this country so large a field for medical practitioners. Again, it was sometimes said that the only object of the great mass of those who studied medicine was to obtain the legal right to practice in the shortest and easiest manner possible; but this was disproved by the fact that such large numbers of students came from long distances, at great personal inconvenience, to the large cities, notwithstanding the outlay of money required, on account of the superior advantages to be obtained in the great medical centres, instead of studying at schools nearer home, where the expenses were often merely nominal and the requirements for graduation corre-

spondingly few. Many of them, indeed, came from States where it was not necessary to have any sort of a diploma whatever in order to pursue the practice of medicine. There were 118 graduates, and the valedictory address was delivered by Charles E. Nammach, of New York.

The annual dinner of the Alumni Association of the Bellevue school was held in the evening at Nils-son Hall, adjoining the Academy of Music, when addresses were made by Dr. Isaac E. Taylor, president of the college, J. Taber Johnson, of Washington, the retiring president of the Association, and Drs. Goffe and Carlisle, of the graduating class. Professor James R. Wood spoke for the faculty, the Hon. John R. Brady for the trustees, and Dr. Gaspar Griswold for the alumni of the college. Among the other toasts responded to were, The Commissioners of Charities and Correction by Commissioner Brennan, Our Sister Alumni Associations by Dr. R. F. Wier, of the College of Physicians and Surgeons, and Dr. D. B. St. John Roosa, of the University, The Bench by Chief Justice George Shea, and The Medical Press by Dr. P. F. Mundé, editor of the *American Journal of Obstetrics*.

— Dr. John Dennison Russ, a well-known philanthropist, has just died at his home in Pompton, New Jersey, in the eightieth year of his age. He was born at Essex, Massachusetts, and was graduated at Yale College in 1823, after which he studied medicine at Bowdoin College. After spending some further time in study in Baltimore and in Boston, he took charge of an expedition sent out from the latter city in 1827 to render assistance to the suffering patriots of the Greek Revolution, and established a hospital at Paros, which he superintended for fifteen months. Later he came to New York, and in 1832 began to turn his attention to the education of the blind, a cause in which he did special service by making many improvements in the methods of printing for the blind. At the time of his death he was also connected with the New York Juvenile Asylum and the Prison Association.

— On the 12th of March a small-pox patient at the Riverside Hospital on Blackwell's Island, thirty-seven years of age, committed suicide, while in a state of delirium, by throwing himself into the East River. The man had only been admitted the day previously, and was placed in one of the rooms opening out upon a balcony inclosed with a stout iron railing. By accident one of the doors in this railing had been left unlocked, and he rushed out upon the neighboring dock, from which he plunged into the water. One of the female nurses attempted to intercept his escape, but was quickly knocked down by him.

— Mr. George Seney, of Brooklyn, has given \$200,000 and a site worth \$70,000, in addition to several other valuable lots, for the purpose of erecting and maintaining a new hospital in that city, and a board of thirty-two trustees, including a number of prominent citizens, has just been organized for the institution.

— The twenty-seventh annual meeting of the Nursery and Child's Hospital was held March 11th

when the secretary reported that the number of persons cared for during the year was 2044. — 969 in the city nursery and 1075 in the country branch on Staten Island.

— In consequence of the need for more efficient quarantine arrangements, the proceeds of the charity ball this year will be devoted to that purpose.

— In the ninth annual report of the Roosevelt Hospital, just issued, it is stated that 1171 patients were treated during the past year, and that there were 155 remaining in the institution on the 31st of December. The death-rate was 14½ per cent., and the total expenses of the hospital during the year were \$56,429.91, or an average daily per capita cost of \$1.11.

— A cremation society has been organized in New York, and Rev. J. D. Bengliiss elected its first president. Among its rules are that one half the dues received from active members and all the dues from associated members are to be devoted to an "incineration fund," the purpose of which is to provide facilities for carrying into operation the cremation of deceased members of the society. This is not to include the cost of conveyance of the body to the crematory, but "only the cremation of the body and the return of the ashes" to the friends or relatives. All active members who may have paid in \$10 to the treasury of the society during life, and who may be in good standing at the time of death, will be entitled to this privilege. The annual dues of active members are to be three dollars, with an initiation fee of the same amount.

— A "convalescents' home," for the reception of patients who have been discharged from the different hospitals in the city, but have not as yet recovered sufficient strength to return to their usual avocations, has been in operation for a year, and has cared for forty-seven such cases. The present building is exclusively for females, and it is proposed to procure one for male patients also as soon as the necessary funds have been raised.

— On Tuesday evening, March 1st, the first annual dinner of the "Union of the Titans" came off at Delmonico's, and was an occasion of much festivity. This is a newly-organized club, the first requisite for membership in which is that the applicant shall be at least six feet and two inches in height. The tallest of the "Titans" is six feet six inches, and among the members are Dr. William A. Hammond and Dr. A. E. MacDonald, superintendent of the insane asylum on Ward's Island.

— At the last meeting of the Academy of Medicine a paper on Statical Electro-Therapeutics, or Treatment of Disease by Franklinism, was read by Dr. William J. Morton. Some of the results which he claimed for this form of electricity were, to say the least, very striking, as, for instance, the complete cure (?) of a patient suffering from progressive locomotor ataxia by seven applications. The case was said to be a well-marked one of the disease, and although a considerable time has elapsed since the treatment was discontinued, there has been no return whatever of any of the symptoms.

— On or about the 22d of February a child weighing 21½ pounds was born in Brooklyn, and in honor of the Father of his country it was given the name of George Washington, in addition to two or three others, which were probably thought to be demanded by its unusually large size.

Miscellany.

LETTER FROM PHILADELPHIA.

MR. EDITOR,— Commencement week has come and departed, and although the exercises of the great medical schools cause scarcely a ripple in the life current of such a large city as this, yet the advent of three hundred and odd full-fledged physicians may be considered, in medical circles at least, as of some importance. These brand-new M. D's., with the twenty-five or twenty-eight hundred others graduated this spring in the medical institutions of this highly favored land, are of course urgently required to supply the great need (!) for more physicians that is felt in all our great cities. It will be an interesting question to decide at some future time, when the profession becomes quite full (for there is such a thing as overcrowding even an omnibus), what is to become of those who, after struggling in vain for a foot-hold, finally decide to give up the regular conveyance. Unfortunately, temptations to irregular and disreputable practices are always at hand: specialist may adopt the tricks of charlatan; physician become patent-medicine proprietor, or open a provident dispensary (provident as regards himself), or indulge in venal or criminal practices calculated to bring reproach upon the whole profession. New medical schools are being instituted every year, and the old ones may be counted upon for their quota of graduates, so that whatever misfortune may be in store for our country we need not fear a doctor-famine, unless, indeed, it be of the kind where the doctors themselves are to be chief mourners. Under proper conditions cream will rise to the top, but if the movement be too vigorous fermentation, acidity and general disappointment may be naturally expected. (The force of this observation lies in its application.)

The commencement of the Jefferson College was held on the 12th instant, the valedictory being delivered by Prof. Roberts Bartholow, and, as might be anticipated, it was a model essay, appropriate, able, and brief. The graduating class numbered 205; and the usual prizes were awarded. The president of the board of trustees conferred the honorary degree of Doctor of Laws upon J. Marion Sims, of New York, a distinguished alumnus of the school. At the commencement of the University of Pennsylvania (being the 115th annual session), held on the 15th instant, Prof. H. C. Wood, Jr., delivered the valedictory. The class (including 17 dental graduates) numbered 162. The exercises of both institutions were held at the Academy of Music at noon, with the usual musical and floral accompaniments.

The Alumni Association of the Jefferson Medical College held its annual meeting on the day before the commencement. The oration was delivered by Dr. Hamilton Osgood, of Boston, before a large and appreciative audience of ladies and gentlemen assembled in the amphitheatre of the new hospital building of the college. The subject of the address was *The Need of a Radical Change in the Education and Training of*

the American Girl, and the Physician's Duty Therein, and its delivery was listened to with marked attention, and with evident effect. On the same evening the Alumni Association gave a supper at Augustin's in honor of the orator, at which about forty gentlemen sat down, Professor Gross presiding, which passed off in a most agreeable manner. During his stay in the city Dr. Osgood was the guest of Dr. Keen; besides numerous invitations a reception was given in his honor by Dr. George C. Harlan, and he was warmly welcomed by his many friends.

The Philadelphia Board of Health has adopted and ordered to be published the following resolutions, which are similar in purport to those recently passed by the County Medical Society:—

"Resolved, That the Board reiterates its deliberate and positive conviction that vaccination and revaccination are the only sure and reliable means of preventing small-pox, and that, if universally practiced, this disease will speedily cease to exist. Citizens are, therefore, earnestly urged to have the operation performed without delay.

"Resolved, That the medical profession be requested to use every effort to cooperate with the Board of Health in securing the adoption of this important sanitary and preventive measure."

The small pox epidemic still continues, although its course is a quiet one, and its prevalence is not sufficiently great to excite popular alarm. The physician at the Municipal Hospital reports a decided reduction in the patients under treatment; but the number of deaths reported each week has not greatly declined.

The State Insane Asylum near Danville was lately destroyed by fire, although considered fire-proof; it burned steadily, but slowly, until fourteen of the twenty-two wards, with the central building, were consumed. No accidents to the inmates are reported. The loss amounts to about four hundred and fifty thousand dollars. It will be, probably, rebuilt.

The Dauphin County Medical Society held a special meeting for the discussion of medical subjects at Harrisburg on February 10th. It was the largest meeting of the kind ever held in that section, 118 names being signed to the register. A number of practical papers were read, notably those of Dr. S. Weir Mitchell on *The Mimicry of Disease*; by J. L. Ziegler, of Mt. Joy, on *Medical Education in its Relation to Quackery*; and one by Dr. S. B. Kieller on *Some Diseases Peculiar to Men and Boys*; Dr. John T. Carpenter, president of the State Medical Society, gave some *Practical Observations in Using Chloroform*; and Dr. Kerr, of York, read a paper on *Embolism*. A supper at the Loehel Hotel concluded the exercises, which were much enjoyed by those in attendance upon the meeting.

Two cases of medico-legal interest of recent occurrence seem worthy of mention: A young, unmarried girl, about twenty-one years of age, had occupied a room in a boarding-house for a short time, when, early one morning the inmates were shocked by finding a newly-born child in the yard, where it had evidently been thrown from her window. It was upon investigation found that she had been confined without any friendly aid, and, although she denied all knowledge of the child at the time, yet it was evident that, after the ordeal was over, she had taken the child and, in a moment of frenzy, had thrown it where it could not fail to bring upon her almost immediate detection, as,

indeed, it did. The coroner's jury held her to answer the charge of murder, for which she is now awaiting trial. The second case was one in which a little boy, three years old, was left in charge of his infant brother, a red-hot stove being in the room. The mother returned in a few moments, and found the boy brandishing a red-hot poker, with which he had marked the baby's face and then thrust it into the infant's mouth to stop its crying; it is needless to add that the baby died.

In my last letter I spoke of a new medical school now organizing; were it not a little premature I could now give the names of most of the faculty and the location of the building, which has been used for another purpose until lately. From the character of the enterprise, it will not be likely to be a dangerous rival to any of the existing schools; probably, if the fees are low enough and requirements for graduation not too high, it may succeed in this city. In my next letter I hope to give an authoritative announcement upon the subject.

In view of the multiplication of schools and specialties in surgery, I communicate the following circular, which has lately been distributed here. It refers to a proposed offshoot from a dental college, and, as you see, offers unprecedented advantages.

THE MANAYUNK ODONTALGIACAL COLLEGE AND HOSPITAL OF UMBILICAL SURGERY.

SPRING ANNOUNCEMENT.—In order to increase the facilities for obtaining diplomas, the Faculty of this College assumes to matriculate students by MAIL, TELEGRAPH, or TELEPHONE.

MAIL.—Arrangements have been perfected through which the ridiculous formality of attendance upon the courses of instruction may be entirely dispensed with. The Faculty assumes to direct the reading of the matriculate from time of birth. Names may be entered by MAIL.

TELEGRAPH.—Telegraphic communications will be established with the home of each matriculate in any part of the world. Attendance upon lectures may be conducted by telegraph. Highly interesting, important, amusing, and diversified clinical lectures on Umbilical Surgery and allied anal diseases will be furnished by telegraph to all parts of the world. The anatomico-physiologic-histologic-pathological expressions of each disease will be lucidly formulated, and the harmonistic correlation completely established in the umbilical mansion, which is thus constructed, and which will give safe refuge to the practitioner.

PHONOGRAPH.—Theses may be deposited and recorded in the phonograph.

TELEPHONE.—Final examinations will begin at the beginning of each session, and will be conducted by telephone. The very worthy, and highly honorable, degree of D. U. S. and D. P. will be conferred by telephone. The candidate is expected to bow to the Honorable President of the Honorable Board of Trustees and Honorable Faculty as he approaches the diaphragm of the telephone and receives the degree.

B. Low, D. U. S. and D. P., *Dean*.

The full force of this can be appreciated only by the initiated.

VACCINATION AND REVACCINATION.

MR. EDITOR.—There has been a good deal said pro and con of late in the JOURNAL on the subject of vaccination and revaccination. We do not propose to enter into the controversy going on between other parties, but wish to state a few plain propositions relative to the subject, and in regard to what the people ought to be taught by the profession.

First. There is inherent in the human system an element-principle or humor, which, so far as we know, has never been christened, for which we propose the

name of variolum, and is that upon which the small-pox poison acts, and is usually eliminated or neutralized by one attack of small-pox. This, we think, is a plain, self-evident proposition.

Second. Vaccine virus acts upon the same element, and when well and efficiently applied eradicates it or neutralizes it. This we also regard as a self-evident proposition. If it were not, then would vaccination be of very questionable utility.

Third. Vaccination gives immunity from small-pox precisely in the proportion that it eliminates the variolum from the system. This is very clearly proven by the facts that a person once vaccinated has a very decided immunity against small-pox over those not vaccinated at all, and those vaccinated twice or more have even a better protection than those vaccinated once.

Fourth. The liability to small-pox differs greatly in different individuals, and we have good reason to believe that it differs greatly in the same individual at different times. During epidemics of small-pox the facilities for contagion seem to be very much enhanced by the epidemic influence prevailing, and the facility with which the vaccine virus takes at such times seems to be correspondingly enhanced.

Fifth. In an attack of small-pox you may have ten, a hundred, or a thousand pustules, all of which seem to be necessary to the elimination of the variolum from the system. Could you reasonably expect a single vaccine pustule to be equally efficacious in eliminating these very varying quantities of variolum from the system? Do you think that a single vaccine pustule would be as efficacious in protecting the individual who may have a thousand small-pox vesicles as it would be in the individual who is liable to only ten? Then will it not require much more thoroughness for vaccinating in the one of the cases supposed, so as to give complete immunity against small-pox, than in the other? But can we, by looking at a patient, tell whether he is liable to have a few scattering vesicles, or confluent small-pox? Certainly not. Can we find out? Yes. How? By trial. No one need ever make any mistake in this matter, and may always be qualified to perform his whole duty to his patient. Vaccinate him thoroughly. Not a single little puncture in the left arm, but a half dozen or more, say three in each arm. Eliminate as much of the variolum from the system at the first vaccination as possible. What then? Vaccinate him again, and do it thoroughly. What then? Revaccinate him, and thus continue to vaccinate and revaccinate until he is thoroughly vaccinated, if you will allow me the expression, or till all the variolum, be it much or little, is entirely eradicated from the system,—until you find your vaccine virus will no longer take, but will act as if you put it in the arm of one who has had the small-pox. Then you will feel your conscience clear in having performed your whole duty to your patient. Then, and not till then, can you assure him that you have done all that can be done, and have given him the best protection against small-pox known to the profession, and you can assure him, with a good deal of confidence, that his protection is well-nigh complete.

This, we conceive, is what ought to be taught by the profession to the people, and what boards of health and all those in authority in such matters everywhere ought to understand, and be prepared to issue orders accordingly, and see them executed. When this is

done thoroughly, and done everywhere, we will be far on the road to stamp out from among the ills that human flesh is heir to this loathsome and dangerous disease commonly called small-pox. Truly,

W. E. GILLILAND, M. D.

COATSBURGH, ILL., March 11, 1881.

MENIAL AND HUMILIATING DUTIES.

MR. EDITOR.—A passage in the *Advertiser* of March 15th furnishes food for reflection. In an editorial on Foreign Affairs, it is reported that at a recent festival at Berlin one prince handed the soup to the Emperor, while another handed him the wine, and the train of the Empress Augusta was carried by countesses. The whole affair was treated as a political event, and the ancient families did not refuse to perform "menial and humiliating duties." This is, no doubt, very sad to the believers in the natural dignity of man, but what would such a one say to a rumor which prevails, namely, that at the Faculty meetings of the medical department of the oldest university in America the youngest members are called upon when supper-time comes to perform similar "menial and humiliating duties"? If this be true, is the custom calculated to increase self-respect or respect for their elders among the younger members, or the reverse? JUVENUS.

DIABETES MELLITUS.

MR. EDITOR.—Having been a sufferer for many years from the above-named disease, I send a short account of some features of my case, hoping it may interest your readers. I am now sixty-five years of age. Some five years ago I noticed I was passing more water than usual; but, as I was apparently in perfect health, and knew old men were quite apt to be troubled about retaining their water, I did not think of its being diabetes, and paid no attention to it. Two years ago last autumn I had been driven pretty hard night and day, besides being worried in financial matters. I found myself growing weak and passing water every hour in the twenty-four, and I was compelled to lie by. I had a year before tested my urine, and found it to contain sugar; but as I was well and hearty I paid no attention to it, and here was my error. I think, possibly, if I had commenced four years ago to use proper remedies I could have made a recovery partial, if not complete; and here I would advise any one who suspects that he has the disease to have his urine tested, and if sugar is found, to at once commence treatment; for then is the time, if ever, that a cure may be hoped for. At the time I speak of I found the specific gravity of my urine 1035, and I boiled down a pint and one half, and made two and one half ounces of solid sugar; of course, the natural salts of the urine were with it, but that would be a very small part of the two and one half ounces. I gave up practice, except what came to my office and an occasional visit. I put myself at once on a meat diet almost exclusively, and I took of laudanum one drachm, tincture of nux vomica fifteen drops, and the compound tincture of cinchona, enough to make one ounce. This I took daily, and soon there was a decided improvement; the secretion was less, and the

specific gravity came down to 1020. I kept along for some three months, when all at once my stomach rebelled against meat; I was obliged to go back to a bread and vegetable diet, and I could not retain enough of that to support life and the constant waste of the disease; and ever since I have eaten such things as my stomach craved, avoiding, however, such articles as were especially of a sugar-producing nature. After giving up my meat diet the specific gravity became 1028 to 1030. I have boiled it down to solid sugar many times, and found an ounce to the pint (never less) of solid residue. At the time I was the best, and the specific gravity 1020, I did not boil any down, but the tests showed that it still contained sugar. I have used various kinds of mineral waters without benefit, except that the "Commonwealth" spring seemed to help me for a time. I used it for three months, and it failed to help further. I have used for more than a year one grain of S. morphia in an ounce of tincture of cinchona and from fifteen to twenty drops of tincture of nux vomica, sometimes I have added fluid extract of gentian. I have read that there was a wonderful tolerance of opium in this complaint, and it has so proved in my case; I had never made use of the drug before this sickness, and when I was using the laudanum, by way of experiment I took two drachms at a dose and felt no narcotic effect, or very little; it relieved me, and I was free from pain,—of course the morphia has a similar effect. I cannot sleep under the influence of opium, so what I take is at one dose and as early as nine o'clock in the forenoon. I have found anything that worries the mind will at once make my disease worse, and I am satisfied that those who have this strange disease should avoid anything like severe fatigue of body, and it is even more important that the mind should be quiet and free from undue anxiety. I attribute my present health to the care I have taken of myself in this respect; we are so nervous in this complaint that things often magnify themselves, and it is hard to maintain an equilibrium and be cheerful, but it is certainly worth a great effort. My advice to diabetics is to take the best care they can of themselves, avoid all excitement, or anything that calls for extra exertion either of body or mind. I have very little faith in medication; the opium treatment has seemed to do best for me. I have known several cases of the disease, and nearly all have seemed to go off by overdoing and starting up the disease in its acute form, dying in thirty or forty hours, when they, previous to the extra exertion, were able to attend to almost any light business.

R. K. CLARK, M. D.

GEORGIA, VT., March 7, 1881.

PRELIMINARY KNOWLEDGE OF THE CLAS- SICS.

MR. HOLDEN, at the close of a brilliant oration, recently delivered before the Hunterian Society, in accordance with its provisions for a biennial oration in honor of John Hunter, expressed his opinion in regard to the value of a preliminary classical training for a medical student; and as the matter has been fully as much discussed upon this side of the water as in England we reproduce Mr. Holden's words. The opinion of a teacher of forty years' experience must be of interest even to those who differ from him:—

I propose, sir, with your permission, to devote the

few remaining moments to a question which has of late divided society into two opposite camps, — whether we ought or ought not to require from our students a preliminary knowledge of the classics. Greek and Latin literature, whether the R. C. S., or even the universities, insist on its study or not, will ever be held in the highest estimation. The more completely it should happen to be set aside for a time, the greater would be the force of the inevitable reaction which would bring it again into power. The question about which there is a difference of opinion is plainly this: Is it, or is it not, a waste of time for students to spend so many years of their life in the study of Greek and Latin, preparatory to entering the profession? It is a matter of the utmost importance to us personally, and I should be sorry to lose this great opportunity of expressing my own convictions on the subject.

First, therefore, I will ask you, sir, and all who have taken part of late years in our examinations, whether you have found, as a matter of fact, that ignorance of the classics is compensated for by a knowledge of science, and that the best scholars are the worst anatomists. And this, I take it, would be the case if the question were merely one of economy of time; if the hours which are now said to be wasted in learning classics were really better spent upon other subjects. But, since it is a matter of experience that those who

come before us best prepared in professional subjects are just those who have had the most complete classical training, it is evident that any surrender of this training is designed as an indulgence to the less intelligent and industrious who seek admission within our ranks.

The mind must undergo a long training before it is fit to grapple with science, and if we set aside classical education we shall be ignoring the value of the best system of training which exists. In students who have had a public-school training I have found a fuller development of the logical faculty, — a more cultivated memory, a greater grasp and power of combination. I have found the task of teaching them so much easier that I have no hesitation in saying that I can teach such pupils more in two months than others, who have had no like education, in six.

Bearing this in mind, let us strive to raise rather than lower the standard, by requiring a proof of sound classical training from those who, if they have not had this, have probably had little or no mental training whatever. Above all, let us not further hamper our noble profession, which in nine cases out of ten is taken up as a means of gaining a livelihood, with the stigma of being illiterate, nor subject the youths who are to be the future representatives of English surgery to the danger of being looked upon as "symbols" of an inferior education.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 12, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	750	301	21.20	19.33	8.40	4.00	1.07
Philadelphia.....	846,984	401	125	21.70	6.73	1.99	3.24	11.22
Brooklyn.....	566,689	246	108	27.64	13.01	16.26	6.10	—
Chicago.....	503,304	190	79	23.68	11.58	8.95	.53	4.21
Boston.....	362,535	173	69	20.81	19.08	13.87	.58	—
St. Louis.....	350,522	159	53	17.33	12.67	1.33	.67	—
Baltimore.....	332,190	164	67	17.68	10.37	6.10	3.05	—
Cincinnati.....	255,708	108	35	12.96	18.52	3.70	3.70	.93
New Orleans.....	216,140	140	42	10.00	16.43	2.14	5.00	—
District of Columbia.....	177,638	95	42	3.16	29.47	1.05	—	—
Pittsburgh.....	156,381	71	29	22.54	16.90	1.41	9.86	1.41
Buffalo.....	155,137	59	22	6.78	6.78	5.08	1.69	—
Milwaukee.....	115,578	39	16	17.95	17.9	5.13	2.56	—
Providence.....	104,850	39	7	17.95	12.82	7.69	7.69	—
New Haven.....	62,882	36	9	8.33	27.78	2.78	—	—
Charleston.....	49,999	28	4	10.71	21.43	—	7.14	—
Nashville.....	43,461	21	7	14.29	14.29	—	—	—
Lowell.....	59,485	20	5	35.00	20.00	—	10.00	—
Worcester.....	58,295	26	12	7.69	19.23	—	—	—
Cambridge.....	52,740	15	5	6.67	20.00	6.67	—	—
Fall River.....	49,006	26	8	11.54	—	—	—	—
Lawrence.....	39,178	12	4	33.33	8.33	—	—	—
Lynn.....	38,284	11	4	18.18	—	9.09	—	—
Springfield.....	33,340	13	5	15.38	15.38	—	7.69	—
Salem.....	27,598	7	0	—	—	—	—	—
New Bedford.....	26,875	9	3	22.22	11.11	—	—	—
Somerville.....	24,985	9	2	22.22	11.11	—	—	—
Holyoke.....	21,851	11	7	9.09	45.45	—	9.09	—
Chelsea.....	21,785	5	2	60.00	—	40.00	—	—
Taunton.....	21,213	8	1	12.50	12.50	—	—	—
Gloucester.....	19,329	5	—	—	—	—	—	—
Haverhill.....	18,475	8	3	25.00	25.00	—	—	—
Newton.....	16,995	6	1	—	33.33	—	—	—
Newburyport.....	13,537	4	1	25.00	—	—	—	—
Fitchburg.....	12,405	3	1	33.33	—	—	33.33	—
Twenty-five Massachusetts towns.....	206,977	70	16	18.57	17.14	7.14	2.86	1.43

Deaths reported 2978; 1095 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 571, lung diseases 452, consumption 436, diphtheria and croup 191, scarlet fever 98, small-pox 64, cerebro spinal meningitis 46, typhoid fever 35, diarrheal diseases 35, malarial fevers 32, measles 29, erysipelas 18, whooping-cough 15, puerperal fever six, typhus fever two. From *cerebro-spinal meningitis*, New York 14, St. Louis nine, Chicago six, Baltimore and Fall River three, Philadelphia, Milwaukee, and Worcester two, Boston, Pittsburgh, Taunton, Haverhill and Quincy one. From *typhoid fever*, Philadelphia six, Chicago, Lowell, and Lawrence four, New York and Pittsburgh three, Cincinnati two, Brooklyn, Boston, St. Louis, Baltimore, New Orleans, Milwaukee, Providence, New Haven, and New Bedford one. From *diarrheal diseases*, New York 10, St. Louis and Baltimore five, Philadelphia four, Brooklyn three, Chicago two, Boston, Cincinnati, New Orleans, District of Columbia, Lynn, and Somerville one. From *malarial fevers*, New York 14, Brooklyn and St. Louis five, Chicago three, Baltimore and New Orleans two, District of Columbia one. From *measles*, New York 11, Boston eight, Brooklyn two, Chicago, St. Louis, Cincinnati, Milwaukee, Charleston, Nashville, Chelsea, and Pittsfield one. From *erysipelas*, New York four, Philadelphia three, Brooklyn and Chicago two, Baltimore, Pittsburgh, New Haven, Nashville, Springfield, Somerville, and Haverhill one. From *whooping-cough*, Philadelphia three, New York, Baltimore, and Pittsburgh two, Chicago, Cincinnati, Lowell, New Bedford, Milford, and Westfield one. From *puerperal fever*, St. Louis two, Philadelphia, Nashville, Newburyport, and North Adams one. From *typhus fever*, Philadelphia two.

Twelve cases of small-pox were reported in Brooklyn, 29 in Chicago, three in Pittsburgh; varioloid, three in North Ad-

ams; diphtheria 40, scarlet fever 17, in Boston; scarlet fever 23, diphtheria five, in Milwaukee.

In 44 cities and towns of Massachusetts, with a population of 1,124,888 (population of the State 1,783,086), the total death-rate for the week was 20.44, against 21.99 and 22.79 for the previous two weeks.

For the week ending February 19th, in 149 German cities and towns, with an estimated population of 7,760,748, the death-rate was 25.4. Deaths reported 3791; 1656 under five; pulmonary consumption 611, acute diseases of the respiratory organs 352, croup and diphtheria 132, scarlet fever 81, whooping-cough 51, typhoid fever 40, measles and röteln 27, puerperal fever 22, small-pox (Königsberg two, Lübeck, Breslau, Munich two, Aachen) seven, typhus fever (Posen) one. The death-rates ranged from 14.3 in Lübeck to 37.5 in Munich; Königsberg 25.8; Breslau 24.2; Dresden 21.5; Berlin 24.2; Leipzig 23.4; Hamburg 21; Hanover 22.5; Bremen 26.9; Cologne 34.2; Frankfurt 23.2.

For the week ending February 26th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 21.9. Deaths reported 3195; acute diseases of the respiratory organs 367, whooping-cough 76, scarlet fever 56, small-pox (London 44) 45, diarrhoea 41, measles 34, fever 25, diphtheria 13. The death-rates ranged from 16.7 in Sheffield to 28.6 in Liverpool; Bristol 18.5; Birmingham 19.4; London 21.5; Leeds 23.7; Manchester 25.9; Liverpool 28.6. In Edinburgh 21.2; Glasgow 23.3; Dublin 38.3.

In the 20 chief towns in Switzerland, for the week ending February 26th, estimated population 522,856, there were 31 deaths from acute diseases of the respiratory organs, diphtheria and croup 15, diarrheal diseases 15, measles eight, typhoid fever six, small-pox four, whooping-cough one, puerperal fever one.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.			
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration. Hours.	Amount in inches.
1881.																				
March 6	29.670	37	43	29	79	56	64	66	NW	NW	NW	12	19	11	O	F	O	—	—	
" 7	29.951	40	51	29	68	37	48	51	NW	NW	NW	15	15	10	C	C	C	—	—	
" 8	30.072	41	51	33	61	41	57	53	W	SE	S	6	7	3	C	C	F	—	—	
" 9	29.905	40	48	34	100	93	100	98	E	NE	NE	9	14	28	C	Lt. R	Lt. R	—	—	
" 10	29.514	40	42	38	100	100	91	97	NE	NE	N	20	16	16	Lt. R	Lt. R	O	—	—	
" 11	29.164	39	39	26	90	69	100	86	NW	NW	W	23	27	22	O	O	Lt. S	—	—	
" 12	29.817	37	48	26	78	53	80	70	W	Calm.	E	15	0	6	O	O	O	—	—	
Week.	29.770	38	51	26				75										40.42	3.18	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening; Lt. R., light rain; Lt. S., light snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 12, 1881, TO MARCH 18, 1881.

WHITE, C. B., major and surgeon. Granted leave of absence for three months on surgeon's certificate of disability. S. O. 57, A. G. O., March 11, 1881.

GARDNER, J. DE B. W., captain and assistant surgeon. The leave of absence granted him in S. O. 16, February 8, 1881, Department of Arizona, is extended five months, and so much of S. O. 34, C. S., A. G. O., as relates to him is revoked. At the expiration of his present leave of absence to report by letter to the surgeon-general. S. O. 59, A. G. O., March 14, 1881.

TAYLOR, B. D., captain and assistant surgeon. Now in San Antonio, will report to the commanding officer, Fort Ringgold, Texas, for duty as post surgeon. S. O. 40, Department of Texas, March 7, 1881.

GIBSON, R. J., first lieutenant and assistant surgeon. Granted leave of absence for one month, and permission to apply for fourteen days' extension. S. O. 47, Department of the Missouri, March 10, 1881.

SUFFOLK DISTRICT MEDICAL SOCIETY. — A regular meeting will be held at the Hall, 19 Boylston Place, on Saturday evening, March 24th, at seven and a half o'clock. The follow-

ing papers will be presented: Dr. C. F. Folsom, Some Points in the Early Diagnosis and Treatment of the General Paralysis of the Insane. Dr. J. H. Whittemore will open the discussion. Dr. F. H. Davenport, A Case of Urethritism. Dr. T. B. Curtis will open the discussion. Dr. H. F. Damon, Clinical Notes on a Case of Glanders in a Woman. Supper at nine o'clock. All members of the Massachusetts Medical Society are invited to be present, and join in the discussion.

H. C. HAYEN, M. D., Secretary.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting of the society will be held on the first Thursday of April, at 10 30 A. M., at the Medical Library Rooms, 19 Boylston Place. M. L. Brown, M. D., will read a paper upon The Gynæcic and Obstetric Uses of Chloral Hydrate. Profession invited. HENRY M. FIELD, M. D., Secretary.

CORRECTION. — The cases of lead poisoning in Dr. Minot's paper, printed in the number for March 10th (page 221), were reported by Mr. T. F. Sherman, and not, as erroneously stated, by Mr. F. M. Sherman.

CORRECTION. — In London letter of February 10th, for Dr. Dyer of Spitzberg, read Dr. Dyer of Pittsburg.

Lectures.

THE NEED OF A RADICAL CHANGE IN THE EDUCATION AND TRAINING OF THE AMERICAN GIRL, AND THE PHYSICIAN'S DUTY THEREIN.¹

BY HAMILTON OSGOOD, M. D.

I WILL ask you to bear in mind that I am endeavoring to prove the need of a change in the training and education of the American girl. But I cannot give the minutiae of a new departure. You will have observed that, in the main, my paper is a criticism. It attempts to show the wrong in order to suggest the right way. Consequently, when I approach the education of the girl, it is with no intention of presenting, *de novo*, an arbitrary system. It is rather with the purpose of showing what a girl's education should not include. I have already mentioned some of the errors of the moral training of girls, but you would not expect me to give details of what a moral education should be. In fundamental points we should be in accord, but in detail we should differ. There is a witty illustration of my meaning: "Iron," says the Professor at the Breakfast Table, "is essentially the same everywhere and always, but the sulphate of iron is never the same as the carbonate of iron. Truth is invariable, but the Smithate of truth must always differ from the Brownate of truth." In respect, then, to the moral basis of the girl's education I will, while reserving the privilege of criticism, merely express the hope that it will be true, simple, and sensible. Her intellectual education I likewise approach with diffidence, for, in the words of Herbert Spencer: "To educate rightly is no simple and easy thing, but a complex and extremely difficult thing; the hardest task which devolves upon adult life." And though I am speaking of the purely intellectual education, I do not for a moment mean to have you think I would separate the mental from the moral, or either of these from the physical training. Yet their isolation from each other, and the failure to realize the absolute necessity of their mutual coöperation, are very common, and do much harm. If we would avoid abnormal and unsymmetrical evolution, these forces must develop simultaneously, move together, go hand in hand. And the criticism of the physician would be necessary only when one of this triumvirate were found to be growing at the expense of the other two. "The growth of the plant," says Johannot in his work on teaching, "proceeds systematically, symmetrically, and harmoniously. Stem, bud, leaf, flower, and fruit, come precisely in the succession necessary to accomplish the highest object of the plant. . . . An excessive forcing of stem or leaf will result in a limitation of flower and fruit. These organs, therefore, develop in due proportion without interference with each other, and, as a natural consequence, avoid loss or waste of force." Applying this illustration to education he says: "The object of education, then, is to promote the normal growth of a human being, developing all his powers systematically and symmetrically, so as to give the greatest possible capability in thought and action. These powers must be trained to act harmoniously, so that there need be no waste of effort in any direction." "The question of compulsory education," says Huxley, "is settled, so far as Nature is

concerned. Her bill on that question was framed and passed long ago. But like all compulsory legislation, that of Nature is harsh and wasteful in its operation. Ignorance is visited as sharply as willful disobedience; incapacity meets the same punishment as crime. Nature's discipline is not even a word and a blow, and the blow first, but the blow without the word. It is left to you to find out why your ears are boxed. . . . The object of what we commonly call education — that education in which man intervenes — is to make good these defects in Nature's methods; to prepare the child to receive Nature's education neither incapably, nor ignorantly, nor with willful disobedience, and to understand the preliminary symptoms of her displeasure without waiting for the box on the ear."

But, in giving her mind its appropriate knowledge, we should not forget the period of life through which the girl is passing. Perceptive studies, or those which appeal to the senses, for childhood; studies which awaken the reasoning powers for a more advanced age, prepare the mind for the reflective studies of middle life. But without the preliminary treatment which develops the imagination and the reasoning powers, the judgments formed by the mind at middle age are apt to be faulty and unreliable, because there is an insullient supply of the materials of thought.

This, according to the profoundest students of the best means of mental development, is the method which should be followed from childhood, in order to give the proper mental direction to later years.

Passing now to the age of twelve years, we find the girl going regularly to school, and forming acquaintance with schoolmates. But the mother should know where she is, and with whom, at all hours. And if she have won the girl's confidence, she can easily avert the injurious influence so harmful at this age. This is of absolute importance, for it is now that the girl's character, thoughts, and feelings, are rapidly crystallizing into the form which is to endure.

"The clay is moist and soft, now, now make haste
And form the vessel, for the wheel turns fast."

In another direction, too, this is a critical age. It is now that the peculiar organization of the girl is beginning to assert itself. It is not enough to wait until nature has made her aware of her sex. What she has gained in physical vigor may all be lost, if in her work or play she be allowed to become unduly fatigued. The trainer never allow a young and spirited horse to be overdriven and carelessly exposed. He knows what the effect of such treatment would be when the animal was called upon to show his best power. And it requires but little thought to see that over fatigue in any direction, during the years which immediately precede the announcement of sex, will detract from the girl's power to meet and bear the change. She shall rather be so trained that she will store up strength upon which she can hereafter draw in safety. It is at this early age, then, that I would have the mother begin those lessons in physiology which, apart from such general instruction in this subject as the girl may receive in school, will have an especial bearing upon her sex. The cruel prejudice against making a girl perfectly familiar with the changes she is approaching is as wicked as it is thoughtless. Every day of our practice brings to our observation ills whose origin lies in this mistaken reticence. It not only injures our girls but the generations which follow them. This undoubtedly stands, *facile princeps*, the great error in the

¹ Extract from an address delivered before the Alumni Association of Jefferson Medical College, March 11, 1881. From advance sheets of the College and Clinical Record.

training of the American girl. She is allowed to approach her physical future blindfolded. One day she is a child. The next, all unprepared, in touching ignorance of the meaning of it all, she enters that world which we call womanhood. Shame upon American mothers, double shame upon American physicians, that this is permitted. This, my brother physicians, is the head and front of my essay. This includes all the rest. For, amazing as it may seem, in nearly all the works on education to which mothers have access, this subject is almost absolutely untouched. And who among us, whose solemn duty it is not merely to heal, but to prevent disease, how many of us see to it that the girls of the families which look to us for advice are properly prepared for this important change in their lives? Do you say this should be the mother's care: such instruction it is her duty to impart? So be it. So say I. But what are the traditions of that mother's training? Was it not also *her* lot to find her way along the life path without that guiding influence which her mother should have bestowed? Was *she* shielded and protected, by gentle thoughtfulness, from the dangers of ignorance at the critical age of her life? This lamentable hiatus in the training of American girls is not of to-day's creation, and generations may pass before the error is blotted out. For, the needed change in this direction must begin in the training of girls now growing into womanhood: and let it be with the hope that they, in their turn, will prepare their daughters for womanhood.

Last summer a case of chorea in a girl nearly thirteen years of age showed me the double necessity of preparing her mind for the physical change which was very near. The cultured mother objected, because the child was "so innocent," not realizing that this innocence was merely *ignorance*. I overcame her prejudice, which I found was due to the fact that she in her childhood was neglected, as she was neglecting her child. This is a typical but a sadly common case. In view of their undeniable need of physiological intelligence, it seems incredible that girls are thus purposely kept in ignorance of their own structure, and are permitted to grow up utterly unprepared for the varying stages of their development. But I believe we should find that three fourths of our female patients were not only ignorant of their physiology at this critical age, but, though cultured it may be in other respects, are still ignorant, even though they may be mothers.

Take the average girl of to-day, at the age of nineteen, we will say. This girl, who would blush if obliged to confess ignorance of Buddha, or Apelles, or some fourth-class character of mythology, will calmly admit that she not only knows nothing of the physiology of her functions, but that she is perfectly indifferent to such knowledge. This is a monstrous error; one into which our girl shall by no means be allowed to fall. She shall be so trained, between her twelfth and fourteenth years, as not only to be mentally but physically prepared for the metamorphosis which is coming to her. She is old enough to know how to live physiologically, and shall gradually be taught the great and divine meanings of womanhood. She shall be impressed with a feeling of reverence for her highest mission in life, in spite of as many women's rights doctrines as might fill the shelves of a Bodleian library. The women of to-day who are striving to put off and fly from the true mission of true women, remind one

of the boy, who, in order to rid himself of an aching tooth, filled it with gunpowder, put a slow match to it; and then ran. The girl shall be taught that "if the boy is father of the man," the girl is mother of the man. From the age of twelve to the day of her marriage she shall be made to feel her responsibility toward her future, and those whose lives will, one day, be in her keeping.

I do not forget the admirable exceptions among our women; those who have dignified callings entirely disconnected from, and which exclude the duties of home and motherhood. All honor to them. They are free to follow their chosen path. But the typical woman, no matter how rare her culture, will not fail to confess that the deepest wish of her heart is to become the centre of a home, as wife and mother. It is her nature and her mission. Where can she find a higher? She may wish to follow another way of life. She may be forced to do so. But I agree with a recent writer, who says: "A woman has a right to do everything she can do, provided she does nothing which will unfit her for bearing and rearing healthy children. It is pitiful to think there are multitudes who have no choice between employments, which unfit them for motherhood, and want. It is pitiful that there are mothers who live their whole married lives in conditions which utterly unfit them for the functions of maternity." The best rules of development for women who are to marry will result equally to the best good of women who are not to marry. If the laws are essential to one they are to all. Let it be understood, however, that the duties of home do not deprive a woman of interest in matters outside the family. There is no better influence in social questions than that of an intelligent mother. Until her family is reared, however, the home and her children are her first and highest duty. "No woman," says Sidney Smith, "should forsake an infant for a quadratic equation." Upon the good health, the self-care, the wise living of mothers, depends the future of our country. For, otherwise, how is our country to be provided with stalwart men and noble, vigorous women?

It is only too true that in the past and present of many nations, woman has been so misunderstood and unappreciated that a revolt has caused many to swing to the other extreme. The true mission of women is not to be "merely a cradle and a grave," as Miss Brackett too bitterly says, but that nobler being in whom lies the hope of our race.

"One of Nature's ends, or, rather, her supreme end," says Spencer, "is the welfare of posterity." "The first requisite to success in life," says another, "is to become a good animal." Paraphrasing Herbert Spencer, I would say that to have a nation of good mothers is the first requisite of national prosperity. This is what should be impressed upon the American girl, and she should be taught that her share in this desirable result is to be attained only through conscientious care of her body and its functions. She cannot escape from herself. She cannot change her sex. The restlessness which is so common among our cultivated women is a mistaken and fruitless insubordination; an endeavor to escape the duties which are the glory, and should constitute the chief joy, of woman. Rebellion against them is a criticism upon her Creator.

The mother is the proper physiological teacher of the girl. But she can hardly accomplish this duty without help from the physician. In and through all

this development of the girl's knowledge of herself, his influence should and must almost necessarily be felt. His duty it is to see that the mother clearly recognizes and understands hers.

The girl *will* know what is hidden behind the deplorable mystery which surrounds these subjects, and if she be not told by her mother, she will obtain her knowledge in garbled, imperfect, and indelicate form, out of the home; and her modesty will thus be hurt, and her natural purity be tarnished. But if there be perfect openness between herself and her mother, if she be instructed in a frank and practical manner, the mystery disappears, the purity remains, and the imagination of ignorance will be put at rest. Unbroken confidence between mother and daughter will, moreover, be to the latter a wall of defence against injurious influence. How mistaken mothers are in failing to establish this fearless trustfulness on the part of their daughters!

Our girl is now being fully prepared for the coming change in her physical being, and shielded and protected by the watchfulness of the mother. After she has crossed the threshold of her womanhood she shall be so guided that neither study, exercise, nor amusement can interfere with the onward sweep and development of her physique. Like King Lemuel's ideal woman "she strengtheneth her arms, she girdeth her loins with strength." She shall be shown that, although she may have the studies of the boy, she cannot pursue them with the same unbroken regularity. If this be a disappointment, let her be taught that underlying all the intellectual ambition of the growing girl should be submission to that higher law of sacrifice which every woman must recognize and accept if she would reach her best possibilities. This apparent loss becomes rich gain to her in the freshness of spirit and depth of receptivity with which she renews her work. And if she ask: "Am I to be irregular in study, am I to deny myself legitimate pleasure?" The reply should be: "Yes, if in that way you can attain a higher development."

One especial danger to which the girl might otherwise be exposed, namely, that of cultivating an unhealthy imagination, should be avoided by excluding all pernicious reading, in the shape of the fashionable novel, all conversation which her mother may not share, and moods and idleness which would lead to morbid introspection. In other words, by the use of a variety of means, her thought shall be kept bright, pure, and healthful.

An error of the day is that a girl is expected to complete her education by her eighteenth year. An age at which lads are but little more than half way in theirs. Everything in the shape of culture is crowded into the years during which the girl should be cultivating the physical strength, common sense, and practicality which are to be of life-long benefit to her and her descendants, while half the so-called culture with which fashionable education crams the girl is of little use and is quickly forgotten.

The women who constantly assert that the girl can study incessantly and without physical harm are simply mistaken. "Physical degeneration in girls," says Spencer, "is a result of excessive study. High pressure in education is worse for girls, because they are debarred from the vigorous recreation of boys, and thus the evil is intensified." Less study and more exercise should be their rule. But the two may be so arranged

that the girl will have a truer culture and a better development than if she be allowed to rush, at constantly increasing speed, through her curriculum of education. While confessing that women can work better when their occupation is frequently intermitted, Mary Putnam Jacobi thinks she has proved that only forty-six per cent. of women need periodical rest. I should be glad to question the remaining fifty-four per cent., and do not doubt that the minority would become the majority if duty were obeyed. I would make the rule absolute, that our girl's education should go hand in hand with, and not exceed, her physical growth. If this rule be disobeyed, as is the custom, especially among young women who are ambitious students, the education will be of little value, the physique, perhaps, of none at all. In his monograph on insanity, Dr. T. W. Fisher says "Continued study severely affects the health of young girls. They risk their lives at the *susceptible* period and break down afterward." Upon good health and upon the ability to perform her functions easily and naturally, depends, in a very large degree, the comfort and happiness of women in later years. Our girls rush through the years of their adolescence utterly regardless of the great need of intervals of rest. And if the careful mother or the watchful physician insist upon periodical repose, they submit to it most ungraciously and with an impatient criticism upon their sex which is pitiful. They try to live as if there *were* no swing of tide in their organism. They try to live down and put under reckless foot the necessities of their sex. But it is the old fight with windmills, with this difference: Don Quixote recovered from his hurts, but they in too many cases never do. And yet, when the day comes, they do not hesitate to assume the office of maternity, and thus, as a result of their foolishness and the indifference of their mothers, they bequeath misery unto the third and fourth generation. Influential women write that girls do not need periodical rest. That if, forsooth, they but observe the laws of health they can go straight on, like men. Query: What are the laws of health? The trouble is that laws which are essential to their well-being women consider arbitrary.

A fair reply to these mistaken advisers is the court scene between Choate and Webster. Choate's client claimed that the patent car-wheel of the defendant was an infringement upon his, and Choate, with brilliant eloquence, occupied three days in proving that the new wheel in no way whatever was an improvement upon the original wheel. When Webster rose to reply the court was crowded in expectation of a superb exhibition of forensic power. With one magnetic glance Mr. Webster took in the entire jury, then tilting upon the table the models of the two wheels, he said: "Gentlemen of the jury, here are the two wheels. Look at 'em." He won his case. In this way I would have a medical jury decide the case before us. I would bring before them a girl who has been properly reared and a girl of the high-pressure system, and say: Look at them!

I can mention two women, honored by our sex as well as their own, who are largely responsible for the present restlessness of many of their sisters. They are noble, cultured women, of great influence. One of them confessed to a patient of mine, that last year nervous exhaustion nearly made her insane, and incidentally remarked that at her last confinement she sent off her proof-sheets, and at the same moment called for doctor

and nurse. You would be surprised if I told you her name. The other admitted that in spite of all she had said in public touching the rights of women, her persistent, unrestful labor had so exhausted her that she had modified her views, but would not confess it to any man living, and would not have the public know of it for the world. I could quote other equally significant confessions. These cases are only a fresh suggestion of the battle with the windmills. It would seem as if these women ought to know the exact sense and weight of what they affirm and teach. But do they realize the actual condition of our young girls, and is this condition entirely due to mistakes in dress and party going? Do we physicians not know there is another side?

Original Articles.

THE ELECTRO-MAGNET IN OPHTHALMOLOGY, WITH THE DESCRIPTION OF A NEW MAGNET.

BY HENRY W. BRADFORD, M. D.,

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THE rapidly extending use of the electro-magnet for the purpose of removing fragments of iron and steel from the interior of the eye, the slight attention previously bestowed on this method of procedure, and the imperfect knowledge of the subject displayed in many of the published articles, have induced me to bring forward the following views. They are the result of several years' practical study. And their main object is to demonstrate that in the application of a properly constructed magnet we possess an efficient means of treating cases for which enucleation has hitherto been practically considered the sole resort.

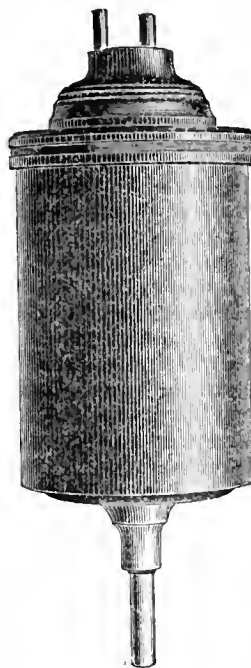
Magnetism may be applied to the eye from either a permanent or an intermittent source, that is, either from a so-called permanent magnet, which, once excited, retains its magnetic power indefinitely, or from a magnet which becomes such only when excited by the electric current. And the superiority of the latter is incontestable. It exceeds its rival by many times in power, when of less weight and smaller size. The permanent magnet is, moreover, open to the objection of being liable to a constant dissipation of its energy upon receiving any sudden shock or blow, upon moving across the magnetic meridian of the earth, and even when at rest, unless guarded by an armature whose weight nearly equals its suspensive power.

The electro-magnet must then be the one employed for the purposes of ophthalmic surgery. And in modeling such an instrument for use about the eye, it is evident that we must combine the minimum of size with the maximum of power. To this may be added, for the sake of convenience, with the smallest and most compact battery that proves itself available.

It is in precisely these three requisites that previous electro-magnets have been deficient. When small their power has been insufficient. When large they have been clumsy, have supplied little power in proportion to their size, and have required a large number of cells to develop their full force.

Having, in the course of the experimental study of his subject, constructed some fifty magnets, of every variety of shape and size, I would advance the following magnet, as giving the best results accomplished:—

The core is composed of soft Norway iron, one third of an inch in diameter, and two and one half inches in length; to one end of this solid cylinder is riveted a flat circular disc of the same material, one inch in diameter, and one sixteenth inch thick.



The surrounding helix is composed of insulated copper wires, weighing twenty-nine grains to the foot, making eight convolutions of one and three quarters inch in length.

The polar extensions are respectively five, four, and three thirty-seconds of an inch in diameter, and one half inch in length; their suspensive power equals twenty, sixteen, and eleven ounces each; when an armature of soft iron, one inch by one tenth in diameter is used, which is within two ounces of the saturation point.

The battery used is a single bichromate of potash cell, having eight square inches of negative surface. The magnet weighs about five ounces, and the intensity of its field by the addition of another cell is made as great as that of a magnet capable of lifting a ton.

The use of large magnets capable of lifting enormous weights offers no advantage over the one above described, as their field is no more intense, and, unless the foreign body is of many pounds weight, does not exert any greater force. It may be laid down as a law that the *size* of the magnet should be in proportion to the size of the body acted upon; if a large body of iron is to be suspended, then a large battery power and correspondingly large magnet must be used, but should the foreign body be of small size such as would be met with in the eye, a small single cell magnet magnetized to saturation will give the same amount of suspensive force, as the magnetic field of each will be the same in intensity, differing only in size.

In regard to the quality of material nothing but the most soft and pure iron should be used; the use of impure commercial iron is open to the objection that its saturation point is much lower than that of the brand known as Norway iron, and as it retains its magnetism, upon making attachment to the battery a second time this may have to be overcome, thereby raising the temperature and lowering the magnetism; this takes place, if the poles of the magnet are reversed, by connecting the battery in a different manner than at the first.

Having finished the construction of the electro-magnet we will pass over to its application and use in ophthalmology.

Foreign bodies that enter the eye may lodge in any one of the following structures, and, commencing with the most superficial, the cornea, they might pass through the anterior chamber, the iris, lens, vitreous, and choroid. Of the metallic substances which enter the eye none are removable with the magnet except pieces of iron and steel. Those that enter and lodge in the cornea may be divided into two classes, first

those minute fragments which enter its surface and are removed by means of the needle, and over which a magnet has no practical effect because of their small size, and, second, those which have an appreciable size. These latter may be extracted in the following manner: The point of the above-constructed magnet is brought in direct contact with the foreign body, and then moved away to the distance of a fourth of an inch; this manœuvre is repeated several times, and if the case is seen before the corneal wound has had a chance to heal, the foreign body will finally be found adhering to the point of the instrument. If, however, the wound has healed a change in the procedure is necessary. While keeping the magnet in close proximity to the foreign body, an incision through the wound is to be made for the purpose of allowing a free exit, the manœuvre of touching and withdrawing the instrument must be gone through with again and again, and ultimately the foreign body will be easily removed. These two methods are entirely sufficient for the extraction of all fragments in this tissue, as long as any part of them is in the cornea, even though the greater portion of their bulk projects into the anterior chamber.

The anterior chamber may be the resting place of a fragment, and if so, it should be drawn to the margin of the cornea, and extracted through an incision in that region either by the forceps or magnet, at the option of the operator, who should bear in mind the importance of keeping the magnet in close proximity to the metal to be extracted if forceps are used, in order that the fragments may not be lost by means of the forceps slipping.

Fragments situated in the iris may be extracted by two different methods by the use of the attractive or suspensive force; in the first method the magnet does not enter the eye at all, but exerts its influence from the outside in the following manner: The eye is seized with a pair of fixation forceps, an assistant keeps the point of the magnet directly over the fragment imbedded in the iris, the operator, with a stop needle, enters at the margin of the cornea nearest the fragment, in a horizontal plane, and with the extremity of the needle loosens the fragment from its point of attachment, the magnet then seizes and withdraws it to the edge of the cornea, where an incision is made for its removal. The second method, which is by far the simplest, is to make an incision nearly at the edge of the cornea, and pass the point of the magnet directly inwards until contact is made, and upon withdrawal the fragment will be found attached to the polar extension; the certainty of this fact is assured, as this magnet is able to draw through normal iris tissue a fragment of iron the size of a pin head.

Fragments imbedded in the lens may, if a traumatic cataract has formed, be removed by either of the above stated methods. If, however, a foreign body is found resting against the anterior capsule and external to it, the magnet alone must of course be used to effect its removal, an incision through the margin of the cornea being practiced for that purpose.

Fragments in the vitreous may be classified under two heads: those that are fixed in position, and those that are free; in the former case no attempt at removal by means of the attractive force of the magnet will be successful, except by bringing the point of the instrument in the closest proximity to the foreign body when we no longer use this power, but its associate,

the suspensive force. In other words, contact with the body should be made with the magnet in order to overcome any adhesions that may exist. This, however, does not apply when the fragment exists in the vitreous, unattached to any surrounding tissue, for then the attractive force of the magnet will draw the body to the choroid at the nearest point, from which position it can be removed through an incision; this action, however, is not an instantaneous one, for the time needed in the manœuvre will vary according to the consistency of the vitreous and size of the foreign body; should the fragment be fixed in the substance of the choroid and sclera the eye should be rotated in the necessary direction until the site of impactment is brought into view, and in order to accomplish this some division of muscle may be necessary in order that sufficient rotation may be accomplished. An incision is then made as close as possible to the imbedded body, and the magnet, which, during this time, is held in position to keep the fragment from being dislocated, should be passed straight into the eye, avoiding all lateral movements; upon withdrawal the fragment should be found adhering.

Having stated the method of treatment for fragments which may lodge in any of the different tissues of the eye, a few remarks in regard to the general facts of the employment and use of the magnet may be introduced. The amount of suspensive power of any magnet, when saturated, as every magnet used in ophthalmic surgery should be, depends upon the size of the foreign body. Hence, the larger the fragment the more probable its removal, and, conversely, the smaller the fragment the more difficult its extraction. Finally, a point may be reached where the resistance to be overcome exceeds the amount of polarity capable of being induced. This is illustrated in the case of minute foreign bodies in the cornea, where the magnet is of no avail. All incisions for removal of foreign bodies anterior to the plane of the lens should be marginal incisions of the cornea, those that concern the vitreous should be scleral, and made posterior to the ciliary border; in both cases, by so doing, the ciliary body is avoided, and in the latter case the surrounding tissues form the best support for the wound.

One important point in regard to all incisions made for the entrance of the magnet, and the removal of a foreign body from the eye, is *that the cut should be not one with parallel edges, but T-shaped*, as in the former case, when the extraction of the foreign body takes place, it is invariably stripped off the end of the magnet, and is retained at the site of the wound, or drops into the interior of the eye. This is a foregone conclusion unless the lips of the wound be held apart, and no amount of skill or carefulness upon the part of the operator can guard against it, unless the incision is of the above-mentioned shape.

Every magnet having a north and south pole, the supposition would be that they would have the same amount of suspensive force: this, however, is not so, and the explanation of this fact must be sought for in the laws of tension of the electrical current. Should we wish to gain the maximum of attractive force the magnet must be constructed with a diameter proportioned to its length as one to twenty-four or more, this of course, requiring more battery power.

The following cases of removal of fragments of iron and steel from the eye have occurred in the clinic at the Massachusetts Eye and Ear Infirmary. This elec-

tro-magnet or modifications of it have been used, and the gradual decrease in size and the increase in suspensive force of the instrument are worthy of notice.

CASE I. November 18, 1879. F. S., machinist, aged twenty-four, received a blow upon the eye while at work chipping steel; piece penetrated cornea, and lodged in the substance of and posterior to the iris, with an exposure of only a point of one of its extremities upon it. The lens was opaque. Iridectomy was attempted, but unsuccessfully, hemorrhage ensuing, the fragment disappeared, and could neither be seen or felt; the point of the electro-magnet was then passed into the eye at the place where the foreign body had been situated, and after the second trial it was seen engaged in the wound and removed with forceps. The magnet used weighed seventeen ounces, and had a suspensive force equal to eight ounces. Dr. F. P. Sprague, in whose clinic the case occurred, soon after removed the cataract, and when last seen, August 16, 1880, the patient had vision of six eighteenths.

Details of the second and third cases occurring in the services of Dr. B. Joy Jeffries, and Dr. C. H. Williams, may be found in the December 30, 1880, number of the Boston Medical and Surgical Journal. The magnet in each of these cases weighed eight ounces, and the ratio of suspensive force had increased to sixteen.

In the fourth case, that of J. S., stone cutter, aged twenty-seven, who came to Dr. Henry L. Shaw, the foreign body, a thin scale of steel, had passed through the cornea, and projected nearly two thirds its diameter into the anterior chamber. As the corneal wound had partially healed over the fragment, all attempts towards its removal were unsuccessful until the wound was reopened with the knife, when the fragment was immediately grasped by the magnet and withdrawn. The weight of the instrument, whose construction was the same as previously described, was five ounces, and its suspensive ratio had increased to over twenty.

The point of the magnet, shown in the engraving, can be removed, and smaller ones attached. Several of these accompany the instrument, which may be obtained of the manufacturer, Thomas Hall, 19 Bromfield Street, Boston.

THE TREATMENT OF STRAINS AND SPRAINS BY COLLODION.¹

BY A. S. BLODGETT, M. D.

PHYSICIANS are called upon to treat a great number of injuries to the joints in which there is no discoverable fracture or dislocation, but which are considered to be partial dislocations of the less mobile articulations, accompanied by more or less extensive rupture or laceration of the ligaments about the articulating surfaces, with some degree of effusion into the cavity of the joint, and often a very considerable amount of hemorrhage and sanguification in the neighboring soft tissues. The nature of the injury makes its recovery a gradual process, the tissues involved are often those in which reparative operations are carried on slowly; the external swelling and the effusion into the articulating cavities are both mechanical hindrances to recovery, so that healing of the lesion can hardly be looked for until they have subsided.

¹ Read before the Suffolk District Medical Society, February 29, 1881.

Added to this is the fact that the most frequent seat of this class of injuries is some joint in the articulations of the ankle or foot, and we have in the location of the accident, perhaps, the most important obstacle to a speedy recovery from the injury. There are but few persons who so completely follow advice as to grant the injured limb freedom from use, for most people will persist in a certain amount of walking with the injured foot under any circumstances. It is often impossible to convince the patient that it is necessary to favor a *strained* joint for the same reason that this is necessary in a dislocated one. Oftentimes the difference between a strain and a dislocation is simply one of degree.

For these reasons the public has learned that recovery from a strain is usually a very slow process, subject to frequent interruptions from the many accidents to which the foot and ankle are exposed in walking, which constantly retard recovery and often are so severe as to prevent any reparative process at all. The formula of the domestic medical adviser that a sprain is often a more prolonged injury and slower to heal than a fracture or a dislocation is, therefore, in most cases correct. The treatment of sprains and strains is often in the highest degree difficult and unsatisfactory; the injury, when located in the foot or ankle, is in a part of the body where the anatomical proportions of the extremity make it unusually difficult to apply many desirable forms of external dressing. The whole limb is rendered useless for purposes of locomotion by any special treatment of the injured portion, and the discomfort and annoyance to the patient are very considerable.

Cold applications or evaporating lotions often macerate the skin and occasion soreness, and the chilling sensation is sometimes so uncomfortable, not to say harmful, to the patient that in some cases this mode of treatment has to be abandoned.

If there be an open wound at the seat of the strain or sprain the treatment of the case is still further complicated. An apparatus for restraining the limb in an immovable position is not often advisable, because of the swelling and other inflammatory conditions of the limb, and it is not desirable to apply an unremovable dressing to any lesion where it is possible to avoid it. It is safe to say that few patients would submit to it if proposed.

It has been my fortune to see quite a number of cases of this injury, and I have treated them according to the methods generally employed in such accidents, and have met with the average amount of success in their recovery; that is to say, after a longer or shorter period of disability the patients have regained the use of the joints, with the usual experience of relapses and weakness for a certain length of time afterward, when the limb is usually fully restored.

In the winter of 1878 I sprained my own ankle, and within the usual time found the parts all about much swollen, the pain considerable, and disability nearly complete. I tried to adjust a bandage, but succeeded only indifferently well, for at the best it would not do what was necessary, and was not easy to retain in place. Treatment by evaporating lotions was so troublesome to me that I soon discontinued all measures of that sort. I was resigning myself to let the sprain take care of itself, when it occurred to me that the application of collodion so prepared that it would contract in drying might be of some service. I made the trial, and was surprised and pleased at the result. For a

few minutes no appreciable effect seemed to follow, but after several coatings there commenced a contraction of the whole layer of collodion from all directions at once, to a much greater degree and in a much more efficient manner than any bandage could possibly effect. The contractile power of the collodion was so great that it seemed as if it would divide the skin at the border of the film. Some of the hairs around the ankle were accidentally included in the collodion film, and were so violently pulled upon that several of them were actually drawn out of the skin. The discomfort attending the contraction of the collodion subsided in a short time, and gave way to a feeling of coolness in the ankle and relief from the pain. The skin became drawn into wrinkles in all possible directions, with a positive and marked diminution in the measurements of the ankle, due to the decrease in the effusion in and about the injured part. After some hours the collodion film cracked in many directions, thus becoming divided into small scales, which I picked off. The skin was not in the least irritated or inflamed by the application. Another fresh coating consisting of several layers of collodion was at once applied before putting the foot to the floor, and the same powerful contraction and a similar diminution of the swelling was effected as at first. In the short space of three days the ankle was restored to its original size, and there was a total absence of pain and tenderness in the joint. I was able to walk without pain, unless the foot was set upon some inequality in the ground, when the strained place of course became painful. In a week I found myself quite well, and have never had a relapse, which I consider the more remarkable as I am not particularly careful, and am upon my feet a great deal.

Soon after this time a pedestrian of some note slipped in a walking match and strained his right ankle. He was ambitious, and considered the accident too trivial to merit attention, and frequently hurt the ankle by standing and walking upon it. In a few weeks his ankle was swollen, tender to the touch, and painful in walking, subject to continual injury from the slightest misstep, and the occasion of much inconvenience to the patient. In this unfavorable state of affairs, treatment by collodion was advised, and the patient left for New York. I have not seen him again, but heard a few weeks afterwards that by the use of collodion he had fully recovered from the weak condition of the ankle, and was less liable to hurt it by a mis-step.

CASE III. A physician in this city made a misstep upon a grating over a hole in the pavement, and fell, spraining the ankle badly and also inflicting a deep punctured wound by some blunt instrument which could not be found afterward. The wound had lacerated edges and a large opening from which a portion of fatty tissue was protruding. The whole foot was greatly swollen, pain was considerable, and the disability complete. With scissors the protruding fragments of fat tissue were cut away, even with the surface of the wound, a square piece of clean, soft linen was laid upon the wound, and over this a larger piece of adhesive gold-beater's skin was applied, thus sealing the wound from the air. Collodion was then applied in several layers over the whole, and continued for a considerable distance upon the uninjured parts of the foot in all directions. When this was dry and firm, cold evaporating lotions were directed, and were faithfully applied. The effect of the cold was fully obtained in the diminution of heat in the swollen foot, but the

most desirable feature was the entire absence of any maceration of the skin or chilling sensation. It was, in fact, a *dry cold*, such as is obtained from an ice-bag, so thoroughly was the foot protected from moisture by the collodion. Not a drop of water reached the wounded spot, and nothing was discharged from it but a little clear serum at the time of the first application, which appeared to be mechanically squeezed out of the flesh from the compression of the tissues by the collodion. The pressure of the parts beneath by the contraction of the collodion film was moderately painful for a few minutes, and then absolute ease was obtained. There was no return of pain. The wound was not disturbed, the dressing was not changed. Healing of the lacerated surface took place by first intention and without suppuration, and, contrary to advice, the patient was walking in four days, without pain, and has remained perfectly well ever since.

CASE IV. An athlete, while turning somersaults, failed to alight where he had intended to, and came to the floor with the right foot resting half on, half off, a thick mat. The result was a severe sprain, which the patient aggravated by endeavoring to "work it off," by standing squarely on the foot, rubbing it, etc. I was called the next morning, and found the foot much swollen, painful, hot, and entirely disabled. After bathing and carefully drying it, collodion was applied over the seat of the sprain, and carried for some distance on to the sound skin around. Vigorous contraction followed, and cold evaporating lotions were applied. In twenty-four hours the swelling had almost entirely subsided, the temperature of the part had sunk to normal, the pain had disappeared, and the relief was so great that the patient felt inclined to put on his shoe. Here, too, the effect of *dry cold* was obtained. Only two visits were made, and in four days the patient was walking in a high-laced shoe, without pain or discomfort. He was advised to continue the collodion for at least two weeks. I do not know if he followed my instructions, but he is perfectly well, and practicing athletic feats every day.

CASE V. A banker on State Street stepped from a horse-car, and strained his foot. He walked a little every day upon the injured foot, and every day he would in some way "tip it over," as he said, until it grew very painful, and threatened to become permanently weak. Under these unfavorable circumstances he was advised to apply collodion, and did so. After five days he reported that the pain and tenderness had entirely subsided; the liability to "tip over" was becoming remarkably less, and the feeling was as if a stout, supporting bandage were accurately adapted to the foot and ankle, which exercised gentle and continuous pressure in any position of the foot. The continued use of the collodion in this gentleman's case, also, has resulted in a perfect cure, when the prospect was that the ankle would remain weak, and become easily strained by any false step.

CASE VI. A young gentleman strained his foot in the gymnasium, the location of the injury being in the articulation between the scaphoid and the cuneiform bones. Before I saw the patient he had already made a vigorous application of tincture of arnica, followed by a similar application of a domestic preparation called "balm of Gilead," which is a tincture made from the buds of the tree which is known by that name. I did not know of this when I examined the ankle, which I found much swollen, very hot, and quite pain-

ful. The superficial tissues were quite oedematous and boggy, and the general appearance was that of a bad injury. It was impossible to examine the state of the joint satisfactorily on account of the pain and swelling, and collodion was applied as in the other cases. The next morning the swelling of the foot was not diminished but was rather increased, and beneath and around the film of collodion was an acute traumatic eczema, the result of the applications which had been made to the ankle the day before, which was also developed on the right hand of the patient, where the lotions had come in contact with the skin while rubbing the foot.

In this case all active treatment of the strain was at once discontinued, and the foot and hand were wrapped in cloths spread with diachylon ointment, which had the effect of gradually reducing the eczematous inflammation, until at the end of three weeks a large shoe could be worn, and in one week more the patient was able to go to his business. The strain was not materially influenced by the treatment of the skin disease, but was necessarily kept at rest, which did it some good. Upon trying to walk, however, at the end of three weeks, it was still weak and painful. Collodion was now applied with the effect of rapidly increasing the strength of the foot, and all pain soon disappeared. The patient has been to his office every day, and has no further discomfort.

CASE VII. Mrs. J. A. made a misstep, and had the usual symptoms of sprain, namely, pain in using the foot, considerable heat, and very great swelling. Collodion was applied, as in the other cases, with the effect of at once reducing the effusion, and in a week the foot was no longer painful in walking, though still somewhat weak. In a fortnight the recovery was complete, and although the patient is a large and heavy woman there has been no relapse.

CASE VIII. F. P., an oarsman of considerable celebrity, slipped while running, and suffered a subluxation in the articulation of the fifth metatarsal bone of the left foot with the tarsus. The injury was accompanied by a noise like the breaking of a stick, which was distinctly audible to the bystanders. When I saw him the foot was painful to the touch, swollen, hot, with all the signs of an extensive injury to the joint, and a partial dislocation of the metatarsal bone, which was more freely movable than its fellow on the other foot. The foot was gently washed, and then parallel lines were drawn upon the skin with ink. Collodion was applied in six layers, and soon a powerful contraction supervened with the effect of diminishing the distance between two sets of lines from 12.5 mm. to 10 mm., or twenty per cent. of its breadth of surface, and from 15 mm. to 12 mm., or twenty per cent. of its breadth respectively. The ratio of contraction is strikingly similar in these two measurements, and I feel quite certain that other experiments will show a permanent coefficient of contraction which will only vary somewhat in amount, according to the location of application and the quality of collodion employed.

The uniform result which followed the use of contractile collodion in these few cases seems to me a sufficient reason for desiring to call the attention of the profession to this method of treating strains and sprains, particularly in and about the ankle. These cases may be supposed to represent the majority of such injuries as they present themselves in daily practice, and I consider them without doubt to be such as would other-

wise have been a source of trouble for weeks, as is usual under ordinary conditions. The treatment by contractile collodion greatly accelerated the recovery, besides restoring to the injured parts an almost perfect immunity from relapse, which is the exception in the healing of strains and sprains.

I do not remember ever to have heard of the use of contractile collodion in the treatment of sprains, and I have never known of its being employed by any person for this purpose previous to the injury which I sustained in my own ankle. This was my first experience in its use, and the result was so satisfactory that I have employed it in all appropriate cases occurring in my practice since that time. In each case its action has caused great surprise to the patient, and the treatment thus far is perfectly satisfactory. I do not know any objection to its use either from its composition or from its retracting power. It seldom causes any irritation of the skin, it does not interfere with the circulation, it never endangers sloughing. The fact seemed to me quite remarkable that, although the contraction was very powerful around the ankle, there was never any puffiness or swelling about the toes or any part beyond the ankle. I do not think a bandage could possibly be applied so as to exercise a similar compression upon the parts beneath without occasioning swelling of the parts beyond the bandage. A very desirable quality in collodion in the treatment of any accompanying wound, as in Case III., is the fact that it forms an impervious covering over the wounded surface, thus hermetically sealing it from the air and from the dangers which often threaten an open wound by infection from this source.

The adaptability of this mode of treatment to cases requiring the application of cooling or evaporating lotions is also of great advantage. The refrigerant is applied directly to the points where such an action is most desirable, and exercises its full force in the way of reducing the temperature of the part, and yet it does not absolutely touch the skin. The result of the protection to the skin is, that the effect of a dry cold is obtained instead of a wet, chilling cold. The skin does not become macerated and soggy from the action of the cold application, and the sensation of the patient is much more comfortable, not to say agreeable, than from the contact of a refrigerating application. Indeed, the film of collodion is so admirable a conductor of heat that I have seen the temperature in a sprained ankle become reduced from this alone, when I am convinced that without the collodion film an evaporating lotion would have been indispensable in the local treatment of the injury. The skin is not thickly covered as by a bandage, but a thin transparent film is spread evenly over its surface, through which every symptom in the injured part can be distinctly and clearly recognized and every shade of color in the skin be plainly discerned. After some hours the film already applied becomes cracked in the lines of its wrinkles when it may be easily peeled off and a new film immediately applied to the same spot, by which all the benefit of a new, fresh compression of the parts is at once obtained.

The treatment may be continued indefinitely. Before applying the collodion it is advisable to gently wash the part to be treated with soap, in order to remove any oily or greasy matter from the skin. These substances might decompose beneath the film and irritate the skin, and they might also prevent the collodion from adhering perfectly in every part. It is

desirable to avoid both these contingencies, and for these reasons I always wash the ankle and dry it carefully by pressing a towel upon it *without rubbing*, by which the moisture can be completely removed, when the collodion may be at once applied. Each additional coat of collodion strengthens the layers already applied, thus acting with a cumulative power in compressing the part and reducing effusion about the seat of injury.

Among the advantages of this mode of treatment are, briefly, prolonged elastic compression in parts notoriously difficult to bandage properly; waterproof protection to the skin from external irritants or applications; hermetical sealing up of wounds in the region of the strain or sprain; constant access to the part without the removal of dressings; an uninterrupted view of every part of the injured limb; reduction of heat in the tissues; great acceleration of the process of healing with perfect restoration of function; a great degree of immunity from relapse; and absolute simplicity in application.

So far as my limited experience warrants an opinion of collodion in the treatment of strains and sprains, I am inclined to consider it by far the best, simplest, and most satisfactory method I have ever known, and I am confident that others will obtain equally pleasurable results in similar cases. I think it more than probable that collodion may prove valuable in the treatment of certain other diseased conditions, upon which I trust to be able to communicate some observations at a future time.

The degree of contraction depends much upon the quality of collodion employed. There is a *flexible* collodion which contains castor oil; this does not contract at all, or but very slightly, and will not do the work. The so-called "*contractile* collodion" must be employed for this purpose. It yields uniform and satisfactory results and is quite durable. It is very volatile and should be kept stoppered, and when being used the finger should be tightly applied to the mouth of the bottle. It is also liable to explode, from the ether it contains, if brought too near a flame, but is fully as safe as ether, and we all use this agent by day or by night without accident.

To obtain the contractile effect of collodion it is necessary to apply several coats successively, one upon the other. I think I have never applied less than six layers, which is easily accomplished as the collodion dries very quickly and a second coat can be applied almost as soon as the first is finished. If for any reason it should become desirable to remove that which has been applied this can readily be done by means of a small quantity of ether, which dissolves the collodion with great readiness. This will hardly be necessary, as the collodion, even if applied to a part where it were not required, causes at most only slight inconvenience, but not great pain, and is not productive of dangerous results.

— The *British Medical Journal* is responsible for the statement in a late article that there has been only one single outbreak of trichinosis recognized in England, and that was from eating the flesh of a home-bred pig.

— The Fisk Fund Prize Essay for 1880, on the Sympathetic Nerve and its Relation to Disease, by C. V. Chapin, M. D., has been published by the trustees of the fund, and is to be had at Messrs. A. Williams & Co.

RECENT PROGRESS IN THE THEORY AND PRACTICE OF MEDICINE.

BY GEORGE B. SHATTUCK, M. D.

INFECTIOUS (SO-CALLED ULCERATIVE) ENDOCARDITIS.

DR. WILLIAM OSLER,¹ of Montreal, discusses this comparatively rare disease, which has only received attention within the past few years, in connection with seven cases, one in a cow, of which he was cognizant, and all accompanied by autopsies. His paper is instructive and interesting, and is rendered more valuable by carefully executed plates of the microscopical appearances of the endocardial vegetations. We make such extracts from it as space will allow. Under the terms *diphtheritic*, *ulcerative*, *malignant*, *septic*, or *infectious* endocarditis, *arteria pyæmia*, *mycosis endocardii*, physicians now recognize one of the most formidable of cardiac affections, characterized by a peculiar morbid process on the valves, blood contaminations, constitutional symptoms of the typhoid or pyæmic types, and usually associated with multiple emboli.

With regard to the nomenclature, he thinks the terms *infectious* and *septic*, as given by Jaccoud,² better than the others. Against the name *ulcerative* is the fact that there may be no actual ulceration on the valves, and there may be, on the other hand, endocardial losses of substance without the special constitutional disturbances by which the disease is characterized. The term *diphtheritic* is good, in so far as it expresses a resemblance in the histological features of the valvular disease to that of true diphtheritic exudation, but this is scarcely sufficient ground for its use; and it is, in a way, misleading, indicating a relation between diphtheria and the disease which is not known to exist. The name *mycosis endocardii* certainly expresses a striking feature of the local process, but with our present imperfect knowledge of the relation of the micrococci colonies to the disease, such a designation is, to say the least, premature. On the other hand, the term *infectious* presupposes no special view as to the nature of the local process, and at the same time indicates, as Jaccoud says, a constant and exclusive character of the disease.

It would appear that, clinically, three classes of cases are included in the disease known as ulcerative endocarditis, and he thinks it important that a distinction should be made between them. We have:—

(1.) Those cases in which the disease appears without any obvious cause, either spontaneously or in connection with rheumatism or some other affection. The term *infectious* might be applied to this class. It is the *arterial pyæmia* of Wilks, the primary ulcerative endocarditis of some authors.

(2.) Those in which the endocardial disease is secondary to some inflammatory focus—acute necrosis, puerperal endometritis, etc. To these the term *septic* might be applied.

(3.) In certain cases of chronic valvular disease an acute endocardial process may be engrafted (recurrent endocarditis), presenting anatomical features similar to the infectious form, but not characterized by the same clinical picture, the patients dying with the symptoms of chronic heart disease.

The chief points to which Dr. Osler wishes to call

¹ Archives of Medicine, February, 1881, page 44.

² Pathologie Interne, tome i., and Nouveau Dictionnaire, tome iii.

attention, and which are illustrated by the cases are : —

- (1.) That the majority of cases of infectious endocarditis occur independently of rheumatism.
- (2.) The frequency with which infectious endocarditis is associated with pneumonia.
- (3.) The production of acute multiple aneurisms of the aorta in the disease.
- (4.) Certain histological features in the endocardial vegetations, and particularly a remarkable fungoid growth met with in one of the cases.

First. — The fact that *primary infectious endocarditis* in the majority of cases does not occur in connection with acute rheumatism, as is almost universally stated to be the case. Taking the reports of fifty-seven cases of this kind, in only fifteen is there any mention either of *acute rheumatism* or of previous rheumatic attacks, that is, in 26.3 per cent. Though it was not possible for Dr. Osler to make an exhaustive review of the literature of the subject, these cases were gathered from the British and American journals, transactions, hospital reports, and from some of the recent French and German journals. He excluded those due apparently to septic infection, as from whitlow, urethral laceration, acute necrosis, and the puerperal condition. Nor did he include those instances described as ulcerative endocarditis in chronic valvular affections (with dropsy, etc.), class three of above division, often accompanied with aneurisms of the valves; but it may be mentioned in this connection that Dr. Ogile, in the ninth volume of the Transactions of the Pathological Society of London, gives twenty-one cases of aneurism of the valves from ulcerative endocarditis, and of eighteen of these cases in which a history is given, fifteen are distinctly stated not to have had rheumatism. Kirkes,¹ the pioneer in this department of pathology, noticed the fact of its independent occurrence. Dr. Osler confesses to having been considerably surprised at the result of this investigation, as he was previously of the opinion, expressed so strongly by Rosenstein² and others, that the great majority of the cases were met with in connection with acute rheumatism.

The second point to which he directs attention is the frequency with which this disease occurs with pneumonia. He naturally regarded it as not a little remarkable that in five cases in succession this combination should be met with. Cases II., III., IV., and V. appear to have set in with the symptoms of ordinary pneumonia. In Case VI. it did not develop until after the patient had been in hospital for some days. In all the disease appeared to be of the primary lobar form. In Cases III., IV., and V., at the time of the autopsy, the stage of hepatization had passed, and resolution had begun. Of twenty-one cases of primary infectious endocarditis recorded in the Transactions of the Pathological Society of London, hepatization of the lung is mentioned in ten as a concomitant pathological condition. Of the fifty-seven cases which were analyzed, twenty-two were complicated with or occurred in pneumonia, that is, 38.5 per cent. What is the nature of this connection? Is the inflammation of the lung a complication of the endocarditis, or *vice versa*? In most of the cases it is distinctly stated that the lung was hepatized, and in the majority of instances the disease appears to have begun with the symptoms of ordinary pneumonia, so that the

conclusion naturally suggests itself that the endocarditis was either secondary to the pneumonia or excited by the same cause; which latter he thinks the more probable supposition. Endocarditis is scarcely mentioned as a complication of inflammation of the lungs. In Huss's statistics³ there are only four cases mentioned out of 959. The condition of the inflamed part of the lung in Dr. Osler's cases did not present any coarse or microscopical differences from ordinary cases. There were no micrococci in the air-cells, nor any appearances resembling the remarkable bacteritic pneumonia described by Delafield.⁴ It is not very evident wherein the connection lies between these affections, but the very considerable number of instances in which they occur together is against a simple accidental complication.

A third point of clinical interest is the occurrence of meningitis in three of these cases. In the fifty-seven cases which Dr. Osler analyzed this is mentioned as present in thirteen; that is, 22.8 per cent. In seven it occurred with pneumonia. Meningeal hæmorrhage, as in Case V., is mentioned several times. It is probable that the meningitis is embolic, though he did not find micrococci in the exudation. Meningitis is a very rare complication of pneumonia and may occur apart from endocarditis; but in a case of inflammation of the lungs, particularly if the apex is involved (in three out of four such instances he found the upper part of the lung affected), the development of an irregular temperature with cerebral symptoms should suggest the possibility of endocardial mischief, with secondary meningeal inflammation. The exudation in the meninges in these cases is lympho-purulent, not very extensive, and generally on the surface of the hemispheres, not basar.

The presence of multiple aneurisms of the aorta in one case is deserving of comment, as he has not been able to find any similar observation in the literature of either ulcerative endocarditis or of aneurism. The man had evidently been the subject of that peculiar congenital malformation of the aortic semilunar valves which results in the fusion of two segments. In this condition they are very liable to be the seat of a sclerotic endocarditis which terminates in incompetency; and Dr. Osler has met with and described two other cases in which the united curtains, when in this state, were the seat of extensive ulcerative endocarditis.⁵

With regard to the intimate pathology of this disease, it is assumed by most recent writers to be a mycosis, that is, to be dependent upon the growth and propagation of lowly fungi on the valves with a consequent blood contamination. Certainly the minute bodies found in the endocardial vegetations correspond in their chemical and microscopical relations to micrococci. They are motionless, highly refractile spherules, less than a micro-millimeter in diameter, arranged in groups or colonies without any perceptible stroma. Acids, alkalies, ether and chloroform have no effect upon them. These characters are supposed to afford satisfactory means for distinguishing them from granular detritus of an albuminous or fatty nature. Most writers have accepted the view that these bodies are fungoid in nature. Heller,⁶ however, criticises strongly the prevailing conceptions with regard to micrococci, and thinks that there are scarcely any micro-chemical

¹ British Medical Journal, 1863.

² Ziemssen's Cyclopædia, vol. vi.

³ Quoted by Wilson Fox in Reynolds's System of Medicine.

⁴ Studies in Pathological Anatomy, page 65, Pl. xxxv.

⁵ On fusion of two segments of the aortic valves. Mont. Gen. Hosp. Reports, vol. i. 1880.

⁶ Virchow's Archiv, lxi. 1875.

agents or physical signs by which they can be distinguished from fatty detritus.

Apart from any micro-chemical tests there are peculiarities about these masses which we do not see in any form of fatty degeneration, as the uniformity in size of the granules and their collection into large groups.

The question of the relation of the micrococci to the disease presents many difficulties, and we are probably not yet in a position to give a final answer to the problem. Klebs, and most German writers on the subject, give an unhesitating assent to the parasitic theory and suppose the micrococci to gain access either through the gastro-intestinal or respiratory systems, and they believe them to constitute the actual *materies morbi*. According to Koster¹ and Klebs² not only are these fungi present in the so-called ulcerative form, but they also exist in, and cause the development of, the ordinary warty or bead-like vegetations so frequently met with in the valves. Within the past few months Dr. Osler has examined four specimens of this variety of endocardial vegetation, and has been able to determine in each instance the presence of micrococci, not, it is true, in the same luxuriance, or arranged in definite colonies, but still sufficiently distinctive. In one case of mitral stenosis a fresh vegetation, when teased, showed many closely-packed spherules, some of which were, as Klebs has remarked with reference to the micrococci in this variety, larger than those met with in the ulcerative form. He was greatly struck with the resemblance which certain of these bodies, in this instance, bore to the individual elements of Schultze's granule-masses — those peculiar granular clumps common in blood of some animals and of impoverished persons. These structures are usually regarded as the *débris* of colorless blood corpuscles, but Dr. Osler shows³ that they are aggregations of discoid bodies, probably living organisms of the nature of which we are still ignorant. They do not exist in the form of masses in the blood, but as isolated particles which might readily become adherent to the fresh endocardial outgrowths. This is merely mentioned as a point worthy of future investigation.

It matters little how the micrococci get to the valves, whether by embolism of the small vessels, as Koster supposes, or by deposition on the surface, as Klebs thinks; the question is: Are they responsible by their growth for the peculiar course and malignancy of cases of infectious endocarditis, primary or secondary? The facts of their occurrence in the verrucose form, which may not be accompanied by any symptoms, and of their abundance in the recurrent endocarditis, which attacks old sclerotic valves, are, Dr. Osler thinks, opposed to this view, for if they act as a septic poison in the one case, why should they not do so in the other? The micrococci do not appear to infest the blood in any numbers, so that they must be supposed to distill some subtle poison, "such soon-speeding gear as will disperse itself through all the veins" and profoundly disturb nutrition. The occurrence, however, of fatal septic cases, closely allied to, or identical with those in which a bacteric endocarditis is found, but in which no micrococci can be detected, either in the local process or in the blood, teaches us that the same poison may exist without the intervention of bacteria, the presence of which in any case may be only a partial phenomenon in a general infective process.

CATARRHAL GLAND FEVER.

Under this name Dr. Hugo Engel,⁴ of Philadelphia, reports two cases — out of nine which he had observed — of an affection, not rare, according to his experience, but not described, he thinks, in any of the systematic works on internal medicine, and in books on surgery only some of its symptoms are alluded to, not as forming a distinct and separate disease, but as manifestations of a syphilitic or a scrofulous dyscrasia. Only one of the individuals affected with the disease described was slightly scrofulous, and only one had a doubtful syphilitic taint of the system; Dr. Engel therefore thinks it clear that the association with either diathesis can only be an accidental one. The two cases reported he considers types of the disease, and says: In fact there are only few complaints which, like the one here in question, run, in every individual attacked by it, a so similar course. To recapitulate: A person previously as a rule in perfect health has, after an exposure to cold and damp, chilly sensations, which are followed by increased temperature, fever, and a rapid pulse. Digestion is disturbed; the bowels are sluggish; the urine is highly colored and very acid. From the very beginning of the complaint the patient has pains all over, but especially in and near the inguinal regions; and most of the superficial inguinal and a few of the superficial abdominal glands on both sides of the body are enlarged and painful. One or two of the first named, on either the right or left side, are more inflamed than others, and the integument over them is reddened. All these symptoms continue for about three to five weeks, when one or two of the glands mentioned last suppurate. A day or two later the fever and the digestive disturbances commence to decrease, and then rapidly disappear, leaving the patient in a debilitated condition, from which he only recovers slowly. The weakness in the lower extremities is especially apt to remain a long time. The glands return only very gradually to their normal size, and if the individual affected with this disease has been debilitated before, from any cause whatsoever, or if he be a scrofulous subject, then the illness becomes a much more protracted one, as one after the other of the previously enlarged glands will suppurate. While the glands on both sides are affected only those on one side are apt to suppurate. No other glands of the body, except those alluded to, are ever attacked in this complaint.

The disease cannot be mistaken for any other. The fever and the early acute symptoms, as well as the history of the case, distinguish it from simple scrofulous enlargement and suppuration of glands. The fact of the exposure and the number of glands involved separate it from the bubo of syphilitic or blennorrhagic origin. In lymphadenoma the number of white corpuscles is increased, which is not the case in the disease here described. No other complaint could possibly be taken for the latter.

As regards therapeutics, Dr. Engel's experience has taught him that there exists no abortive treatment of any kind. The disease will run its course, and we can only try to prevent suppuration of more than one gland, to hasten absorption of the morbid products of the others, and to accelerate convalescence. The first object we reach best by keeping the patient in bed until we can be reasonably sure that no more glands will suppurate. He applies, from the first day, hot poultices to those glands which seem doomed to break

¹ Virchow's Archiv, Bd. lxxii.

² Archiv für Exper. Pathol. u. Pharmacol., Bd. ix.

³ Proceedings of the Royal Society, 1875.

⁴ Medical and Surgical Reporter, November 13, 1880, page 421.

down, and sprinkles over each cataplasm the undiluted liquor plumbi subacetatis, to lessen inflammation of the surrounding tissues; all other glands he paints twice daily with the tincture of iodine, until they have been reduced to their normal size. Absorption is further accelerated by bandaging both legs from the knees up, and including the abdomen in the bandaging. The patient is put on an easily digestible but nourishing diet; his bowels are kept open by an occasional blue pill, followed by a saline, and internally he employs, throughout the disease, the mineral acids, a favorite prescription of his being, —

℞ Acidi muriatici diluti	f 3 ss.
Tinct. nucis vomice	f 3 j.
Aque destillate	f 3 iiss.
Syrup. rubi idæi, q. s. ad	f 3 vj. M.

Sig. Unciam dimidium quaque quantâ horâ.

If the fever is high, he gives every second day a single dose of fifteen or twenty grains of quinia in mineral lemonade, the single large dose having a far more favorable influence on the disease than often repeated small doses of the same remedy. The body is twice daily sponged off with tepid water. As soon as the tongue is clear and the fever has subsided, he prescribes the syrup of iodide of iron in twenty-five drop doses three times daily. Abscesses are treated surgically. The moment we attack the glands more vigorously, to hasten either suppuration or absorption, we only prolong the case. In this disease the doctor as well as the patient must have patience. Iodide of potassium and iodoform are useless; mercurial preparations do harm; jaborandi or other diaphoretics debilitate without any benefit, and a tonic treatment with iron, etc., from the beginning, only disturbs digestion more. The best plan to follow is to tell the patient, on the first day, that if he wants to be able to attend to his business again within six weeks — the shortest possible time — he must stay in bed at least for a month, and then act according to the rules laid down.

The disease, Dr. Engel thinks, undoubtedly belongs to the domain of internal medicine, just as leucocythæmia, lymphadenoma, the pest or diphtheria. As in the first the enlarged glands do not constitute the disease, nor in the second the abscesses, nor in the last the throat affection, so is this a constitutional disease, which finds its external expression in enlarged and suppurating glands. And a disease which — almost without warning — will incapacitate an active man (in only such has he seen this complaint) for at least six weeks, for any work, is surely important enough, the writer thinks, to be put on record, and to be thoroughly studied, so that we may, perhaps, at some future time, be able to drop the expectant plan of "noli me tangere," and to cut short this more annoying and painful than dangerous complaint.

As mentioned, the disease seems to attack only adult men, which fact can easily be explained by the causing element, and to be self-limiting, and to affect a person only once. The name proposed for it, "catarrhal gland fever," is perhaps as good as any other.

EXPERIMENTAL RESEARCHES AS TO THE CONNECTION BETWEEN RENAL DISEASE AND CARDIAC HYPERTROPHY.

Grawitz and Israel¹ have performed some experiments upon rabbits to determine the pathological relations between renal disease and cardiac hypertrophy.

¹ Experimentelle Untersuchungen über den Zusammenhang Zwischen Nierenkrankung und Herzhypertrophie, Arch. für path. Anat. u. Phys., lxxxviii, s. 315.

phy, which have a certain bearing upon increased arterial tension in Bright's disease and lithæmia,² as noticed by Mahomed, and upon the mechanical theory of compensation propounded by Traube. The renal affections were produced by a temporary occlusion of the vessels of the kidney. The artery, being exposed and isolated, was compressed by forceps. At the expiration of one or two hours these were removed and the wound was sewed up. The first result in every case of this occlusion of the renal artery was a parenchymatous hæmorrhagic nephritis. The secondary result was at times a renal cirrhosis; at others a parenchymatous nephritis (either the small contracted or the large white kidney), according to circumstances. The first result was obtained with strong, hearty animals; the second, with the feeble and debilitated.

The experimenters proceeded to study the comparative influences resulting from, (1) the renal cirrhosis, (2) the parenchymatous nephritis, (3) extirpation of a kidney. They found that the resulting changes in the organs depended upon the age and condition of the animal and not upon the nature of the artificial lesion set up in the kidney.

In young and growing animals it was observed that the uninjured kidney began to hypertrophy immediately after the operation, and at the same time its functional activity was increased. The result was always the same whether in cirrhosis, parenchymatous nephritis, or extirpation of one of the kidneys; in each case the other kidney developed progressively until attaining the size of two ordinary kidneys, and simultaneously the quantity of urine secreted was doubled, and the animals continued in perfect health. The injured kidney continued to secrete a watery urine of light specific gravity, and small in amount as long as the heart remained unchanged, and in these young animals the heart was always unaffected. Among the old and developed animals, on the other hand, the compensating hypertrophy of the sound kidney was less marked, slow in establishing itself, and always insufficient. Upon removing the left kidney, for example, which weighed 5.3 grams, it was found that the right kidney at the end of nine days weighed only 8.1 grams.

The experimenters then proceeded to study the effect of this deficiency upon the system. They found that, (1) some of the animals died from nremia; (2) some lived, though in a miserable condition, showing that this deficiency remained uncompensated; (3) some lived and continued in good health, and among the animals of this third category hypertrophy of the left ventricle was always found. Messrs. Grawitz and Israel express the general result of these changes by the following formula: hypertrophied heart + hyper. kidney = two healthy kidneys + healthy heart. In discussing the question of the first cause of the cardiac participation in these changes these writers are not disposed to regard it as simply a mechanical matter, but think rather that the small quantity of urine contained in the blood after the affection of one kidney excites first the other kidney and then the heart to exaggerated action, thus subsequently causing hypertrophy. They found that neither extreme stages of renal atrophy, nor parenchymatous nephritis, nor removal of the kidney, produced increased arterial tension, however great the changes effected in the heart. It was found that the injection of small quantities of urea into the blood produced the constant result of exaggeration of the action of the heart.

(To be continued.)

² Guy's Hospital Reports, series 3, vol. xxiv. 1879.

Hospital Practice and Clinical Memoranda.

PERINEPHRITIC ABSCESS.

BY W. G. FROST, M. D., DANVERSPORT, MASS.

W. A. T., thirty-seven years old, single, took a severe cold October 26, 1880, for which he received domestic treatment till November 20th. I found him sitting up and dressed, much emaciated, no appetite, pulse 88, temperature $101\frac{3}{4}^{\circ}$ F., tongue coated, and with the general appearance and make up of consumption. He had no cough nor thoracic pain. He complained of pain in the right loin with tenderness, of pain without tenderness over the lesser trochanter. He had no pain along the ureter, no numbness of the thigh, and the urine though of high color was normal in quantity and in specific gravity with neither pus nor albumen. The right thigh was partly flexed and he walked with difficulty. He was told that he had inflammation, with pus forming, around the right kidney. The symptoms gradually increased, and at the end of ten days swelling, with obscure fluctuation, appeared in the back.

December 3d. Obtained four ounces of thick gelatinous and effusive pus, by aspiration.

December 6th. Obtained by aspiration twelve ounces of pus same in character as before.

December 9th. Eight ounces of pus by aspiration. Patient is weaker, pulse 100, no appetite. He has now a suspicious cough with expectoration and night sweats.

December 12th. Opened the abscess by an incision one inch long and three inches deep. Two and a half pints of pus were discharged. A drainage tube was inserted and the cavity was washed with carbolic acid solution.

December 13th. Is weaker, kept his bed all day, pulse 120.

December 18th. Have used the carbolic acid solution twice daily since the 12th. Abscess has discharged but two or three ounces daily since it was opened and is healing, pus laudable. The cough and expectoration have increased, chills alternate with fever, night sweats continue, both feet are badly swollen, emaciation extreme, pulse 90-120, and he requires a crutch and cane to walk. The presence of tubercles in the interscapular region is plain.

December 22d. Removed the rubber tube.

December 29th. Patient is improving. Wound is healed. Walks without crutch or cane.

January 21st. Gaining slowly. Rode out to-day. Is gaining in weight.

February 9th. Gaining steadily. Has ridden out several times, some days when the thermometer was but a few degrees above zero. Appetite has improved, cough is better, no night sweats, swelling gone from the feet. Left this morning, by railroad, for his home, in Nova Scotia.

March 5th. He writes that he reached home all right, and, though somewhat weak and coughing somewhat, is still gaining and weighs one hundred and sixty-four pounds, twenty-four pounds more than he weighed December 20.

The treatment from the outset was supporting, — beef, milk, eggs, cod-liver oil, and Murdock's food.

March 19, 1881.

MORPHIA HABIT.

BY J. A. LOVELAND, M. D., WESTMORELAND, N. H.

MRS. D., aged some thirty-five years, of nervous temperament, had been a morphine habitué six years but resolved to be one no longer. Quantity used by the mouth twelve grains daily. Treatment commenced January 28th by deprivation. First thirty hours the patient was comfortable. January 29th. In the evening was very restless; was suffering acute pain; mind clouded but would answer direct question. January 30th. Still restless except when under the effect of narcotics. Bowels moved by magnesiae sulphas. January 31st. By reason of vomiting passed an uncomfortable night. Mind clear. Neuralgic pains in all parts of the body. February 1st. Vomiting alternating with diarrhoea, which yielded to treatment on the following day. February 3d. Is exhausted, no appetite, thinks she is dying. Some of the time has had no desire for morphine, but now has a craving for it. On consultation with my friend, Dr. G. C. Hill, it was decided to give morphia in grain doses every six hours in connection with a tonic. Stimulants freely. February 4th. The effect of the morphia was almost magical. She had a good appetite, is strong compared with her condition yesterday, cheerful and has no distressing symptoms. Is to take one quarter grain of morphia every six hours with tonics. February 8th. Condition has improved so much that morphine is discontinued. February 9th. Feeling so well to-day that but little narcotic medicine was taken. Takes milk freely. February 12th. Slight delirium at night. General condition encouraging. February 13th. Takes nourishment freely. Slept considerably. February 15th. Is cheerful, rested well through the night and is receiving the tonic effect of the large doses of quinia she has been taking. Pulse 85 and full. In the evening her husband assisted her to some milk when she fell back and instantly expired. The nervines used as her condition required were bromide of potash, belladonna, chloral, and cannabis indica. Much attention was paid to the proper administration of stimulants, tonics, and nutrients. The fatal termination was unexpected. If death had taken place in consequence of cardiac asthenia, the cause which most readily suggests itself, I should suppose it would have been present in some degree at my morning visit. No autopsy.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

FEBRUARY 26, 1881. DR. R. M. HODGES in the chair. DR. A. N. BLODGETT read a paper entitled

THE COLLODION TREATMENT OF STRAINS AND SPRAINS.¹

In reply to a question by Dr. Bradford as to the number of coats required, DR. BLODGETT said that no absolute rule had been followed; he first applied the collodion over the most swollen parts, and then continued it outwards to the uninjured portions. By this time the central part was firm, and the process was then repeated. There were probably six to eight coatings in all.

¹ Vide this journal, page 292.

DR. BRADFORD questioned whether any amount of contracting force could be exerted by the collodion applied in this way, and whether the diminution of swelling might not be due to the cold produced by the evaporation of the ether. He also doubted the possibility of compression without subsequent oedema of the toes.

DR. BLODGETT replied that he considered the compression different in character from that exerted by a bandage. It was a compression in all possible directions, diminishing the extent of surface, and thereby the depth and extent of the inflammatory process. He did not think it was due to ether evaporation, which lasted but a moment, and, moreover, had not been proved to diminish the size of inflamed parts.

DR. J. J. PUTNAM suggested that the absence of oedema might be due to the fact that the pressure was equable at all points. The complete closure of one vein would probably cause more oedema than a slight compression of many. Assuming that contraction ceased after a short time, and therefore compression was not extreme, and also that a certain amount of serum was exuded as a result of pressure, then it was probable that the blood-vessels had more room, and the equilibrium of the circulation would be re-established. Dr. Putnam also spoke of the great value of massage in the treatment of sprains.

DR. MARCY referred to the treatment of sprains by immobilization with a plaster bandage, and thought the principle the same and the resulting cure as speedy; that collodion, however, possessed great advantages over this method if the results obtained were as good. He inquired whether the collodion treatment was not applicable to affections of the knee-joints.

DR. BLODGETT replied that he had not as yet used it for that purpose.

DR. E. M. BUCKINGHAM suggested that the absence of oedema might be due to the elasticity of that part of the skin not encircled by the collodion, which allowed sufficient distention for the establishment of the circulation, thus virtually putting the ankle in an elastic bandage.

DR. BLODGETT admitted that this might be partially true, but thought that the chief action was a local one, relieving distention by an exudation of serum. In reply to a question by Dr. Ayer, Dr. Blodgett said a renewal of the coating was usually required about every twenty-four hours, it being indicated whenever the film showed a tendency to crack or peel off.

DR. BARNES spoke of the strong contractile power of collodion, as evidenced by its ability to bring into and keep in apposition the gaping edges of wounds.

DR. J. J. PUTNAM read a paper on

STRETCHING THE FACIAL NERVE FOR THE CURE OF FACIAL SPASM.¹

He stated that this operation had been performed four times, and in three of these cases at least had been eminently successful, the other not having been finally heard from. The cases treated in this way are those of the class called constitutional or idiopathic, because no cause for the spasm can be found. The operation consists in dissecting down to the nerve in question, hooking it up, and exerting traction with a considerable degree of force. The immediate effect is paralysis, which may persist for several months. In the case presented by Dr. Putnam it lasted about two months, then disappeared rapidly, and at the end of nearly

nine months the spasm had not returned. From experiments on a dog Dr. Putnam had found that the aural branch of the facial nerve broke at a weight of forty pounds, and paralysis of the facial branch—which, however, had begun to pass away on the second day after the operation—was caused by a weight of eight pounds. The necessity of guaging the force to be applied was insisted upon, and also that the patient should be allowed to partially recover from the effects of the ether during the stretching, that the immediate effect might be noted.

DR. S. G. WEBBER referred to a case he had seen where the apparent exciting cause was looking at a bright light. He said that the only other method of treatment giving even partial success was by electricity. The chances of permanent paralysis following this operation he considered comparatively slight. The success hitherto of this procedure for the relief of facial spasm had been very encouraging. For the relief of neuralgia the general operation of nerve stretching in the different nerves affected had been very striking. Dr. Webber referred to a case where paralysis had followed the extraction of a wisdom tooth.

DR. CHENERY spoke of a case of puerperal albuminuria where a very large percentage of albumen was present, and asked the society as to the indications for treatment.

DR. MARCY spoke of a case in which artificial delivery had been accomplished, and where, the woman dying eight hours afterwards, a fatty degeneration of the capillaries of the kidneys was found. He wished to inquire if others had met with this condition, as it was one not usually spoken of.

DR. REYNOLDS referred to the recognized fact that many women have albuminuria without eclampsia. Forty-one per cent. of all women confined have albuminuria. Treatment should be directed towards securing (1) sound sleep, to guard against puerperal mania. (2) Quiet of mind. It is a well-recognized fact that mental disturbance increases the liability to eclampsia. (3) Perfect digestion.

Dr. Reynolds spoke of a fact which had been insisted on by Dr. W. L. Richardson, namely, that the risk of eclampsia is in direct relation to a decrease in the amount of urine for the few days preceding confinement. When the urine does not fall below sixteen ounces the liability to eclampsia is not marked. Dr. Reynolds also said that a hamorrhage a few days previous to labor seemed to act as a safety valve.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

CANCER OF THE UTERUS.

OCTOBER 9, 1880. DR. BLAKE read a paper on the above subject.

DR. DOE criticised his own method of operating, in the case reported by Dr. Blake, as follows:—

Instead of depending upon the curette and the use of caustics afterwards, as he did then, he would now remove as much of the growth as possible by the electro-cautery, the wire being kept from a white heat and slowly drawn through; the remainder of the growth he would remove by the curette, and then apply thoroughly the electro-cautery at a red heat to the diseased parts.

¹ Vide Archives of Medicine, January, 1881.

This last method, he said, is that followed by Dr. John Byrne, of New York, who claims for it that it protects better against secondary hemorrhage than even the curette, and that the tendency to recurrence is infinitely less than by any other method, as its application tends to destroy the disease in its fine and deeply penetrating ramifications.

He reports one case where the whole interior of the cervix and a portion of the body was removed, and the patient remained well six years later.

A second case where a vegetating cancer was removed from the cervix in 1874, by what method not stated, and returned again in five months so as to completely fill up the upper half of the vagina and extended into the body of the uterus to within an inch of the fundus, was removed by the galvanic cautery, and there was no return six years later.

A third case, involving the whole cervix and portion of the body, in a person greatly reduced, was operated upon in this manner, the parts being touched with a dome-shaped cautery, and there was no indication of the disease returning two years later.

As regards the injury to the peritoneum which accidentally occurred in one of the cases reported by Dr. Blake, Dr. Doe remarked that the experience of such men as Goodell and Carl Brown shows it to be of much less serious import than was at first supposed. Dr. Goodell says that he has repeatedly made an opening into the peritoneum without any ill results following, and he quotes Brown as saying that, in order to have the wire pass through healthy tissue, he does not hesitate to include a portion of the peritoneum.

Dr. BAKER reports four cases recently, where, in operating for the removal of a cancerous growth from the uterus, he opened into the peritoneum and no ill results followed; in one case the opening was so large that the whole body of the uterus could be seen.

Dr. DOE reported the following case as illustrating the insidious manner in which the disease often manifests itself. A lady forty-two years of age had traveled extensively through India during the winter months, returned to Boston in the spring feeling perfectly well, and continued so until her return from the country in September. At this time, without pain or any exciting cause whatever, the catamenia continued longer than usual, and, not ceasing at the end of three weeks, a vaginal examination showed the uterus to be fixed and the whole cervix one mass of cancer involving also the posterior wall of the vagina for nearly an inch. The patient lived but six months after the disease was detected.

Dr. MINOT said it was rarely that a case was seen sufficiently early for successful surgical treatment, although much temporary benefit might sometimes be obtained even in advanced cases. In one instance, in which he had removed nearly the whole cervix by the galvano-cautery, the disease reappeared in the stump in the course of a few months. After a thorough application of the incandescent porcelain tip, a temporary arrest was again obtained. The same application was afterwards made again, but the disease invaded the neighboring parts and the woman died within a year. In a case of soft cancer, attached to the anterior wall of the uterus, just above the cervix, the tumor was removed, but returned in a few weeks. It was again removed, but similar growths were found attached to the interior of the womb in various places. These were all removed as carefully as possible, the entire inner

surface of the womb was thoroughly scraped with the finger-nail, and a solution of perchloride of iron was freely applied. The disease returned, as before, but the patient lived nearly two years from the date of the first symptoms. The autopsy showed the cervix and lower part of the body of the womb destroyed by ulceration, only about one fourth of the organ being left. The neighboring parts were also invaded.

Dr. MINOT believed in accordance with the opinion of Dr. Blake, that by scraping and the application of acids the patient's life may sometimes be made tolerable for a considerable length of time.

Dr. LYMAN stated that he had seen a good many of these cases and operated on a good many. He remarked that it was singular how two cases almost precisely alike will differ in rate of growth. He had known a case to last five years, and another to grow rapidly like a cauliflower in a hot-house. He did not believe in the possibility of eradication by any means; the best chance would be by operation early in the disease either by curette or glacial acetic acid or both. Of three cases seen last winter in one the patient was so much reduced, had had so much hemorrhage, that an immediate fatal result seemed imminent, but the removal of portions and the application of tampons of sub-sulphate of iron gave such relief as to enable her to return to her home in the country where she had a very comfortable existence for a long time. Another case exhibited an immense epithelial mass, like half a potato, growing upon the posterior vaginal wall. This was not meddled with as nothing but mucous membrane was left between it and the rectum. In the third case it was also too late to do anything.

Dr. Lyman detailed cases operated upon, in every instance with partial relief. He did not think the operation stimulated the development of the disease. If the case were seen early he advised to operate as if to cure. Further, he believed that a great many of these cases had their "point de depart" in lacerated cervix, an injury which the practitioner should feel bound to operate upon if accompanied with subinvolution of uterus or much eversion of cervical mucous membrane.

Dr. BLAKE said he agreed with Dr. Lyman as to the importance of laceration of the cervix as a factor in the development of cancer. There were certainly evidences of laceration which later on developed into malignant disease, a perverted action having arisen in cells subject to causes of irritation, the disease being from a local origin thus traced.

Dr. LYMAN remarked that the operation by posterior incision and turning the prolapsed organ out from above downwards was first recommended by Craveilhier.

Recent Literature.

Columnæ Adiposæ. A newly-described structure of the cutis vera, with its pathological significance in carbuncle and other affections. By J. COLLINS WARREN, M. D., Instructor in Surgery, Harvard University, Surgeon to the Massachusetts General Hospital. Cambridge: Printed at the Riverside Press. 1881.

We are glad that Dr. Warren has seen fit to collect the papers which he has published on this interesting point of anatomy. In fact, the neat little pamphlet

before us opens with a paper that has not yet seen the light, but is to appear in Dr. Satterthwaite's long-promised Histology. As our readers know, Dr. Warren discovered in skin of various parts of the body tubular canals running in the main vertically from the subcutaneous layer to the base of the hair bulbs and containing fat. "In thin skin the canals are either so short as hardly to pass for such, or, if the hair-root is of sufficient length to extend to the bottom of the cutis, absent. A thick skin, and the existence of downy hairs are, then, the conditions necessary for the presence of this structure in its most typical form." Dr. Warren has shown that these canals can be injected from the subcutaneous surface, and that the injecting fluid will spread off from them through the cutis in various directions. We must regret that he has not endeavored to demonstrate an endothelial lining by silver nitrate.

There is no question as to the accuracy of Dr. Warren's observations; but the significance of these structures is doubtful. We were at one time half inclined to believe that they had some connection with the regeneration of the hairs, but have quite given up the theory. It seems as if their purpose is to bring the subcutaneous fat into contact with the hair bulbs, and consequently when the hairs are deep enough, or the skin thin enough, to accomplish this without them, they do not exist.

The pathological part of the work is also very interesting. It is shown that it is through these canals that the pus forms a carbuncle and the elements of morbid growths make their way to the surface.

T. D.

On Certain Conditions of Nervous Derangement, Somnambulism, Hypnotism, Hysteria, Hysteroid Affections, etc. By WILLIAM A. HAMMOND, M. D. New York: G. P. Putnam's Sons. 1881. Pp. 256.

This is a reprint, with extensive changes, of the author's *Spiritualism and Other Causes and Conditions of Nervous Derangement*, which was published in 1876. The present work can scarcely be called medical; it is rather a very interesting and instructive narration of the delusions which have attracted popular attention and gained wide belief in past ages and at the present time. The book might be supposed to have been written to disabuse the laity of certain false notions, excepting that, as the accounts given show, many physicians even need also to be enlightened. Hypnotism, somnambulism, fasting girls, ecstasy, hystero-epilepsy, stigmatization, supernatural cures, hallucinations of sight, are among the subjects considered. The stories are told well and are interesting, and may serve a good purpose in preventing some weak minded one from being deceived.

The author expresses clearly and emphatically his disbelief in so-called metallo-therapy and recounts experiments with impressionable patients showing that the results are not so much dependent upon the metal used as upon the mental state of the patient. The concluding paragraph on this is worth quoting. "We see from what has been said that there are no persons, even those whose education and practice fit them for detecting deception, who may not be readily deceived, and this by exactly the same kinds of fraud which they themselves have been most active in exposing."

In some parts, especially when considering hysteria, the author seems to have mixed up cases of insanity, raceality, and hysteria, classing them all as hysteria; also in giving a résumé of the case of Palma d'Oria (page 174), he concludes, first, that she had probably contracted syphilis; second, was strongly hysterical; third, was the subject of purpura hemorrhagica; fourth, was a most unmitigated humbug and liar. Probably the fourth conclusion would cover the whole case; if that is too harsh a judgement, then the second would be sufficient.

The author's definition of mind, which would not be generally accepted, enables him to partly explain some of the phenomena considered. He regards mind (page 243) "as a force, the result of nervous action and the elements of which are perception, intellect, the emotions and the will. Of these qualities some reside exclusively in the brain, but the others, as is clearly shown by observation and experiment, cannot be restricted to this organ, but are developed with more or less intensity by other parts of the nervous system." According to this definition the spinal cord is looked upon as in part the seat of the mind, and also the sympathetic ganglia. By this definition nothing is really gained, however, to enable us to understand the phenomena; and by speaking of mind as governing the phenomena unconsciously to the subject, when it is meant that the spinal cord or other parts of the nervous centres act automatically, the majority of people will perchance not distinguish as to which part of the mind thus acts, and may get some of the higher functions mixed up with the lower. Would it not be as well to say that the centres which take cognizance of the actions of the nervous system, and control or regulate them, are for the time being inhibited from acting and the lower centres run riot at their own free will; then somnambulism, hypnotism, etc., follow. If the control of the higher centres are only partly abolished hysteria and other allied states result.

The author seems to confound some of the events recorded in the life of Christ with the stories told of "saints" living in recent times. Having, apparently, little or no sympathy with the Christian faith he has made some allusions which will not be accepted by those who hold such a belief. Thus he refers the transfiguration of Christ to a relaxation of all the muscles of the face concerned in expression, accompanied by suffusion of the eyes and dilatation of the pupils. There are, however, only two or three such passages, and the book as a whole is a sober and rational narration, chiefly quotations, from original sources, of some of the most absurd stories and phenomena which may properly come under the various subdivisions of the book.

Constipation, Plainly Treated and Relieved Without the Use of Drugs. By JOSEPH F. EDWARDS, M. D. Philadelphia: Presley Blakiston. 1881.

A little book for non-medical people, it contains in three chapters nothing which will do any one any harm and much good advice. We hope it may reach the public for which it is designed.

—Plague is reported to have broken out again in Mesopotamia, and yellow fever is prevalent in Rio Janeiro.

Medical and Surgical Journal.

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ABDOMINAL SURGERY.

OUR readers will surely have read with much interest, in a recent number of the JOURNAL¹ an account, contributed by a correspondent from Vienna, of a case of gastric carcinoma, in which Professor Billroth successfully removed the entire diseased portion of the stomach, the patient recovering rapidly from the immediate effects of the operation. This striking case, considered in conjunction with others of similar character and import, which, during the last fifteen or twenty years, have been accumulating in the annals of medicine throughout the civilized world with constantly increasing rapidity, proclaims unequivocally that a new era of surgery has been entered upon. The peritoneal cavity and the organs therein contained are now no longer to the surgeon objects of superstitious fear,—like, as it were, an unexplored, unknown, and dreaded central Africa,—but a portion, constantly becoming more and more important, of his domain, in which his growing skill and daring may legitimately and beneficially display themselves.

The extraordinary results attained, which would doubtless have astonished and shocked our predecessors of less than half a century ago, which even now many of our most influential and authoritative contemporary colleagues are still reluctant to acquiesce in and countenance, have been due not only to increasing familiarity with the peritonæum and its contents,—familiarity in this matter bringing about its usual and proverbial result,—and to the growing audacity thereby engendered, but also, in a large measure, to the great development of the resources of antiseptic surgery, which we owe, mainly, to the creative genius and untiring perseverance of Joseph Lister. The part played by "listerism" and the benefits conferred by it have not consisted merely in the preservation of wounds, by means of carbolic acid, from putrefactive contamination, and in the successful treatment thereby of individual cases; but, by means of the antiseptic methods, widely adopted and diffused, a general prophylaxis has been effected against the various adverse and nefarious conditions summed up in the word "hospitalism," whereby even those hospital surgeons who have refused to acquiesce in the theory and practice of antiseptic surgery have unconsciously and unintentionally benefited.

Facts are more eloquent than words. We will, therefore, without further preface or apology, place

before our readers a summary of some of the most striking results recently achieved by abdominal surgery.

Ovariectomy, by virtue of the large field of experience and of eminently successful enterprise which it has afforded since 1809, when Ephraim McDowell, of Kentucky, first successfully removed an ovarian cyst by laparotomy, has unquestionably been the foundation of the important branch of operative surgery now under consideration. It is in dealing with ovarian cysts mainly, and occasionally with the various other abdominal tumors liable to be taken for them, that certain practitioners, now recognized as *abdominal surgeons*, first acquired the special experience, knowledge, and skill by which they have become able, with confidence and security, freely to incise the abdominal walls, to explore their contents, and to excise and remove morbid growths or diseased organs.

Ovariectomy, first successfully performed in this country, and subsequently styled by Piorry "*une audace Américaine*," has remained preeminently an Anglo-American procedure. The names which stand foremost in the list of surgeons who, since McDowell, have helped to establish the operation, are those of Spencer Wells, Clay, Baker Brown, Keith, Thornton, in Great Britain; of Atlee, Peaslee, Kimball, in the United States; of Péan and Koeberlé on the continent of Europe. But to no one more than to Spencer Wells belongs the honor of having raised ovariectomy, and with it abdominal surgery, to its present secure position, and of having taught the surgical world the best methods for its successful performance.

A few figures will suffice to show the great degree of success now attainable by means of this operation *in experienced hands*. Spencer Wells, only a few weeks ago, communicated to the Royal Medical and Chirurgical Society of London a paper which summarized the results of his last 200 cases, completing a series of 1000 ovariectomies performed by him from first to last. Among the 1000 patients 231 had died and 769 had recovered, the mortality, however, having steadily diminished from 34 in the first 100 to 11 in the last. The last 112 cases took place in private practice, and were all done antiseptically, the result being a mortality of 10.6 per cent. The president of the society, Mr. Erichsen, said "he would be expressing the feelings not only of the society, but of the profession and public generally, by conveying their very best thanks to the illustrious author of this great work. For no man had done such a work in surgery as to have recorded one thousand cases of any one great operation with so little mortality. Nothing can redound more to the credit, not only of Mr. Wells, but of surgery, than that such great results had been achieved by him. I have lived," continued Mr. Erichsen, "through the whole period covered by the operation, and have been present at meetings of this society when the introduction of the operation was being discussed; and I cannot but call to mind the obloquy (in which I never myself shared, for I performed the operation myself until I left it in better hands) which attended the operation and the

¹ The JOURNAL, March 10, 1881, page 238.

operator. It is something to have lived through an epoch of surgery which has seen an operation of this magnitude not only survive that obloquy, but become one of the most successful operations in surgery, when performed with sufficient care, attention to detail, and, of course, personal skill."

Among other ovariologists who have recently reported series of cases, we will only mention Mr. Knowsley Thornton, of London, who had experienced fifteen deaths in one hundred and fifty cases of complete ovariectomy, making a mortality of ten per cent., and, lastly, Dr. John Homans, of this city, whose results, lately recorded in the *JOURNAL*, were as favorable, on a comparatively small scale, as those of the most experienced operators, two deaths only having occurred in twenty-five consecutive cases of complete ovariectomy, with a mortality rate of eight per cent.

Another operation, involving laparotomy as the first step, which was a direct outgrowth from ovariectomy, is hysterectomy for the removal of fibro-cystic tumors of the uterus. Growths of this kind, by reason of their liability to simulate ovarian cysts, and on account of the supposed danger attending their removal, used to be the bane and bugbear of ovariologists. Spencer Wells formerly advised and practiced closing the abdominal incision at once, without disturbing the tumor, when it was found, upon inspection, that the surgeon had to do with a fibro-cystic myoma instead of an ovarian cyst, an intended ovariectomy being thus converted into a mere exploratory incision. In September, 1869, Péan, of Paris, notwithstanding the caution preached and practiced by Spencer Wells, successfully removed the uterus and both ovaries in a case of fibro-cystic uterine tumor, the cervix only being left to serve as a pedicle. The patient made a good recovery. The operation has been often repeated with favorable results, not only by Péan and by Koeberlé, of Strasburg, but also by Spencer Wells. The latter, in 1878, reported twenty-four cases, in which, since 1861, he had removed uterine fibroids, with or without one or both ovaries, the series including several cases of hysterectomy with removal of the fundus and body of the uterus and of both ovaries. In the twenty-four cases there were fifteen deaths, and nine recoveries, one of the latter, however, terminating fatally, from generalization of cancer, six months after the operation. In 1873 Spencer Wells expressed the opinion that "when a uterine tumor is pedunculate, or can be separated from the principal part of the uterus, or when the whole of the fundus and body of the uterus, with or without the ovaries, can be removed, leaving the cervix and its vaginal attachments uninjured, the operative question is a different one, and recent experience is leading to a more encouraging view of the surgical treatment in such cases."

A form of hysterectomy, known as the operation of Freund (of Breslau), has been resorted to with a certain degree of temporary success for the removal of cancer of the uterus. Spencer Wells, in 1878, after briefly describing this operation as a "very great improvement, which has been recently introduced by Dr. Freund, of Breslau, in the mode of removing

entirely a cancerous uterus," adds that "should it in some cases (no doubt they would be rare) be deemed desirable and justifiable to remove an entire uterus affected by cancer, this appears to me to be the best way hitherto described of doing it with a reasonable hope of success." One of the most striking extensions, however, of abdominal surgery consists in the ingenious and daring modification of the Cesarean section, known as Porro's operation, for the delivery of pregnant female dwarfs with contracted pelvic outlet. In 1876 Prof. E. Porro, of Pavia, first performed the operation which now bears his name. The results were completely successful, both mother and child surviving. The operation has been briefly described as follows in a recent valuable paper by Dr. R. P. Harris: "After the evacuation of the uterus its neck is constricted until all hemorrhage is arrested, the organ drawn out, and cut away, and the stump secured like the pedicle in ovariectomy in the lower part of the abdominal wound. The operation has in almost all instances been performed under the spray of dilute carbolic acid, and the Lister method of dressing and management strictly carried out. Drainage tubes through the Douglas cul-de-sac and the abdominal wound have also been employed, sometimes to the number of three or four, but in almost every case at least one through the cul-de-sac and vagina. The Müller modification, sometimes also called the "Rein and Müller method," is thus described by Dr. Harris: "Dr. G. Rein, of St. Petersburg, Russia, proposed, in 1877, that the uterus should be ligated to avoid all hemorrhage before it should be opened for the removal of the fetus. Müller added to this the turning out of the uterus from the abdominal cavity by a long incision, before the ligature, and then evacuating it, so as to avoid the risk of the entrance of its fluid contents into the abdomen, after which the operation is to be completed as in the Porro method." Dr. Harris, having collected a total of thirty-six cases of Porro's operation, found that in seventeen cases the mother, and in five cases the children, had died, the others, nineteen mothers and twenty-six children, surviving. In the last twenty cases of his list there were twelve recoveries, and eighteen children were delivered alive.

Yet another procedure, pertaining to abdominal surgery, which has recently been ventured upon several times with success, though quite as often attended by failure, is the removal of a kidney by nephrectomy. Mr. A. E. Barker, of London, published, a year ago, a fatal case of his own, and with it a summary of twenty-eight instances in which, for various reasons, removal of a kidney had been performed or attempted. Of the whole twenty-eight cases there were fourteen recoveries and fourteen deaths, but, excluding six instances of erroneous diagnosis, of which five terminated fatally, there were thirteen recoveries and nine deaths, two of the latter being desperate cases, in which the operation could not be carried out. In all the successful cases, recovery was complete except as regarded the possible recurrence of neoplasms. A recent number of the *Lancet* (March 5th) contains a short ac-

count of a case of nephrectomy by Mr. Morratt Baker, in which the operation, over a week after its performance, promised to prove successful. The temperature was then ranging from 98° F. to 100° F., the patient, a child, taking nourishment well, and picking up strength. "This operation," adds the *Lancet*, by way of editorial comment, "has not yet established itself as a recognized surgical procedure, and it is most important that all the cases in which it is attempted should be fully recorded."

(To be concluded.)

INCREASE IN THE DEATH-RATES OF NEW YORK DURING THE LAST FEW MONTHS.

At the last meeting of the Academy of Medicine of New York a portion of the evening was devoted to a discussion of the marked increase in the death-rate of the city during the last few months. Prof. Alfred L. Loomis believed this to be attributable to three causes: first, that New York was a malarial district; second, that the sewerage, as well as much of the plumbing, was defective; and, third, the filthy condition of the streets. Considering, as he did, that the latter was at present, perhaps, the most important element in this increase of mortality, he offered resolutions to the effect that, whereas it was the opinion of the Fellows of the New York Academy of Medicine that the uncleanly condition of the streets of the city was an efficient factor in increasing the malignancy of many diseases, and thus contributed to the present alarming death-rate, it was therefore resolved that, acting under a deep sense of their responsibilities as members of a profession whose chief duty was to check the development of disease, they earnestly warned the public against the danger of allowing this state of things to continue, and also that they were heartily in accord with the call for a citizen's meeting to be held at Cooper Union on Friday evening, March 18th, to demand relief from the legislature.

The resolutions were seconded by Prof. Austin Flint, and after remarks by him, the president, and others, were unanimously adopted. On motion of Dr. Richard H. Derby, it was resolved that the above resolutions should be authenticated by the president and secretary of the Academy, and that the president should appoint some Fellow of the Academy to present them to the meeting for street-cleaning reform, to be held at Cooper Institute, with such remarks as he might deem expedient to demonstrate that the resolutions expressed the unanimous sentiment of the Academy of Medicine, and the medical profession in general. The president then appointed Dr. Loomis to represent the Academy at the public meeting referred to.

This meeting was held at the Cooper Institute on the following evening, and proved to be a grand popular demonstration, the lead in which was taken by the most influential and distinguished citizens of New York. Chief Justice Charles P. Daly presided, and pertinent addresses were made by Dr. Loomis (on behalf of the Academy of Medicine), the Rev. Robert

Collyer, D. D., Mr. Sigismund Kaufman, Judge Brady, Mr. D. Willis James, Mr. Frederick R. Condit, Mr. Charles H. Marshall, Dr. D. B. St. John Roosa, and Mr. Joseph H. Choate. During the evening a set of resolutions, presented by Mr. Morris K. Jessup, were adopted, to the effect that those present at the meeting were convinced of the impossibility of keeping the streets of the city clean under the present system; that in their opinion there ought to be a separate department, under a single responsible head, for the purpose of cleaning the streets, and removing the ashes and garbage; that fitness, not politics, should govern the appointment of the employees of the department; that in the name of the people of the city of New York they protest against any further continuance of the present state of affairs, and appealed to the legislature for immediate and lasting relief; and that a permanent committee of twenty-one be appointed by the chairman, with power of substitution, for the purpose of obtaining the requisite legislation, who should report on the same at a future meeting, to be assembled at the call of the chairman. Before the adjournment Chief Justice Daly appointed the committee of twenty-one, in accordance with the resolutions, with Mr. D. Willis James as chairman.

MEDICAL NOTES.

— Mr. J. Lawrence Hamilton, of London, proposes to introduce an abundant supply of pure artificial vaccine lymph, produced outside the body of living man or living animal, by isolating and then breeding the vaccine organisms in suitable germ nutritive solutions which have been previously deprived of all septic and other noxious germs. The special precautions which Mr. Hamilton considers necessary to secure success in breeding the artificial vaccine lymph, as well as the results of therewith inoculating men and animals, will be published at a future date.

— From the latest official data now furnished by the *Medical Register* up to date, it appears that the whole number of persons now on the *Medical Register* as being legally qualified to practice for 1881 is 22,936. Of these there are in England 15,918, in Scotland 3,451, in Ireland 3,564; so that it appears that 69 per cent. of the whole number of British practitioners are registered in England, 15 per cent. in Scotland, and 15.6 per cent. in Ireland. These numbers have remained pretty invariable since the *Medical Register* was first begun in 1858; the average percentage throughout that time being 69.2 in England, 14.6 in Scotland, 16.2 in Ireland. A slight increase appears in the number of practitioners during the last five years; the total number of medical practitioners for 1877 having been 22,713, while it is now 22,936. — *Cincinnati Lan. and Clin.*

— Edinburgh has a Society for the Relief of Persons laboring under Incurable Diseases. It has a roll of over two hundred pensioners.

— At the last meeting of the New England Psychological Association, Dr. Calvin S. May was unanimously expelled.

— According to the *London Medical Journal* several members of the profession in England, possibly with the view of rubbing up their knowledge of foreign tongues, have adopted the practice of addressing the secretaries of the International Medical Congress in various languages. One gentleman, who has had occasion to write three letters, has availed himself of the opportunity thus afforded to show his acquaintance with Italian, German, and French. This system is not without its advantages, as it has benefited a worthy interpreter, who has been permanently engaged to meet this unforeseen emergency.

— Miss Isabella Bird, in her recent charming work, *Unbeaten Tracks in Japan*, describes a visit to a native hospital at Kubota, under the charge of Dr. Kayobashi, who "is fresh from the medical college at Tôkiyô, and has introduced the antiseptic treatment with great success." Miss Bird says: "the odor of carbolic acid pervaded the whole hospital, and there were sprays enough to satisfy Mr. Lister! At the request of Dr. Kayobashi I saw the dressing of some very severe wounds carefully performed with carbolized gauze, under spray of carbolic acid, the fingers of the surgeons and the instruments used being all carefully bathed in the disinfectant." — *Medical News and Abstracts*.

— The question has been raised in England, whether when a workingman is isolated because of contagious disease in his family, compensation from public funds should be allowed him for the loss of his labor. The argument made is as follows:—

"This man is required by law to absent himself from his vocation, and thereby prevented from earning money, in order that he shall not spread a contagious disease, and this at a time when his normal expenditure is heightened by the necessities of sickness. The law offers him no compensation for this sacrifice, and the workingman must, under such circumstances, accept parish relief or starve. A sanitary authority, drawing its funds from public rates, should have the power of appropriating such funds for the purpose of supporting persons whom the exigencies of public health require to be isolated from their work, and thus remedy the incongruity of victimizing a defenseless artisan for the public good."

It appears to us that the social standing or poverty of the person to be isolated has nothing to do with the equity of the case. If it is just that the hod-carrier should be compensated for the loss of his time, it is just that the lawyer or the merchant should also be compensated. As a matter of fact it does not appear just that either should be compensated from the public funds any more than he should be compensated for his fees to the physician, or for the wages of his nurse. — *Sanitary Engineer*.

— At a dinner of the Boston Druggists' Association, on the evening of February 22d, in the course of an address by Mr. Theodore Metcalf upon the condition of the business as early as 1837, he concludes his remarks by speaking of the physicians then in practice here, making the following personal allusions:—

* Of the older physicians to whom I had letters,

upon coming to Boston, all are gone, save one; some of them succeeded by sons and grandsons, now as eminent as they then were. No shape of man in that array graces the sunshine of to-day, save one, and of him I will speak, if you will permit me, in the words of another:—

"The monumental pomp of age
Is with the goodly personage,
A stature undepressed in size,
Scarce bent, which rather seems to rise
In open victory o'er the weight
Of ninety years, to loftier height,
Magnific limbs of withered state,
A form to love and venerate."

Those who knew him will recognize in these lines the image of the venerable Dr. Edward Reynolds, my earliest professional friend in Boston. As he has long been out of active practice, I the more readily pay to him this tribute of respect:—

"Let others hail the rising sun,
I bow to him whose course is run."

— A recent judicial decision in Maine declares that a burial ground which does not affect the physical health of the occupants of a dwelling-house near which it is located, nor their olfactories by any effluvia from the graves, is not in law a nuisance. The human contents of graves cannot offend the senses in a legal point of view. To become a nuisance the graves, or their contents, must be such in their effect as naturally to interfere with the ordinary comfort, physically, of human existence, and the inconvenience must be something more than to fancy, delicacy, or fastidiousness.

— The Women's State Christian Temperance Union is circulating among physicians a reprint of a paper which was read before the North of England Branch of the British Medical Association, entitled *The Power Medical Men Possess of Aiding in Temperance Reform*.

NEW YORK.

— Nearly forty cases of typhus fever were reported at the office of the Board of Health during the week ending March 19th. Three cases were reported from the German Hospital, six from the Charity Hospital, Blackwell's Island, and two from a house in West Twenty-Seventh Street. All the others were traced to the Shiloh Lodging-House, at the corner of Prince and Marion Streets. This building is an old church, formerly occupied by a congregation of negroes, but which for many years remained deserted, and is now in a very dilapidated condition. Two or three years ago it was fitted up as a lodging-house for tramps and other imperunious members of the community, who, by the payment of eight cents, can secure a bunk for the night, and a breakfast, consisting of a roll and a cup of coffee, in the morning, while those who are too poor to afford this expenditure are permitted to pay for their lodging and breakfast by splitting up a certain quantity of wood. Almost every night during the past winter this place has been crowded to its utmost capacity. The building is now thoroughly fumigated every day, and an inspector from the health department has been stationed at the door to examine each lodger before he enters. It is probable that it

will not be closed at present, as that would only tend to spread the disease to other lodging-houses of the same class. The present is the most serious outbreak of typhus that has occurred in New York for quite a number of years, but the Board of Health are using every means at their disposal to prevent the spread of the disease. All last year there were but two cases reported, and the highest number of cases noted in any one week during the last ten years was in October, 1871, when nine were reported in a single week.

—A few days ago, about eight o'clock in the morning, the people on upper Broadway were startled by beholding a negro running down the street stark naked, and pursued by a large crowd of men and boys shouting "small-pox!" He was quickly captured, however, by two policemen, who threw a horse-blanket around him, and took him to a neighboring station-house, whence he was presently conveyed to the reception hospital, at the foot of East Sixteenth Street. It seems that the man had gone to bed not feeling well the evening before, and that during the night confluent small-pox had developed itself. In the morning, in the violent delirium peculiar to the disease, he had sprung out of bed, torn off his night-shirt, and rushed into the street naked.

—The College of Pharmacy of the city of New York held its fifty-first annual commencement at Chickering Hall, on the evening of March 22d. Addresses were made by Ewen McIntyre, the president, and by Douglas Campbell, and the valedictory was delivered by Eugene L. Fridenburg. Three scholarship prizes were awarded, and two special prizes for essays on Botany and Pharmacy, respectively. There were sixty-five graduates.

—On the same evening a meeting of the New York Cremation Society was held in one of the rooms of the Cooper Institute, when a paper, entitled *The Disposal of the Dead—a Plea for Cremation*, was read by Dr. Edward J. Birmingham, editor of the *Hospital Gazette*. In the course of it he spoke of the rapid extension of New York towards Woodlawn Cemetery, and the proximity of the thickly settled portions of Brooklyn to Greenwood, and claimed that the sanitary necessity for cremation formed the strongest argument for its general adoption.

—Mr. A. B. Stone has just purchased for twenty thousand dollars a handsome site at Bath, Long Island, called Bath Park, for the Children's Aid Society. It contains four and a quarter acres, with trees, pavilions, bath-houses, and many conveniences for a sanatorium, and has a frontage of about four hundred and fifty feet on the sea, at a point where the bathing is peculiarly safe. The new summer home will be the resort of the poor children of the tenement houses during the hot weather.

—The bill requiring all the plumbers of New York and Brooklyn to have their names registered, and also giving the boards of health of the two cities supervision over all new plumbing, has been ordered to a third reading by the Assembly at Albany. This bill is the one drawn up by the New York Sanitary Reform Society.

Miscellany.

SANITARY LEGISLATION.

THE following amendments to the General Statutes of Massachusetts relating to boards of health are under consideration by the legislature, and are likely soon to become law:—

Chapter one hundred and thirty-three of the Acts of eighteen hundred and seventy-seven is hereby amended by striking out from the fifth section the last five words, as follows: "where such connection is made," and inserting in place thereof the words, "where a public sewer abuts the estate to be drained."

The Committee on Public Health, to whom was referred the Order relative to the expediency of further legislation in regard to Boards of Health in towns, and the Order relative to the expediency of further legislation for the Protection of the Children in the Public Schools against Contagious Diseases, report the accompanying Bill.

Section one of chapter twenty-six of the General Statutes is hereby amended so as to read as follows:

"Section 1. In each of the several towns of this commonwealth, the board of selectmen shall, in the month of January in the year eighteen hundred and eighty-two, appoint two persons, neither of whom shall be a member of the board of selectmen, and one of whom shall be a physician (provided there be a resident physician), who, together with the chairman of the board of selectmen, shall constitute the board of health of each town.

"The board so constituted shall enter upon its duties on the first Monday of February then next succeeding. The terms of office of the two appointed members shall be so arranged at the time of their appointment that the term of one shall expire on the first Monday in February in each year after the year eighteen hundred and eighty-two.

"In each of said towns, said boards of health shall annually, in the month of January, present to the State Board of Health, Lunacy, and Charity, a report made up to and including the thirty-first day of the preceding December, upon the sanitary condition of the town during the year."

THE CATGUT LIGATURE.

FROM the extremely interesting address on the above subject by Professor Lister, delivered before the Clinical Society of London, January 28th, we quote his description of the proper preparation of catgut ligatures. After speaking of the inconvenience of the extremely long period which the old method requires, he gives as follows the conditions for a perfectly satisfactory state of the catgut for surgical purposes. "In the first place I have spoken of a short period of preparation. This is very desirable. Then it is essential that the catgut should have proper strength, so as to bear any reasonable strain that the human hands can put upon it, in the thicker forms, as when used, for instance, in such cases as the circumferential ligature of the thyroid vessels in the removal of a goitre, or for securing the pedicle in ovariectomy. And it is not sufficient that it should be strong to start with; it is easy to get catgut strong in the dry state; it is necessary that it should be strong after steeping in blood-serum for a while. Take, for example, the case of a

tumor of the thyroid. I employed six ligatures, and in a former case I thought it prudent to pass as many as eight, but it is not convenient to tie each of these ligatures as soon as it is passed, and the process of passing takes a considerable time. Now it would be a very sad thing if the residence of the catgut among the tissues soaked with serum for a few minutes, or even a quarter of an hour, should render the catgut so soft that it should give way when we put the strain of the hands upon it. That, then, is another point essential, if the material is to be useful for all the purposes for which it is desired. Then, again, it is necessary that a knot tied upon it should hold with absolute security, not merely in the first instance, but after soaking for an unlimited time in blood-serum. It is further needful that it should not be too rigid, for, as we shall see immediately, it is possible for catgut to be over-prepared, in which case it may remain almost like a piece of wire among the tissues, and ultimately, perhaps, come away by suppuration in consequence of the mechanical irritation which it produces. But while the animal juices must be able to soften it sufficiently to render it mechanically unirritating, yet, on the other hand, it will not do for it to be too rapidly disposed of by absorption. If it is to do duty for the ligature of an artery in its continuity in the immediate vicinity of some large branch, it must remain for a considerable time of good strength, unabsorbed, and, when it is at length absorbed, it is desirable that it should be removed in such a manner that, while it is reduced in thickness, it should still, as long as any of it remains, retain its tenacity.

"Now, these are a series of conditions which, I assure you, it is not easy to fulfill completely. I have in various experiments complied with some of them easily enough, but failed in others. Sometimes I have succeeded with all but one, and one has baffled me. I have tried various materials, as you will naturally suppose."

Professor Lister gave in detail many of his experiments on the subject, and then described his present method.

"I dissolve one part of chromic acid in four thousand parts of distilled water, and add to the solution two hundred parts of pure carbolic acid or absolute phenol. In other words, I use a one to twenty watery solution of carbolic acid, only that the carbolic acid is dissolved, not in pure water, but in an exceedingly dilute solution of chromic acid. But minute as is the quantity of the chromic acid, it exerts, when in conjunction with carbolic acid, a most powerful effect upon the gut. The first effect of the addition of the carbolic acid to the chromic solution is to change its pale yellow color to a rich golden tint. But if the liquid is allowed to stand without the introduction of the catgut it changes, in the course of a few hours to a dingy reddish brown, in consequence of some mutual reaction of the two acids, and a considerable amount of reddish-gray precipitate is formed. If, however, catgut about equal in weight to the carbolic acid is added as soon as the ingredients are mixed, the liquid retains its brightness, and the only change observed is a gradual diminution of the depth of the yellow color, the precipitate which, I presume, still occurs, taking place into the substance of the catgut. As soon, therefore, as the preparing liquid has been made, catgut equal in weight to the phenol is introduced into it. If you have too large a proportion of catgut it will not be sufficiently prepared, if you have too small a quantity,

it may run the risk of being over-prepared. At the end of forty-eight hours the chromic element of the liquid has nearly spent itself, and precipitation is complete. The catgut is then taken out of the solution and dried, and, when dry, placed in one to five carbolic oil; it is then fit for use. I have here a sample of catgut prepared by this method. Although it has been steeped in warm blood-serum since this morning at eleven o'clock, it is still translucent and firm without being rigid, and a reef-knot tied upon it holds with the most perfect security.

"The strength of the catgut depends upon different circumstances. In the first place, sheep differ as to the strength of their intestines, and the catgut maker, if he understands his business, will insist upon having his raw material of a proper kind. In the next place, the intestines must not be allowed to putrefy, they must be used when quite fresh. For these things you must, of course, rely upon the maker of the catgut. In the next place, the preparing liquid causes a certain amount of softening of the catgut, and if it is introduced in loose hanks this will tend to produce a little uncoiling of the twisted cord, and a still greater degree of uncoiling will take place during drying. It is of very great importance that this should not occur, because it involves weakening of the thread, and that in different degrees in different parts, and this may lead to the gut giving way when you subject it to a strain. The catgut, then, should be prepared on the stretch, both when it is put to soak and when it is put to dry.

"I need not enter into the mode in which this can be done by the manufacturer. I may only say this, that the surgeon who wishes to prepare it himself may do it in different ways. For instance, he may take two large test tubes, one a little larger than the other, and he may wind the catgut on the smaller tube, fixing one end by sealing-wax, winding it round, and then bringing it up again, and fixing the other end with sealing-wax at a higher level than the liquid will reach, putting sufficient liquid into the larger test tube, and introducing the smaller test tube with the catgut wound round it, with a little shot to keep it down in the liquid. After forty-eight hours he takes out the smaller test tube, and leaves it till the catgut is completely dry. I merely mention this as an illustration, and also as furnishing a hint to some surgeons in private practice who may desire to prepare the catgut themselves. Or a couple of gallipots, one larger than the other, will do just as well. But, as I have already said, the principal uncoiling takes place during drying, and for all ordinary purposes a sufficiently good article is got by putting the catgut loose into the liquid, and making it dry on the stretch by tying the ends of each hank to two fixed points in a room.

"In the dry state, catgut prepared by this method is as strong as need be. As to strength in the condition after steeping in blood-serum, I confess it is only this very day that I have obtained evidence that catgut thus prepared is really all that we can desire in that respect. The catgut of the hank from which this specimen was taken measured, in the dry state, two and two thirds hundredths of an inch in diameter, and broke at thirteen pounds six ounces. I have found, by experiment, that ten pounds is the utmost strain that my arms are able to put upon a cord. Thirteen pounds six ounces, then, is amply sufficient, while, at the same time, the catgut is not at all too large for going into the eye of an aneurism needle."

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 19, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	674	273	25.37	20.77	9.79	6.38	1.77
Philadelphia.....	846,984	388	138	20.10	5.67	3.09	1.80	9.53
Brooklyn.....	566,689	218	90	22.94	17.43	11.93	4.13	.46
Chicago.....	503,304	202	88	22.28	14.85	7.43	.50	5.95
Boston.....	362,535	166	71	15.06	12.05	7.23	.60	—
St. Louis.....	350,522	177	62	20.90	14.12	2.26	.57	—
Baltimore.....	332,190	156	65	15.38	10.90	5.13	4.49	—
Cincinnati.....	255,708	96	35	13.54	23.96	5.21	2.08	—
New Orleans.....	216,140	121	39	21.49	14.07	4.13	6.61	—
District of Columbia.....	177,638	80	29	12.50	13.75	5.00	—	—
Pittsburgh.....	156,381	76	32	21.05	14.47	2.63	13.16	—
Buffalo.....	155,137	48	22	25.00	10.42	10.42	12.50	—
Milwaukee.....	115,578	36	16	16.67	11.11	2.78	5.56	—
Providence.....	104,850	37	8	16.22	—	10.81	—	—
New Haven.....	62,882	35	12	11.43	14.29	5.71	—	—
Charleston.....	49,999	33	9	9.09	12.12	3.03	6.06	—
Nashville.....	43,461	25	10	12.00	16.00	—	—	—
Lowell.....	59,485	24	9	25.00	12.50	—	—	—
Worcester.....	58,295	24	12	16.67	20.83	4.17	12.50	—
Cambridge.....	52,740	23	8	34.78	8.70	21.74	—	—
Fall River.....	49,006	21	6	4.76	23.81	—	—	—
Lawrence.....	39,178	15	3	20.00	13.33	—	—	—
Lynn.....	38,284	15	5	26.67	6.67	20.00	—	—
Springfield.....	33,340	14	3	14.29	—	7.14	—	—
Salem.....	27,598	8	1	—	25.00	—	—	—
New Bedford.....	26,875	10	2	—	20.00	—	—	—
Somerville.....	24,985	9	6	44.44	22.22	33.33	—	—
Holyoke.....	21,851	6	2	—	—	—	—	—
Chelsea.....	21,785	8	2	—	—	—	—	—
Taunton.....	21,213	8	2	25.00	12.50	—	25.00	—
Gloucester.....	19,329	4	1	50.00	25.00	50.00	—	—
Haverhill.....	18,475	5	2	20.00	20.00	—	—	—
Newton.....	16,995	6	3	33.33	16.67	16.67	—	—
Newburyport.....	13,537	3	0	—	33.33	—	—	—
Fitchburg.....	12,405	2	1	—	50.00	—	—	—
Twenty-seven Massachusetts towns	223,452	71	20	18.31	26.76	2.82	1.41	—

Deaths reported 2844; 1087 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 581, lung diseases 425, consumption 417, diphtheria and croup 190, scarlet fever 105, small-pox 62, cerebro-spinal meningitis 57, diarrheal diseases 42, typhoid fever 40, malarial fevers 24, measles 21, erysipelas 20, whooping-cough 15, puerperal fever five. From *cerebro-spinal meningitis*, New York 15, St. Louis 14, New Orleans eight, Chicago seven, Philadelphia three, Brooklyn two, Cincinnati, Milwaukee, Lynn, Newton, Northampton, Attleborough, Quincy, and Milford one. From *diarrheal diseases*, New York 10, New Orleans five, Brooklyn and Baltimore four, District of Columbia three, Philadelphia, Chicago, Boston, and St. Louis two, Cincinnati, Pittsburgh, Milwaukee, New Haven, Lowell, Cambridge, Brockton, and Quincy one. From *typhoid fever*, Philadelphia nine, New York six, Lowell four, Chicago and St. Louis three, Brooklyn, Pittsburgh, and Lawrence two, Boston, Baltimore, Cincinnati, District of Columbia, Buffalo, Milwaukee, Nashville, Attleborough, and Amherst one. From *malarial fevers*, New York and St. Louis eight, Brooklyn four, Chicago and Baltimore two. From *measles*, Boston eight, New York five, Philadelphia and Nashville two, Chicago, St. Louis, Pittsfield, and Brookline one. From *erysipelas*, New York five, Philadelphia, Baltimore, and Cincinnati two, Brooklyn, Chicago, Boston, St. Louis, Pittsburgh, Providence, Cambridge, Lawrence, and Haverhill one. From *whooping-cough*, Philadelphia four, District of Columbia two, New York, Brooklyn, Chicago, St. Louis, Cincinnati, Providence, Cambridge, Springfield, and Somerville one. From *puerperal fever*, St. Louis, two, New Haven, Lowell, and Fall River one.

Nine cases of small-pox were reported in Brooklyn, 16 in Chicago, and three in Pittsburgh; diphtheria 46, scarlet fever 11, in Boston; scarlet fever 24, diphtheria seven, in Milwaukee.

In 46 cities and towns of Massachusetts, with a population of 1,141,363 (population of the State 1,783,086), the total death-rate for the week was 20.19, against 20.44 and 21.99 for the previous two weeks.

For the week ending February 26th, in 149 German cities and towns, with an estimated population of 7,880,919, the death-rate was 25.3. Deaths reported 3837; 1771 under five; pulmonary consumption 543, acute diseases of the respiratory organs 411, croup and diphtheria 149, scarlet fever 87, measles and röteln 50, whooping-cough 47, typhoid fever 45, puerperal fever 21, small-pox (Munich, Regensburg, Aachen five) seven. The death-rates ranged from 16.7 in Bremen to 38.4 in Strasburg; Königsberg 35.4; Breslau 32.6; Munich 37.1; Dresden 26.4; Berlin 23.9; Leipzig 22; Hamburg 23.3; Hanover 17.8; Cologne 25.9; Frankfurt 20.9.

For the week ending March 5th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 23. Deaths reported 3355; acute diseases of the respiratory organs 419, whooping-cough 82, scarlet fever 57, small-pox (London 52) 53, diarrhoea 34, measles 28, fever 26, diphtheria 16. The death-rates ranged from 17.2 in Brighton to 26.5 in Liverpool; Bristol 19.5; Birmingham 21.1; Leeds 21.4; Sheffield 22; London 23; Manchester 25.2. In Edinburgh 22.3; Glasgow 22.8; Dublin 36.

In the 20 chief towns in Switzerland, for the week ending March 5th, actual population according to census just published 548,301, there were 41 deaths from acute diseases of the respiratory organs, diphtheria and croup 17, diarrheal diseases 17, typhoid fever seven, measles four, small-pox four, whooping-cough, puerperal fever three. Death-rate of Geneva 26.6, Zurich 31.8, Basle 30.9, Berne 45.7.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration. Hours.	Amount in inches.
March 13	29.792	36	38	32	100	90	90	93	N	SE	SW	5	3	3	Hy. S	Lt. S	O	—	—
" 14	30.059	36	41	33	100	73	90	88	N	NE	Calm.	8	14	0	Lt. S	Lt. S	C	—	—
" 15	30.309	36	44	31	89	66	80	78	N	E	S	3	5	7	C	F	F	—	—
" 16	30.040	42	52	30	79	86	74	80	SW	W	NW	8	19	13	O	F	F	—	—
" 17	30.199	35	39	34	80	80	90	83	NE	NE	E	10	12	6	O	O	O	—	—
" 18	30.218	37	41	34	90	73	90	84	E	E	E	9	10	12	O	O	C	—	—
" 19	30.098	35	41	32	90	73	100	88	E	E	E	8	12	14	O	O	Hy. S	—	—
Week.	30.102	37	52	31														27.20	.52

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening; Lt. R., light rain; Lt. S., light snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 19, 1881, TO MARCH 25, 1881.

GIBSON, J. R., major and surgeon. Relieved from duty at Fort McHenry, Md., and to report to the commanding officer United States Barracks, Washington, D. C., for duty as post surgeon. S. O. 52, Department of the East, March 22, 1881.

MEACHAM, F., captain and assistant surgeon. To report for duty to the commanding officer, Fort Hamilton, New York Harbor. S. O. 52, C. S., Department of the East.

REED, W., captain and assistant surgeon. Awaiting orders at Fort McHenry, Md., to report to the commanding officer of that post for duty. S. O. 52, C. S., Department of the East.

PORTER, J. Y., captain and assistant surgeon. Granted leave of absence for one month, to take effect from 6th proximo. S. O. 28, Department of the South, March 22, 1881.

SHUE, E. D., first lieutenant and assistant surgeon. When relieved at Fort Grant by Assistant Surgeon J. B. Girard, to report in person to the commanding officer Camp Thomas, A. T., for duty. S. O. 27, Department of Arizona, March 8, 1881.

ARTHUR, WILLIAM H., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 62, A. G. O., March 17, 1881.

BESUNELL, GEORGE E., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of Dakota, for assignment to duty. S. O. 62, C. S., A. G. O.

BIRMINGHAM, H. P., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 62, C. S., A. G. O.

WYLLIE, M. C., first lieutenant and assistant surgeon (recently appointed). To report in person to the commanding general, Department of Dakota, for assignment to duty. S. O. 62, C. S., A. G. O.

KING, J. H. T., captain and assistant surgeon. The leave of absence granted him in S. O. 253, November 29, 1880, from A. G. O., is extended to June 30, 1881, and his resignation accepted by the President of the United States, to take effect June 30, 1881. S. O. 65, A. G. O., March 21, 1881.

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Lectures.

CEREBRAL LOCALIZATION.

BY N. N. MUDD, M. D., ST. LOUIS.

THE brain is an organ of the mind, each mental operation prompts its functional activity. As a condition essential to nervous activity in all the higher animals we recognize the existence of afferent sensory tracts, carrying sensations to a ganglionic centre, composed of cells, and efferent motor tracts conveying motor impulses.

These fundamental facts of anatomy, as well as all analogy, point to the conclusion that "identical mental operations always are associated with functional activity of identical tracts of nerve fibres and cells in the brain and its dependencies."

These tracts and these nerve cells or ganglia are localized, circumscribed, and their functional activity is always the same. It is no proof that these tracts are not well defined that we fail to trace them through the intricate anatomy of the cerebral hemispheres, nor does it seem to me that because there may be an overlapping of the different perceptive and volitional centres that this is an argument against localization of functions. Again, in such an intricate structure as the brain there must be a degree of interdependence of its various parts. It is not complete and perfect in any of its divisions, except as it is perfect as a composite whole. This must be conceded, but should not be allowed to militate against the truth of Ferrier's doctrines.

The doctrines of cerebral localization are now awakening world-wide interest among scientific men. Experimental physiology and keen and accurate observations at the bedside are confirming many of the theories advanced by the exponents of, and the enthusiastic workers in, this department, in their endeavor to localize cerebral functions.

[At this point the lecturer exhibited the accompanying chart, taken from Ferrier, on which he pointed out the different portions of the cerebro-spinal axis, and explained their functions.]

The nervous system in all the higher animals is composed of afferent sensory fibres, ganglionic centres, and efferent motor tracts, together with an intermediate basis substance, where these cell units are aggregated.

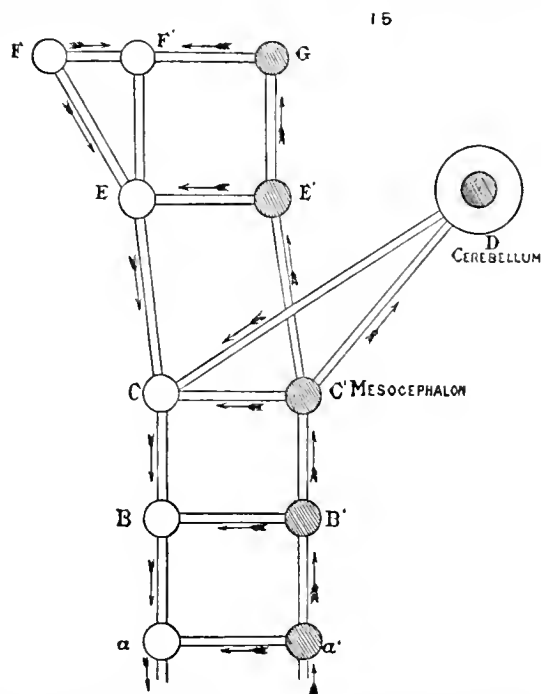
In this chart (pointing to the accompanying diagram) the dark circles indicate the sensory centres, the arrows indicating the course of the ingoing currents. The motor or volitional ganglia are those which you see marked with a simple ring or circle. The circles represent the encephalic and the spinal centres, A A' represent the reflex or excito-motor centres of the spinal cord. These may act quite independently of the higher centres of the encephalon. B B' indicate the region of more complex reflex action, such action as we have controlling the respiration, the circulation, and the vaso-motor nerves. Passing still higher we find in C C', which are directly connected with D, the cerebellum, the mesocephalic centres, where, as it is well known, we locate the complex forms of activity, such as locomotion, emotional expression, and equilibrium.

Just here it is well to recall a fact which is well established by experiments upon inferior animals, that the independence of the mesocephalic ganglia and the

cerebellum is in inverse ratio to the development of the cerebral hemispheres. The diagram will indicate how we may cut off the cerebellum without disturbing the functional activity of the mesencephalic ganglia, and without affecting conscious sensation and voluntary motion. The localization of these different functions has been long well known, and is established with more or less precision.

In 1870 Fritsch and Hitzig established by a series of experiments the fact that the direct application of the faradic current to the surface of the hemispheres in certain well defined regions caused movements. This fact, as also the more important one that the irritation of certain circumscribed areas was always associated with definite muscular contraction, is well proven. It was, before this, generally believed that the cerebral hemispheres acted as a unit, as a composite mass, which represented the site of conscious sensation and volition, but it was *not* believed that definite functions could be ascribed to different regions of the cerebrum.

[Referring again to the chart.] E E' represent the basal ganglia, E corresponding to the corpora striata,



while E' represents the sensory ganglia, the thalamus optici. In these basal ganglia we have differentiated the various functions of the cerebral lobes, G F' and F; and in the convolutions of the different lobes we have localized the different conscious cerebral actions.

Can we now assign to certain parts of the cerebrum determined functions? Ferrier asserts positively that definite areas of the cerebral hemispheres have certain well defined functions, and supports his theory by many facts deduced from experiments upon the monkey, in which he irritated different portions of the brain by the use of the faradic current. The definite muscular activity resulting from this irritation cannot come from its conduction to the basal ganglia, for when we apply the current directly to the basal ganglia there is a general muscular spasm, and not the definite, localized, circumscribed activity that we get from irritation of particular convolutions of the cere-

¹ Read before the St. Louis Medical Society, January 15, 1881.

brum. Clinical observation also offers many confirmatory evidences of the localization of functions in the cerebral convolutions.

Let us look for a moment at the anatomy of the cerebral hemispheres, and see whether we find in the normal structure of the part any reason to believe in the localization of cerebral functions in the convolutions. The gray matter of the hemispheres is distributed in two different and distinct regions. The central ganglionic masses composed of the thalami optici and corpora striata, forming the basal ganglia, and the laminae of gray substance everywhere present on the surface of the convolutions, forming the second region.

Charcot, in his work, *Localization in Diseases of the Brain*, describes the central ganglia and their relations so well, that I present a chart copied from his work. [At this point the lecturer exhibited a diagram of a vertical transverse section of the brain.]

The white band running upward through the central ganglia Charcot terms the internal capsule. It is composed almost entirely of white connecting fibres, which pass between the crura of the brain and the convolutions. Above and to the inner side of the internal capsule we have the gray nucleus of the thalamus opticus. Below and to the outer side of the internal capsule we have the lenticular nucleus of the striated body.

Connecting the cerebral mass and the cerebral peduncles with the convolutions we have, "first, radiating fasciculi of the thalami optici. Second, radiating fasciculi of the corpora striata. Third, radiating fasciculi of the lenticular ganglia. Fourth, the direct fasciculi which go to the foot of the peduncle without stopping in the gray central ganglia." These different fibres may be recognized in sections of the internal capsule.

Perhaps the most authentic and best established localized functions in the cerebral cortex are in the psycho-motor zone of Ferrier, which is located around the fissure of Rolando. About this fissure is an arrangement of the gray laminae which is peculiar to this region, and is confirmatory of the experiments of Ferrier. Here are found pyramidal motor cells, giant cells, which resemble very much the multipolar motor cells of the anterior cornua of the spinal cord. These cells are very largely developed in regions in which Ferrier, by experimental physiology, has located motor activity. We find upon the occipital and sphenoidal lobes, in which sensory functions have been located, granular cells, very different from those of the motor zone. Thus histological researches confirm the doctrines of cerebral localization.

Before considering the anatomy of the circulation of the brain we will look a moment at the differences in character of the diseases of the spinal cord and of the brain. The so-called "systemic lesions" of the cord are well understood and distinctly circumscribed. They may involve also the rachidean bulb, but above this point we find an entire change in the character of the disease. In the brain the circulation is the key to the pathological changes. Circumscribed diseases of the brain are generally dependent on either thrombosis, embolism, hemorrhage, or changed nutrition produced by disturbed vascular supply. These sources of disease are active also in the intermediate structures formed by the medulla and the pons Varolii, but we do not find any such conditions pertaining to disease of the cord proper.

The circulation of the cerebral hemispheres, the

manner of the distribution of the arteries, the isolation of the central ganglia from the cortical layer, indicate independent activity. According to Duret and Heubner, — from whom much of the precise knowledge of recent date concerning the circulation of the brain is derived. — there are two systems of vessels, the central and the cortical; the central system being derived very largely from the sylvian or middle cerebral artery, the anterior cerebral supplying only a small portion of the caudate ganglion, while the posterior cerebral supplies a part of the thalami optici. From the same trunks, but farther out, are derived the vessels for the cortical system.

These two systems are entirely independent, and have no manner of communication in their peripheral distribution. The circulation of the central ganglia is entirely distinct and separate from that of the cortical portion of the brain. There is an intermediate territory between the two which is poorly nourished, and which is frequently the seat of senile softening.

The arteries of the central system are given off at right angles to the trunks of the sylvian arteries as they run along the inferior surface of the brain, and may be divided into two sets. First, those supplying the anterior portion of the internal capsule; second, those supplying the posterior portion of the internal capsule. These branches are distributed in the central mass, and have but slight if any anastomoses with each other.

The cortical branches of the sylvian artery pass out and break up into primary and secondary branches, which ramify in the pia mater and run parallel with the cerebral convolutions. From these ramifications are derived the nutrient arteries, which penetrate the gray cortex and pass into the convolutions, not only from the cortex but from the sides of the convolutions, and converge towards a central point.

For the present we may say that our ability to discriminate in the regional diagnosis of lesions of the central mass consists in our ability to recognize disturbances of the internal capsule. We can often determine whether the anterior or posterior portion of the capsule is involved in disease, for in the one we may have hemianesthesia and in the other only hemiplegia.

In cerebral topography there are some well-marked fundamental fissures and convolutions; for instance, we have the fissure of Sylvius with its anterior and vertical or posterior arms, dividing the anterior from the middle lobe of the brain. Running vertically upwards from near the anterior portion of the horizontal limb of the sylvian fissure is the fissure of Rolando, which passes upwards and inwards to the longitudinal fissure. Upon either side of this fissure is situated the motor zone of the cerebral hemisphere, composed in front of the ascending frontal convolution and the posterior part of the first frontal convolution, and behind of the ascending parietal convolution, and near the median line a part of the parieto-occipital lobe.

Extending forward from the ascending frontal convolution are two fissures nearly parallel with the longitudinal fissure, which divide the frontal lobe into the first, second, and third frontal convolutions. The frontal lobes are the seat of the intellect, the posterior inferior part of the third frontal being the centre of speech.

In the parietal lobe is the intra-parietal sulcus, below which is the supra-marginal convolution and the angular gyrus in which is located the centre of sight.

Below the fissure of Sylvius the temporo-sphenoidal

sulcus separates the superior from the middle sphenoidal convolution. In the superior temporo-sphenoidal convolution is located the centre of hearing, while in the middle and inferior temporo-sphenoidal are centres of smell and taste.

If we can ascribe to the convolutions in the occipital lobes special functions it is in connection with the functions of organic life; the sense of well or ill being, as evidenced in nutrition or in the condition of the gastro-intestinal canal.

Looking on the inferior surface of the cerebrum we see the dentate fissure, close to the posterior border of the corpus callosum, and continuous with this fissure posteriorly we have the calcarine sulcus. External to this, between it and the collateral fissure, is a convolution extending toward the anterior part of the middle lobe, the uncinate convolution, or the hippocampal region, in which is located tactile sensation.

Dividing the brain at the longitudinal fissure into two lateral halves, upon the median surface is observed a fissure which runs parallel with the anterior portion of the corpus callosum, called callosa marginal. Above this is the frontal lobe, below the gyrus fornicatus. Between the parieto-occipital fissure and the posterior part of the callosa marginal sulcus we have the præcuneus or quadrilateral lobe.

If we are to make use of the deductions of experimental physiology in our practical work as physicians, it will be after we have learned to locate exactly and describe with anatomical precision the lesions that we find in post-mortem examinations. Clinical examinations made during the progress of disease without a knowledge of the facts of localization as taught by experimental physiology will not be made with sufficient accuracy to prove whether the lesions found on post-mortem examinations are confirmatory or not of the doctrines of cerebral localization.

The precise relation of these fissures and convolutions to the prominent points of the skull is of clinical importance. The coronal and lambdoid sutures divide the skull into the frontal, parietal, and occipital regions. The frontal region is subdivided by two lines, one of them corresponding with the anterior portion of the temporal arch, the other midway between this and the median line, forming the supra, mid, and infra frontal regions.

The parietal region is divided by a line running vertically through the parietal eminence into the anterior and posterior parietal regions. Each one of these is subdivided by a line drawn along the temporal arch into a superior and inferior anterior or posterior parietal region.

If I draw a line through the anterior parietal region from the sagittal suture to the point of junction of the squamo-parietal and the sphenoparietal sutures, I shall outline very clearly the position of the fissure of Rolando, and about this we find the psycho-motor zone, which is located almost entirely in the anterior parietal region.

The posterior parietal lobe, in which is located the centre of motion of the leg and foot, as in locomotion, extends into the upper portion of the post-parietal region. In cranial topography the cortical centre of sight is about the parietal eminence, hearing in the lower anterior parietal region, smell and taste in the temporo-sphenoidal region, while the tactile sense is more deeply placed on the inferior surface of the cerebrum.

In 1879 I had an opportunity of observing a case in

which the psycho-motor zone was involved, and which gave evidence of irritability of the cerebral cortex, the irritability being evinced in convulsive movements of the limbs. The man received a blow upon the head which contused the bone and induced inflammatory softening of the osseous tissue, but there was no inflammation of the membranes, neither was there any pressure upon the brain. The injury was inflicted just above the parietal eminence of the left side, and about one and a quarter inches from the middle line. Fifteen days after the injury the man noticed a twitching of his right leg, which was involuntary, and which increased from hour to hour until he was seized with epileptic convulsions.

The site of injury corresponded exactly with the situation of the convolution, as located by Ferrier, which is active in producing motions of the leg. The injured bone was removed, the membranes were found healthy, and the convulsive movements ceased.

Dr. Hall, of the northern part of the city, had under observation a man aged forty-two, shot accidentally December 26, 1880. The ball entered the forehead two inches above the junction of the eyebrows; passing through the skull, it passed through the posterior portion of the first frontal convolution and impinged on the skull about one and a half inches in front of the occipital bone to the right of the median line. From this point it was deflected downwards toward the superior curved line of the occiput, passing through the occipital lobe. As you will observe, the track of the ball injured first the convolution active in controlling the lateral movements of the head and the elevation of the eyelids; it then passed through the greater portion of the motor zone of the arm, hand, and leg, left untouched the convolution presiding over the muscles of the face, angle of the mouth, of the lips, and tongue.

The symptoms in this case indicated very nearly the track of the ball, for during life he was unable to elevate perfectly the eyelids, he had complete hemiplegia of the left side, but could talk; there was but little distortion of the muscles of the face, the lips responded to the stimulus of the cup placed to them, and he drank, although he did not complain of hunger nor thirst.

A peculiar symptom of this case was that upon touching the paralyzed side he recognized the touch in every instance; but instead of referring it to the point touched he invariably referred it to the corresponding point on the opposite side of the body. If symmetrical points were touched at the same moment he recognized only the touch upon the sound side. It will be observed in the description of this injury to the brain that the hippocampal region, the site of tactile sensation, was undisturbed.

— The *British Medical Journal* reports the death of a child, aged seven months, from the effects of a needle, which had found its way into the body either by swallowing or from without. About a fortnight ago the infant was seized with very peculiar and unexplainable symptoms of illness, the only outward indications being irritation and a hardness on the left side of the body. These symptoms increased, and the child died. A post-mortem examination showed that a common sewing-needle had pierced the pericardium, and imbedded itself in the lower region of the heart.

Original Articles.

PODODYNIA: ITS CAUSES AND SIGNIFICANCE.¹

BY T. B. CURTIS, M. D.

THE word *pododynia*, or *podalgia*, is here used, for the sake of brevity, to designate certain painful affections of the feet, in which pain, spontaneous or provoked by contact and pressure, exists independently of any physical signs, visible or tangible, of local organic disease of the part, whether inflammatory or traumatic. A puzzling and refractory case, encountered in private practice a few years ago, furnished the occasion and incentive for studying the different varieties of painful affections of the feet, in which mere *pain*, apparently independent of any gross lesion, constituted the main, or only, symptom complained of by the patient. I was thus led to rehearse and investigate the numerous etiological conditions in which pododynia, as above defined, is liable to occur; and the following short account of what was to be found in medical literature touching this comparatively unimportant topic, represents merely a contribution to the elucidation of the semeiology of pain in the foot.

The symptom in question, especially when limited to the purely subjective phenomenon pain, and unaccompanied by any discoverable local lesion, may appear a trivial matter; nevertheless, a chronic, long-lasting pain or tenderness of the foot is often so disabling, by interfering with locomotion, that the importance of correct diagnosis, prognosis, and treatment is by no means commensurate with the apparent insignificance of the ailment complained of. Moreover, although the causes of pain in the foot are very diverse, and their connection with this local manifestation is often remote and obscure, pododynia, considered only as a symptom, has not unfrequently a real diagnostic interest and value; and is, therefore, I think, worthy of attention, from a semeiological point of view. Without further apology, then, for dwelling upon so small a topic, I will first give a short account of my case, and then add such information as I have been able to collect on the subject of the disease from which my patient was suffering, as well as concerning the other forms of pain in the foot occasionally encountered in practice:—

CASE. A large, heavy man, about forty-five years of age, stout and somewhat plethoric in appearance, but in other respects looking robust and healthy, came to my office in August, 1877, complaining of a pain in the right heel. In answer to questions, he informed me that for some years before he had occasionally noticed urinary deposits, "brick-dust," together with slight attacks of temporary irritation of the bladder. He had also had "rheumatic" pains of uncertain character. No other morbid antecedents could be elicited. The pain was first felt about six weeks before his visit. He remembered having slipped and struck his heel, a few days previously, but this accident seemed a trivial one, and he attached, at the time, little or no importance to it.

At the time of his visit, strong pressure showed the existence of a tender spot on the sole of the right heel, about two inches from the posterior extremity of the *os calcis*. No other symptom was detected by a careful examination. The appearance of the part was perfectly normal, heat, redness, and swelling being entirely

absent. The patient was quite free from pain so long as he kept quiet, and he walked into my office without limping; but when he went even a moderate distance on foot, the pain soon became sufficiently acute to render further walking very uncomfortable, and caused a degree of lameness which hindered him very materially in the accomplishment of his bread-winning duties, the latter being those of a business-agent and errand runner, and keeping him a great deal on his feet. The diagnosis entered in my record of the case was "confusion: pain kept up by walking." I advised complete rest for a week, and the use of an alkaline mixture, in which twenty-five grains of citrate of potassium were to be taken thrice daily.

The patient returned two months later in the same condition as when first seen. The pain had ceased during abstinence from walking, recurring, however, as soon as he resumed his habitual occupations. Moreover, the other foot had become similarly affected, with a pain in the *tendo Achillis*. I then advised counter-irritation by means of tincture of iodine, together with the internal use of iodide of potassium, in doses of five grains, thrice daily. I failed to see the patient again, but have since been told by a mutual acquaintance that he had remained without improvement. I also learned that, before applying to me, he had been under the care of one of our most experienced surgeons.

REMARKS. Not long after the disappearance of this dissatisfied and unsatisfactory patient, I came across a description of his trouble in a book recently published by Dr. Gillette,¹ a surgeon of the Paris Hospitals. In this work, Dr. Desprès, of Paris, also a hospital-surgeon, is quoted as having bestowed the name of "policeman's disease" (*maladie des gardiens de la paix*, the latter designation being a euphemism which, after the downfall of the Empire, replaced the abhorred term *sergent-de-ville*) upon a painful affection of the foot, originating in a deep-seated contusion of the adipose cushion which covers the *os calcis*, and perpetuated by pressure undergone during locomotion. This ailment had, it seemed, been first described, many years ago, in 1833, by Velpeau.² It had also been, more recently, the subject of an essay by Dr. Fabre.³ According to Desprès, whose cases were chiefly observed among the Paris policemen, the pain generally affects first the right heel. It diminishes or subsides altogether during rest, but recurs, with or without implication of the other heel, when walking is resumed or persisted in.

Such is the "policeman's disease" of the French. I once inquired of Dr. Samuel A. Green, who, in his capacity of city physician, is often called upon to attend our sick or disabled policemen, whether among the latter he had ever met with such cases of painful heels. He had, however, had no such experience.

Pain in the heel, or sole, unattended by any objective symptoms, occurs under the following varied conditions:—

(1.) As an irradiated, reflected, or so-called "sympathetic" pain, in cases of *urethral stricture*, it has been observed by Luxmoor, Brodie, and many others.⁴

(2.) In cases of *osteal calculus*, "one of the most

¹ Gillette. *Clinique Chirurgicale*. Paris. 1877.

² Velpeau. *De la Contusion*. Thèse de concours. Paris. 1833.

³ Fabre. *Essai sur la Contusion chronique du Talon*. Paris. 1876.

⁴ Sir Henry Thompson, on *Stricture*. London, 1869, page 95, Van Buren and Keyes on *Genito-Urinary Diseases*, 1874, page 268 J. W. S. Gouley, on *Diseases of the Urinary Organs*, 1873, page 16.

¹ Read before the Boston Society for Medical Improvement, March 28, 1881.

interesting examples of this," says Von Pitha,¹ "occurred in the person of a colleague, Dr. Reisch, of Prague, who, in 1857, was freed from a large stone by lithotripsy. . . . He indicated, as one of the most precise symptoms of the calculus, a sensation as if he were standing with his left foot on a red-hot plate. With each successive diminution of the size of the stone, by means of the operation, the circumference of this burning plate seemed to diminish, and at last only a small edge of the sole remained the seat of this reflected pain. This remnant, however, continued obstinate after I had, as I believed, removed all the detritus, and when exploration failed to detect anything within the bladder. In spite of my denial, the patient insisted determinedly that, according to his sensations, some small fragments still existed at the left side of the fundus of the bladder. I examined him again, and at the end of a few weeks found, at the spot which he had indicated, a small fragment concealed in a fold of the mucous membrane. When this was removed, all pain in the sole disappeared, and the patient, for the first time, expressed himself relieved."

(3.) Similar irradiated or reflected pains in the foot are occasionally experienced in *cysto-prostatitis* or inflammation of the neck of the bladder. A patient of mine, somewhat advanced in years, had suffered for several years from obstructive hypertrophy of the prostate, with complete retention of urine, requiring the habitual daily use of the catheter, and complicated by chronic catarrh of the bladder. He had also had a phosphatic vesical calculus, which was removed by lithotripsy, partly by Professor Guyon in Paris, and partly by myself after the return of the patient to this country. He had for several months been afflicted with a most painful and harassing complication, namely, a chronic cysto-prostatitis, liable to frequent acute or subacute exacerbations. A considerable degree of relief, by the way, of the distressing and almost ceaseless vesical tenesmus caused by this inflammatory affection accrued from the use of intra-prostatic injections of strong solutions of nitrate of silver, — varying in strength from one in fifty to one in twenty parts of water, — practiced with Guyon's injector, at intervals varying from three or four to six or seven days. In this patient, curiously enough, every paroxysm of prostatic pain, whether caused by movements in bed, by locomotion, by calls to urinate, by catheterism or by the applications of nitrate of silver, was and still is liable to be accompanied by a sharp, distinctly localized pain in the ball of the left foot, the sensation then felt being compared by him to that which would be caused by treading with the bare foot upon tacks or broken glass. The pain at the neck of the bladder was of the same description, as if due to the presence of a sharp, jagged foreign body, so as to lead to repeated explorations for calculus under ether; this pain, also, is left sided, being referred to the left side of the vesical neck and rectum.

(4.) In *cystalgia* or neuralgia of the neck of the bladder, Von Pitha² himself, suffering from this neurosis, was actually sounded for stone as often as five times, by his own desire, so closely were the symptoms of vesical calculus simulated by his crystalgic paroxysms. A very severe neuralgia at the same time also

affected the heel, the pain, at its moments of greatest severity, taking on exactly the sensation that would have been experienced if the periosteum were being forcibly separated from the *os calcis*. "The pains are so intense," says Von Pitha, "and the deception so complete, that I am under the conviction that if the subperiosteal excision of the *os calcis* were being executed, the pains would only resemble in nature and severity those which I suffer during the acute paroxysm."

(5.) In *gout*, besides the pain attending the acute inflammatory attacks of dermatitis, lymphangitis, and cellulitis, caused by the deposits of biurate of sodium, sharp pains in the feet, particularly in the heel, at times occur without any objective symptoms. Sir James Paget³ cites pain in the heel as one of the many lesser signs of gout. "Of course," he says, "it was not meant that no further inquiries should be made, but only that pain at the heel ought to suggest gout, and lead to further questions on the point. Similarly, pain in the tendo Achillis, especially in elderly persons, who had sustained no injury, was due, with very few exceptions, to some degree of gout." Elsewhere⁴ he says, "I cannot remember to have heard any patient complaining of spontaneous pain in his tendo Achillis, except such as I knew to be by inheritance disposed to gout or a lithic acid diathesis. Pain in the heel of an elderly person has, generally, the same meaning. . . . 'Burning soles' and the less frequent 'burning palms' generally signify a gouty constitution or one closely allied to it, and so do the sensations of hot, tingling, and burning patches of the skin of the thighs, without external appearance of redness or eruption." Dr. Dyce Duckworth,⁵ of Saint Bartholomew's Hospital, to whose extensive and painstaking observations we owe much valuable information touching the protean signs of the gouty constitution, testifies to the same effect as follows: "Deep-seated pain in the heel has been recognized as of gouty origin. The sensation is compared to the feeling of a foreign body being implanted there, such as a bullet. And it is noteworthy that this is sometimes a symptom of a renal calculus which may itself be the outcome of a gouty taint. The pain is sometimes distinctly in the tendo Achillis." Charcot⁶ mentions the tendo Achillis as one of the ligamentous structures in which uric acid is liable to be deposited in overtly gouty subjects. A discussion took place a few years ago in one of the medical societies of Paris on *pain in the heel, or talalgia, and its treatment*, in which several speakers took part. It was agreed that the pain was often due to a gouty or rheumatic diathesis, and the use of salicyate of soda, in daily doses of one or two drachms, was said by Buequoy, Panas, and Desprès,⁷ to be often efficacious.

The burning soles and palms, alluded to by Sir James Paget, may, perhaps, be considered more or less analogous to the distressing and at times painful affection of the extremities, recently described by Dr. S. W. Mitchell,⁸ under the title of A Rare Vaso-

³ British Medical Journal, May 22, 1875, page 665.

⁴ Sir James Paget's Clinical Lectures, London, 1875, page 372.

⁵ Studies of some Irregular Manifestations of Gout. By Dr. Dyce Duckworth. Saint Bartholomew's Hospital Reports, vol. xv., 1879, page 104.

⁶ Charcot, Maladies des Vieillards, Paris, 1874, page 53. See also Prof. W. H. Draper, on the Gouty Vice, in Seguin's American Clinical Lectures, New York, vol. i, p. 307.

⁷ Lyon Medical, No. 5, 1879. New York Medical Record, 1879, page 490.

⁸ S. W. Mitchell. American Journal of the Medical Sciences, July, 1878, page 17.

¹ Von Pitha. Medical Times and Gazette, September 25, 1875, page 358. See, also, John Hunter, edited by Palmer, vol. i, p. 321. Charles Hawkins, in Holmes' System of Surgery, vol. iv, p. 1035.

² Von Pitha, loco citato. See also Civiale, Maladies des Organes Génito-Uriinaires, Paris, 1858, vol. ii, p. 9.

Motor Neurosis. In this chronic and most refractory disease, however, for which the descriptive name of *erythromelalgia* is proposed by Dr. Mitchell, the subjective sensation of heat or scalding is accompanied by a marked temporary flushing or hyperæmia of the affected parts, with redness and warmth of the surface. This affection, therefore, cannot properly be included in the category of purely subjective ailments considered in this paper.

A patient of my own, an elderly lady, coming from a distinctly gouty stock, who had suffered severely somewhat over a year ago from gall-stones, with severe hepatic colic and jaundice, and who has lately placed herself, by my advice, under the care of Dr. J. C. White, on account of a persistent and most distressing generalized pruritus, has also suffered, since last October, from what I take to be *erythromelalgia*, namely, paroxysms of painful burning of the feet, accompanied, according to her report, by flushing of the skin, and occurring mostly at night in bed.

(6.) *Renal calculus* occasionally gives rise to a pain irradiated to the heel, as stated by Dr. Dyce Duckworth in the passage quoted above.

(7.) In *gonorrhœa* pain in the heel is described by Fournier,¹ Panas, and others, as an occasional manifestation, more or less akin to the various forms and localizations of so-called "gonorrhœal rheumatism," which affects the articular and tendinous synovial membranes and the bursa. It was first described as affecting the heel in this disease by Swediaur.

(8.) In *syphilis*, also, according to Fournier,² the same phenomenon is met with. Here, as in gonorrhœa, the pain is attributed by him to a bursitis.

(9.) In *locomotor ataxia* the heel may be the first or, for a while, the principal seat of the lancinating or boring pains, characteristic of the first stages of that strange disease. A patient whom I had occasion to see a few years ago, and whom I sounded for stone, at the request of his medical attendant, was suffering from occasional painful paroxysms of vesical and rectal tenesmus. For several years previously he had experienced sharp, boring pains (the *douleurs térébrantes* of Charcot) which had first attacked the heel. He subsequently developed ataxic symptoms, with staggering gait. Dr. Seguin, describing the symptoms of locomotor ataxia, says that "patients usually give up in despair the attempt to show you every spot in which they have suffered, and they generally indicate as foci of pain the heel, instep, and thigh." Dr. Buzzard also expressly mentions the heel as frequently the seat of pain in tabes.

(10.) Lastly, an obscure form of pain in the feet has been very briefly described by Prof. S. D. Gross,³ under the name of *pododynin*. It shows itself in the form of great tenderness to pressure, and is met with in certain sedentary classes of artisans, particularly in tailors.

Such, mainly, are the manifold conditions under which the purely subjective symptom, *pain in the foot*, may occur. This little ailment is not unfrequently as puzzling and refractory to the medical attendant as it is annoying and disabling to the patient. This consideration will, I trust, be accepted in justification of the attention which I have ventured to bestow upon the subject.

¹ A. Fournier. Article *Blennorrhagie*, *Nouveau Dictionnaire de Médecine*, vol. v. p. 237.

² A. Fournier. *La Syphilis chez la Femme*, Paris, 1873, page 711.

³ S. D. Gross. *Surgery*, Philadelphia, 1872, vol. ii. p. 1054.

INDEXES¹ TO MEDICAL LITERATURE.

BY FRANCIS H. BROWN, A. M., M. D., BOSTON.

"I FOR my part venerate the inventor of indexes, and I know not to whom to yield the preference, either to Hippocrates, who was the first great anatomizer of the human body, or to that unknown laborer in literature, who first laid open the nerves and arteries of a book."—DISRAELI.

THE simple word index is to most readers of books an unimportant one, suggesting a certain amount of machine work by a printer's assistant or an inexperienced hack, who has hastily galloped over the author's pages, culling here and there a title, and putting it down, often with the most egregious misapprehension of the writer's idea. But to a real worker with books the index is *the book*, and he can often better forego the book than the index. I use the word index in the sense which we now give to it. Index, Table, Register, Calendar, Summary, Syllabus, have all been used in the past of literature with much the same significance; but as we now reserve the title Contents for the continuous summary of the book, we give the title Index to the alphabetically arranged analysis of the contents.

Dr. Allibone in his Dictionary of Authors thus quotes from a writer in the *London Monthly Review*: "The compilation of an index is one of those useful labors for which the public, commonly better pleased with entertainment than real service, are rarely so forward to express their gratitude as we think they ought to be. It has been considered as a task fit only for the plodding and the dull, but with more truth it may be said that this is the judgment of the idle and the shallow. The value of anything, it has been observed, is best known by the want of it. Agreeably to this idea, we, who have often experienced great inconveniences from the want of indices, entertain the highest sense of their worth and importance. We know that in the construction of a good index there is far more scope for the exercise of judgment and abilities than is commonly supposed. We feel the merits of the compiler of such an index, and we are ever ready to testify our thankfulness for his exertions."

Authors and editors are often deterred from making an index by the fear of labor, but this is no excuse; if the book is worth publishing it is worth an index. Lord Campbell proposed that an author who published a book without an index should be deprived of the copyright act, and our own countryman, Horace Binney, has expressed the same idea. Baynes, the author of the archaeological epistle to Dean Milles, puts it with much more force and fully as much point, at least he is thus reported by the learned Francis Douce: "Sir, my friend John Baynes used to say that the man who published a book without an index ought to be damned ten miles beyond hell, where the devil could not get for stinging nettles." How often do we feel disposed to coincide with such as these in searching

¹ The use of the plural form *indexes* in place of *indices* may excite comment. As will be seen in the quotation employed, it has the sanction of Disraeli; it is also authorized by Mr. Cutler, the learned librarian of the Boston Athenæum, and is given as the preferable form by both Worcester and Webster, while Mr. Whentley, — from whose admirable book on *Indexes* I have taken many ideas, — referring to a quotation from *Troilus and Cressida*, says, in a footnote, "I would here, under cover of our great poet's name, protest against the use of the plural *indices*. As long as a word continues to take the plural form of the language from which it is borrowed, we cannot look upon it as thoroughly naturalized. Surely index may be considered an English word when it was treated as such by Shakespeare."

up some subject in the works of modern English and French authors, as innocent of indexes as a stone of meat. Carlyle very justly says, "Books born mostly of chaos, which want all things, even an index, are a painful object." Truly may it be said it is the *soul* of a book.

In that industriously and pleasantly written book of Mr. Wheatley, of Manchester, What is an Index? — which will well repay any one's reading, — the author says, "An ideal indexer needs many high qualifications, but, unlike the poet, he is not born, but made. He must be a good analyzer, and know how to reduce the author's many words into a terse form. He must also be continually thinking of the wants of the consultant of his index, so as to place his references under the heading that the reader is most likely to seek."

There is so much work to be done, and more than ever and elsewhere in this bustling, seething age and country, that it is not well to go over and over the old road which others have trod. Hardly an instrument is made or a method of treatment suggested but its counterpart is found in the old-time days of Paré and Celsus, hidden away under the dust of ages. If this work can be saved by more or less full indexes of the past we cannot fail of making more speed in the future.

In medicine we have fallen behind the rest of literature in comprehensive indexes. Serials have been published for years, rich in the investigations, the experiments, the thoughts of the best of the profession, but the periodicals are closed volumes, except to those who are willing to wade through often imperfect indexes at the close of the volumes. Who can lay his hand in a moment on Dr. Ware's Treatment of Delirium Tremens, or Dr. Mason Warren's Hermaphroditism, or Dr. Bowditch's Anomalous Development of Tubercle in our own Medical Journal, classical articles each of them, and how few can devote the time to hunting them up in our busy everyday life.

It should be a cause of gratification and pride that our own country and age is soon to do so much to wipe out this opprobrium to our profession. Fore-shadowed by the specimen fasciculus of a catalogue of the National Medical Library, and with the first volume before us, we cannot fail to look with the greatest interest for the succeeding volumes of this catalogue of medical literature. With this aid the pursuit of investigation in our profession will be comparatively easy, and we can heartily join the talented author in his prayer to Congress for the means to bring it before the medical public. "What is the value of such an index to the people of the United States, as compared with an expedition to the north pole, five miles of subsidized railway, one company of cavalry, or a small public official building?" Under the same skillful hand the Index Medicus has passed through its second year, a publication which is perfectly indispensable to true workers, and it should have a list of subscribers which, at any price in reason, ought to secure its publishers and its editors from the slightest chance of loss. A solemn sense of duty should impel each one to send his subscription to the publisher, and help him to bridge over this critical period of its existence.

The bibliographical lists which have appeared from time to time in our serials on special subjects, and the reports on special subjects of medical literature are invaluable, and are worth many times the space they take. The bibliography of albuminuria by Dr. Ellis in the Medical Journal, of cremation by Dr. Adams in

the State Board of Health Report, of Dr. Jeffries in his work on color-blindness, and of various writers on their special topics in Buck's Treatise on Hygiene and Public Health, and those of the New Sydenham Society make the road an easy one to plodders in the same direction.

The Pathological Society of London, the Royal Medical and Chirurgical Society, the Royal Society of London, and the College of Surgeons of London have excellent classified indexes of their libraries; the *British and Foreign Medico-Chirurgical Review*, the *Dublin Medical Journal*, the *Edinburgh Medical and Surgical Journal*, the *London Medical and Physical Journal*, the *Medico-Chirurgical Review*, and the *New York Medical Journal* give valuable indexes of their material. The work of Plocquet and Reuss fairly covers medical literature previous to 1800. And in this year Reuss commenced his *Repertorium Commentationum a Societatis Literariis Editorum*, which was continued for twenty years and completed in sixteen quarto volumes. Before this Albert von Haller had issued his *Bibliotheca Botanica* (1771), *Bibliotheca Anatomica* (1774-77), *Bibliotheca Chirurgicalia* (1774-75), and *Bibliotheca Medicinæ Practicæ* (1776-78).

We cannot fail to mention a most valuable work, published by the New Sydenham Society in 1877, *The Medical Digest*, by Dr. Richard Neale. The preparation of bibliographical indexes was one of the original objects proposed by the New Sydenham Society, and this epitome, on all the topics of medicine, made up from fifteen of the best English and American serials of the day, gives a key to the best work that has been done for the past forty years. It is the outcome of more than thirty years' continuous labor. "Week after week," says Dr. Neale, "cases full of interest, observations of the greatest value, modes of treatment applicable to a variety of circumstances, are found in the pages of such publications. These are read and appreciated at the moment, but the memory fails to recall them when needed, and much valuable time is often lost in searching back numbers and wrong volumes for what, after all, will, most probably, be missed."

A general index of the Reports of the Massachusetts State Board of Health, including the entire series from the creation of the board, has recently been made by the writer of this paper. It opens up a vast amount of valuable material on general hygiene and on special topics of the utmost importance to the good of the community.

All these leave a vast amount of professional literature still lost in the forgetfulness of the past. In view of such an accumulation of material hidden in hundreds of valuable periodicals and other works, we cannot fail to be impatient for the appearance of Dr. Billings's promised volumes, or desirous for the formation, on this side the water, of an organization to supplement the work so well started by the Index Society of London.

For a few volumes back the index of the Boston Medical and Surgical Journal has been arranged on a definite plan, by authors and subjects; the subject catalogue following, as nearly as may be, the nomenclature — not a perfect one, but, perhaps, as good as we can command at present — of the Royal College of Physicians of London. Every disease relating to the nervous system is entered under its appropriate head, and every specialist in nervous disorders can see at a glance what has been written on his own subject. The same plan

is carried out in the various branches which have always been recognized in general practice, or which are now cultivated by persons particularly devoted to them, under the headings diseases of the circulatory, respiratory, digestive, and other systems; while bibliography, hygiene, health and boards of health, hospitals, education, poisons, Vienna, are some of the topics which will indicate the mode of classification; under these or some other similar easily-distinguished head every article is placed, as well as under the name of the author. It can hardly be possible that one should fail to find an article with the greatest ease; it cannot fail to strike one that this putting together under distinct heads must facilitate study and investigation; and the reader who dimly recalls an article in midwifery, by Dr. Blank, in a volume some years back, is not forced to search it laboriously up under the titles, obstetrics, labor, pregnancy, gestation, placenta, uterus, cord, and half a dozen other topics, through a series of volumes.

Criticisms of such an index as has been adopted by the *Boston Journal* may be and have been made; it is better to meet such fairly and to place every reader in reach of the author and in accord with the editor. The name or the title of an article may be omitted; an accident of this character may happen in any one's experience. A word or note of apology to the aggrieved party ought to be amply sufficient to heal any such wound. Unfortunately an index which should be the most accurate of all things is especially liable to accident. Any omission or slip of the author's pen leaves nothing by which it can be detected until its discovery, perhaps years after, calls forth a groan from some disappointed searcher. A single letter or figure imperfectly formed and wrongly read by the printer makes the reference valueless. The context gives no aid to the proof-reader in a matter in which printer's errors are most liable to occur. It is impossible to devise any check system or balance sheet by which inaccuracies can be detected. Again, modern pathology has changed the classification of diseases, so that some have a different place now from that recognized by the older members of the profession; pulmonary phthisis may be a disease of the lungs to one, while to another it may be a general disease and to be classified with scrofula,—as is done in the nomenclature of the College of Physicians. Herpes zoster may be a cutaneous disease to one, but a neurosis to another. Sanguineous apoplexy and pulmonary extravasation may be looked for under the nervous and respiratory systems respectively, or, by another person, under the circulatory. The true method of indexing all cases which admit of doubt is to place them under both heads, and it is the custom of the indexer of the *Journal* to follow this rule. Indeed, some titles require half a dozen entries, in order to meet the possible needs of many readers.

Not the least important part of medical literature is contained in pamphlets and monographs, naturally ephemeral in their character, and easily lost by those who do not make collections of such material. A text-book covers the whole ground of a specialty, with brief and often entirely unsatisfactory references to individual topics, but a monograph is the elaborated work of one who has given especial thought to the subject under investigation. The best, the freshest, the most thorough work in medicine is contained in pamphlets, which, in the hands of most private individuals, are soon lost and quickly pass out of mind. The labor of cataloguing, classifying, and binding is too great for most persons,

and without such catalogue the collection is comparatively valueless. Few of our libraries ever make any systematic attempt to collect pamphlets, and those which reach them by chance are bundled together without any thought of indexing. The Boston Medical Library has now a collection of 8000 medical pamphlets carefully catalogued, the Boston Public Library as many more, and the National Medical Library surpasses these with its 40,000 precious pamphlets.

The librarian of the Mercantile Library of San Francisco, in speaking of general literature, gives a key-note which is as valuable in medicine as in a wider field. "A thorough collection of the periodical literature of the day constitutes a part of every library of note, acknowledged to be the most important and useful. Its value in a public library cannot be over-estimated. It offers the student an epitome of all history, science, and art in the past, and a continuance of the same in every department even to the present day. It contains the latest improvement in science, the freshest turn of thought. With a completion of Poole's Index to Periodical Literature to date, the searcher after knowledge would have, in a complete magazine collection, a store of information inexhaustible and, in worth, beyond computation."

RECENT PROGRESS IN THE THEORY AND PRACTICE OF MEDICINE.¹

BY GEORGE B. SHATTUCK, M. D.

CHICKEN CHOLERA. A STUDY OF THE VIRUS.

M. Pasteur has at last communicated the long-awaited results of his study of this malady, with the conclusions he has reached by successive cultivations and inoculations of the micro-organism which constitutes the infecting virus. The paper² is valuable, and readily suggests a wider application of the facts and principles established by the writer's experiments.

He lays down, to begin with, the following propositions, based upon previously published observations: (1.) Chicken cholera is an extremely virulent disease. (2.) The virus is a microscopical parasite, easily propagated by culture outside the bodies of its victims; and hence the possibility of obtaining this virus in a perfectly pure state, and of an indisputable demonstration that it is the sole cause of the disease and of resulting death. (3.) The virus offers various degrees of virulence. (4.) These degrees are not merely established by observation of natural conditions, but may be produced by the experimenter at will. (5.) As is in general the case with all contagious diseases, chicken cholera does not recur, or rather recurrence is of such a mild type that protection can always be brought to such a point that inoculation of even the most active virus will finally produce no result. (6.) From the preceding propositions it is evident that in chicken cholera there are forms of the virus which bear the same relation to the most active virus that human vaccine matter does to the virus of small-pox. Just as the vaccine virus, from a mild malady — vaccinia — affords protection against the severe disease, — variola, — so the virus of chicken cholera presents phases of diminished intensity, causing the disease, but not death, and under such conditions that after recovery the animal is proof

¹ Concluded from page 636.

² Bulletin de l'Académie de Médecine, Séance du 26 Octobre, 1880.

against inoculation by the most active form of the poison. There is this difference, however, in favor of the investigations upon chicken cholera: whilst the exact relations of vaccine matter and variola are still in dispute, we are certain that the diluted virus of cholera is derived directly from the very active virus of that disease; in other words, that the fundamental nature of each is the same. This fact that there are various degrees of activity in a poison whose active principle is a micro-organism, which can be isolated as one isolates the ferment of beer or the mycoderm of vinegar, is sufficiently remarkable. It is, however, entirely consonant with the variable virulence in different epidemics of all these virulent diseases; of small-pox itself, for example.

M. Pasteur next proceeds to show that these variations in intensity of the virus and of the disease are at the control of the observer. He took the most active virus procurable, the inoculation of which was certain death, and found by prolonged experiments (here being the cause of delay in the communication of his present observations) that the virulence of the poison was not modified by propagation through successive generations, but only in proportion to the time elapsing between removal of the parasite from its first to its final abode, and this modification is, moreover, shown by experiments to be in direct proportion to the exposure of the virus to the influence of atmospheric air, to the action of oxygen.

The gradual modification of the virus is noticed at first by a longer interval between inoculation and death; when carried farther, by recovery after severe symptoms; and, finally, by recovery after mild symptoms. M. Pasteur has been unable to discover any difference in the microscopical appearances of the parasite, whether of an active or of a mild virus.

This modification of the chicken-cholera virus by exposure to the influences of oxygen, M. Pasteur remarks, is more than an isolated fact; it puts us in possession of a principle, and we have in it the whole history of the limitations of great epidemics.

Mr. Toussaint¹ during this same period has been experimenting at Allort and at Lyons as to the possibility of securing immunity against *charbon* by inoculation with a diluted culture-liquid of the characteristic micro-organism of that disease. His results have been sufficiently successful to cause the further prosecution of these investigations to be awaited with impatience. His method was to defibrinate the blood of an animal attacked with *charbon* by filtration or by heating to 55° C., in order to eliminate the bacteria; this blood was then injected under the skin of another animal, which in the course of twelve to fourteen days was found to be completely protected against *charbon*. If the parasite is to be regarded as the active element of the poison in these virulent diseases, there are evident contradictions between M. Pasteur's methods and results and those of M. Toussaint, which should be reconciled. The results so far observed, however, may be accepted as facts, and are encouraging as indicating the possibility of progress in securing methods of artificial protection against contagious diseases in general.

THE EPIDEMIC AMONG THE WORKMEN IN THE ST. GOTHARD TUNNEL.

Dr. E. Bugnion,² of Geneva, describes the cause of the singular epidemic prevalent last spring, and which

still prevails, among the workmen of St. Gothard. One reason that the cause of this epidemic, which is a little worm known as *ankylostomum duodenale*, was not immediately recognized, was the refusal of the authorities to allow post-mortem examinations. In one hundred and seventeen deaths which took place prior to the publication of the government report in June, 1880, only a single examination was made. Dr. Bugnion says:—

This parasite had been hitherto entirely unknown in Switzerland; it is not unknown in Italy, but is more common in hot countries, such as India, the Antilles, and Brazil, and especially in Egypt, where it causes the disease denominated the Egyptian chlorosis. This latter fact was brought to light in the year 1854 by Griesinger, a distinguished German physician, who passed many years in Egypt; and to whom we owe, as well as to his countryman Bilharz, important researches as to the parasitical diseases of that country.

The *ankylostomum* is a nematoid worm, and consequently belongs to the same order as the trichina, the oxyuris, the ascaris lumbricoides or children's worm; but that which renders it much more prejudicial than the latter is the fact that, instead of feeding on the contents of the bowels, it attaches itself like a little leech to the mucous membrane of the duodenum, of which it sucks the blood. Its mouth is armed for this purpose with a cup-like sucker, on the edge of which are fixed three pairs of hooks, with which it fastens itself to its victim. At the entrance of the œsophagus are found, besides, three movable blades, which work like little lancets, and probably serve to make incisions in the portion of the mucous membrane seized by the sucking organ.

Large ecchymoses owing to the bite of the *ankylostomum* are often found in the mucous or submucous lining of the intestines; and the repeated intestinal hæmorrhages produced by its attacks may be considered as the principal cause of the aggravated anæmia and increasing weakness which are generally observed in such patients.

The largest of these worms are always females; they measure about half an inch in length (12.618 millimeters); the male is about half the size. The smallness of these parasites is compensated for by their number, for they are often found by hundreds in the intestines of the individuals who have died of this disease. Dr. Tarona, at Varese, counted as many as 1250 specimens of *ankylostomum* in the evacuations of a single patient, after the administration of ethereal extract of male fern.

The external symptoms of the complaint are an increasing paleness of the skin, lips, etc., and it is accompanied in serious cases by swelling of the feet and a puffiness of the face, caused by the excessive fluidity of the blood. The pulse is quick and feeble; the patient suffers from palpitation and giddiness; he feels a great lassitude, and soon becomes unable to work. With these symptoms, which are those of an aggravated anæmia, are generally connected a derangement of the digestion and cutting pains in the abdomen. This condition may last for years, and is too often terminated by death. The patient finally sinks under dropsy and exhaustion.

The *ankylostomum* is extremely prolific; each female produces thousands of eggs. Happily for the patient, the development of these does not take place in the bowels, otherwise he would certainly lose his

¹ Garnier's Dictionnaire annuel, page 139, 1881.

² British Medical Journal, i. p. 382, 1881.

life. The eggs must be evacuated; the embryo continues its evolutions externally, and is hatched in water. It is in drinking this water containing the germs of ankylostomum that the man introduces this dangerous visitor into his body. It is easy to understand that, owing to the want of cleanliness on the part of the St. Gothard workmen, the epidemic has extended so rapidly.

The first of these cases was recognized by Professor Pozzolo last spring. It was that of a workman who had been employed in the great tunnel, and died soon afterwards in the hospital at Turin, with symptoms of aggravated anaemia. The post-mortem examination revealed the presence of numerous specimens of ankylostomum in the small intestine. Three other cases, observed in the same town by Drs. Concato and Perroncito, were the subject of a communication to the Académie des Sciences in Paris, in the sitting of March 15, 1880.¹ The parasite was also identified, but in no great numbers, on March 10, 1880, at Airolo, at a post-mortem examination, by Dr. Giaccone, one of the physicians of the St. Gothard Company.

Notwithstanding these important discoveries, hesitation was at first felt in attributing to the presence of this noxious worm the cases of anaemia which were constantly increasing among the workmen. In consequence of the ankylostomum having been rarely observed up to this time in that part of Europe, it seemed more natural to refer the complaint to vitiated air, want of light, unsuitable food, — in short, to the defective sanitary conditions in which the workmen lived.

The evidence, however, became irresistible after Dr. Sonderegger² had treated a young engineer of the works. The patient showed all the symptoms of Egyptian chlorosis, and after having taken santonin (two decigrams) with calomel (five decigrams) evacuated the ankylostomum in large numbers.

Similar cases were not long in appearing. Thus, in the month of November, Professor Bäumler³ discovered the parasite in the case of a Tyrolean workman, who had left the Gothard, and who had been admitted into the hospital of Freiburg in Breisgau.

In December six instances of the same thing were observed by Dr. Schönbachler, in the Schwyz Hospital, among the workman who had been employed in the tunnel. One of them soon sank, and about three hundred specimens of ankylostomum were found attached to the mucous lining of the duodenum and jejunum.

During that time twelve new cases were reported at Turin by Dr. Perroncito and others, but none of them had a fatal result, in consequence of the successful administration of fifteen to thirty grains of ethered extract of male fern with two and a half to three and a half drachms of tincture of male fern during two or three days successively.

Finally, we can add a last case, that of an Italian workman, who had been at Goschenen up to October last, and who, after having worked for some months in another part of Switzerland, was obliged, in consequence of increasing anaemia and weakness, to seek medical aid in the Infirmary of Rolle during the month of January. Dr. Dumur, the director of this institution, has had the kindness to send eight specimens of ankylostomum (three males and five females) evacuated by this patient. The presence of the parasite was first

placed beyond doubt by microscopic examination of the eggs which had been expelled. These little bodies, which measure hardly more than one six-hundredth of an inch (one twentieth of a millimeter), nevertheless offer to the physician an important aid to diagnosis, by their being easily distinguished from those of the other hæmatoid worms infesting the human body.

The eggs of the *Oxyuris vermicularis*, which might otherwise be confounded with those of the ankylostomum, as being about the same size, are distinguished by the greater elongation of the shell, which is more convex on one side than on the other, and is furnished with an operculum. The embryo ready formed may be perceived within, while the eggs of the ankylostomum are generally expelled at an earlier stage of development.

RELAPSE OF TYPHOID FEVER, ESPECIALLY WITH REFERENCE TO THE TEMPERATURE.⁴

DR. IRVINE published some articles on this subject in the *Medical Times and Gazette* during the year 1879. These form the basis for a crown octavo volume of 143 pages which has lately appeared. During his service at Charing Cross Hospital the writer became strongly of the opinion that relapse in typhoid fever is much more common than is generally supposed; that while primary relapse is common, second relapses are not uncommon, and third and fourth relapses may be met with. He thinks it difficult to overestimate the value of temperature as a clinical guide during apparent convalescence from typhoid fever. The thermometer will be often found the only efficient agent to clear away obscurities. The observations should be continuous and frequent, and the typical curvatures of the daily chart are of more value than the height of the temperature. Relapses are over and over again set down as primary attacks. The records of thirty-one patients are reported which furnish forty-six cases of relapse, each case being accompanied by a careful chart more instructive than the text. The reports offer instances of, (1.) Single relapse of simple nature; (2.) Relapses either irregular or complicated; (3.) Double, triple, and quadruple relapses; (4.) Recrudescences, intercurrent relapses, and cases likely to be confounded with relapse; (5.) Total relapses, simple or complicated. In twenty-nine of the relapses recorded, out of a total of forty-six, the apyrexial interval between the primary attack of typhoid and the relapse could be determined with complete accuracy. These twenty-nine relapses were divided amongst twenty-three patients, three of whom had each three relapses. The average duration of the interval was a fraction over five days; in three instances the duration was ten days, and in four there was no appreciable interval. The average interval of five days is scarcely half that met with by Dr. Murchison. The absence of an apyrexial interval extending over at least twenty-four hours in four of the cases contradicts the assertion of some writers of eminence that typhoid-relapse never occurs without a clear apyrexial interval between it and the primary disease. In almost all the cases of uncomplicated typhoid the temperature was during the "intervals" normal morning, noon, and night, and oftentimes subnormal—below 98° F. As a rule the interval preceding a relapse is marked by subnormal temperatures. Speaking generally, Dr. Irvine is disposed to say that if one relapse occurs, a second should be looked for and guarded against.

¹ See Comptes Rendus, page 619.

² Correspond. f. Schweiz. Aertze, 1880, 29.

³ Correspond. f. Schweiz. Aertze, 1881.

⁴ By J. Pearson Irvine, M. D., B. Sc. F. R. C. P., London. With Temperature Charts. London: J. & A. Churchill. 1880.

Of the thirty-one patients in his series at least five had a third relapse, while in one case a fourth relapse occurred. The duration of relapses is uncertain; taking twenty-nine instances of relapse out of this series — instances observed from first to last, where complications could be positively excluded, and where treatment was never directed to cutting the disease short — the average duration of relapse was about twenty to twenty-one days.

Dr. Murchison found the average duration of relapse about fifteen days. It is almost certain that, where two or more relapses occur in a patient the later relapses are, if no accident happens, shorter than the preceding ones; just as the first relapse is, as a rule, shorter than the primary typhoid.

How does relapse as judged by the thermometer, in particular, declare itself? In most cases the recurrence of the disease is characterized by an unexpected and continuous elevation of temperature. The fever begins suddenly, and though remissions may occur daily, it increases until it reaches its height on the fifth evening of relapse. The remissions are of little diagnostic importance. But where complications are absent from first to last, the highest temperature is met with on the fifth day. From this day the temperature maintains nearly the same level (with morning remissions varying in degree) until the eighth or ninth day, when it falls decidedly and, beyond all doubt, critically. Dr. Irvine considers it diagnostically and prognostically, most important to observe the temperature in relapse from hour to hour during its eighth and ninth days. The fall in temperature at this period he regards as a most favorable omen, and the fatal cases among those recorded by him are marked by its absence. On these critical days the temperature may be found from three to six degrees or more below its previous level. These observations are supported by the charts accompanying the cases. This critical fall marks a stage of the disease and not its termination; a rise in temperature always follows. A third stage of the disease begins from the ninth day with a new accession of fever. On the tenth day, for example, the temperature may almost run up to previous levels; but afterwards there are gradual daily remissions of fever — great or small, but constant — until the disease is at an end, about the twenty-first day of relapse. The assertion that three stages are met with means simply that critical periods should be looked for. Such periods being the fifth, eighth or ninth, the fifteenth and twenty-first days of the disease, on which days it is particularly important to note the temperatures. Dr. Irvine entertains the view that relapse is due to the primary contagion, and that the reported cases of recurrence of a typhoid attack weeks, or even months, after a patient's convalescence, are in all probability merely cases of multiple relapse, for, unless the thermometer is used with daily regularity intermediate relapses may be very readily passed by.

DIPHTHERIA TREATED BY PILOCARPIN.

Dr. George Guttman, of Croustadt, reports a very favorable experience with pilocarpin as a remedy for diphtheria.¹ He first began to use pilocarpin for this purpose in April, 1879, and his experience at the time of writing extended over about a year and a half, and included a large number of cases both severe and mild. Its action was also tested by some of his colleagues

with equal success. The resulting secretion from the mucous membrane of the throat and fauces removes the false membrane without exciting an injurious inflammation, nor was any marked depression produced by the exhibition of the drug in the majority of Dr. Guttman's cases; where any such tendency was manifested stimulants in some form were administered alternately with the pilocarpin. He found it more advantageous to give the medicine by the mouth, and used the following formulas: For children, 17 pilocarpin muriat., gr. $\frac{1}{2}$ (0.02-0.1), pepsin, gr. 1-1 $\frac{1}{4}$ (0.06-0.08), acid hydrochlor., gtt. 2, aq. destill. 5jss (80.0). M. Sig. A teaspoonful hourly. For adults, 17 pilocarpin muriat., gr. ss-1 (0.03-0.05), pepsin, gr. 30 (2.0), acid hydrochlor., gtt. 3, aq. destill. 5s (240.0). M. Sig. A tablespoonful hourly.

So many writers have been tempted to believe that they had at last found a specific against this terrible malady, that a tenacious skepticism is sure to await the announcement of any new remedy, however promising. The action of the pilocarpin is, of course, a local one, and its effects, when operative, the gentle removal of false membranes from the mouth, fauces, and larynx. The secondary systemic poisoning by the products of local inflammation may also, perhaps, be thus avoided. It would certainly seem that the local action of the pilocarpin might in some cases be of much service. The general depressing effect of the drug should always be carefully guarded against. Dr. F. W. Vogel reports several cases thus treated in the *JOURNAL* for March 10, 1881.

ACCIDENTAL AND SUDDEN DISLOCATION OF THE LIVER, WITH RECOVERY.

Dr. A. Y. P. Garnett² reports what he considers to have been, and what the conditions as reported seem to justify him in regarding as a case of sudden dislocation of the liver. Such an accident must be, to say the least, excessively rare, and Dr. Garnett, after careful search, believes his case to be unique in medical literature. A woman, aged fifty, who had always enjoyed good health, and, though very stout, had led an active life, whilst stooping hurriedly to pick up some object from the floor, felt a sudden wrench or giving way on the right side. She felt, as she expressed it, that her "ribs had slipped in and the bowels had been thrown up, and bulged out." There was severe pain across the abdomen and chest, difficult respiration, a sense of suffocation, and consciousness of fullness and distention of the abdomen on the right side. She tried to walk, but found this occasioned so much nausea, pain, and faintness that she remained in bed. Dr. Garnett being summoned the next day, was led, as the result of a careful physical examination, to the conclusion that there had been a sudden and violent displacement of the liver downwards.

The patient remained in bed, on her back, with the lower limbs flexed on the pelvis, and woolen cloths, saturated with a warm solution of muriate of ammonia, constantly applied to the seat of pain. The following day the patient was found comfortable and free from pain or fever. Measurements showed a diminution in bulk of the abdomen. The diminution in bulk and alteration in the area of flatness upon percussion were still more marked the next day. A week's confinement in bed, followed by the application of a broad

¹ Berlin. klin. Woch., No. 40, October, 1880, s. 569.

² American Journal Medical Sciences, January, 1881, page 110.

elastic band around the abdomen, completed the treatment and the recovery. Dr. Garnett expresses a natural surprise that, considering the anatomical attachments and surroundings of the liver, the resulting mischief did not prove more disastrous.

A CASE OF WANDERING LIVER.

In connection with the preceding the following case¹ is worthy of notice:—

The following case is reported by Dr. Hochhalt:² A woman, fifty-five years old, who had in her youth been subject to jaundice, lifted a heavy sac about one year before she came under observation. At the time of that unusual exertion she suddenly experienced a sharp pain in the right hypochondriac region, and fell to the ground in an unconscious condition. Since then she constantly suffered from a feeling of weight and her right side was occupied by a movable, hard tumor. Her condition has remained unchanged, and, beyond attacks of temporary indigestion and obstinate constipation, she has no morbid symptoms.

The diagnosis of movable or floating liver appeared a proper one when the results of the physical examination were taken into consideration. These may be summarized as follows: first, the liver was not found in its normal position; second, in the hypogastric region a tumor, corresponding in its shape and dimensions to the liver, was discoverable; third, this tumor was movable; fourth, it could be returned, by manipulation and a suitable decubitus of the patient, to the right hypochondrium; fifth, the abdominal parietes were abnormally lax and flabby. As regards treatment, the patient was merely directed to wear an appropriate abdominal supporter.³

A CASE OF MOVABLE LIVER.

The *Lancet*⁴ reproduces an observation accidentally made on a physician by Dr. Chvostek, and recorded in the *Wiener Medical Blatt*. There were no symptoms whatever of anything wrong in the abdomen, and there was no history of violence or of any occurrence that threw light upon the condition. When the man stood up the upper and posterior border of the liver was felt to come forward from under the margin of the thorax, and to be six centimeters and a half below the tip of the xiphoid cartilage in the right parasternal line, and one centimeter below that point in the left parasternal line. The left end of the liver was plainly felt through the abdominal wall, and from it the anterior, or rather the lower edge of the liver could be traced arching down to the right, being in the middle line fifteen centimeters below the xiphoid process, and in the right nipple and axillary lines respectively seven and one-and-a-half to two centimeters below the edge of the thorax. The liver did not markedly descend on taking a deep inspiration. In the horizontal posture it could be replaced under the ribs to a considerable extent. In lying on one side the organ fell to some extent towards the dependent side. The lower edge of the suspensory ligament could be felt tightly stretched, but this produced no pain, and so completely absent were all symptoms that the condition was only discovered accidentally.

Hospital Practice and Clinical Memoranda.

DEATH FROM CARBOLIC-ACID POISONING FOLLOWING HYPERDISTENTION OF AN ABSCESS WITH A CARBOLIC SOLUTION.⁵

BY E. H. BRADFORD, M. D.

The following case is of importance as a surgical warning. Death occurred after a procedure not hitherto regarded as dangerous.

A boy five years old had been afflicted with hip disease for more than a year, and had been under treatment for over six months at the Samaritan Hospital. He was in comparatively good condition, was free from pain, slept and ate well, and some motion remained at the hip-joint. A cold abscess had formed on the thigh, pointing on the outer side, which was incised while the patient was under primary anæsthesia, the whole procedure lasting but a few minutes. The abscess contained about eight ounces of sero-purulent fluid. Carbolic spray was played upon the limb during the incision; the abscess was hyperdistended with a solution of carbolic acid of a strength of one to forty. This was allowed to flow out; the limb was squeezed, to force out the remaining fluid. A drainage tube was inserted, protection applied to the incision, and layers of antiseptic gauze (which had been wrung out in a solution of carbolic acid), with the mackintosh, were bandaged on to the limb, a Martin's rubber bandage being used to ensure compression. The patient recovered quickly from the ether, but in the following night was seized with obstinate vomiting, which persisted during the morning, but stopped at noon. The gauze dressing was removed and another applied, but the abscess was not syringed out. Vomiting returned in the night, and in the following morning the boy was in a feeble condition. The urine that was passed was tar color. The carbolic dressing was removed, and a cloth wet in a solution of chlorinated soda was substituted. Death took place two days later, with symptoms of collapse.

There was no diarrhoea during the illness. The temperature, twenty-four hours after the operation, was 100° F., but twenty-four hours later it fell to 96° F., returning to normal until just before death, when it rose to 102° F. The pulse was feeble throughout the whole sickness, varying from 130 to 160, and did not improve under alcoholic stimulants, the subcutaneous injection of brandy, or atropia.

Glauber's salts, mentioned as an antidote to carbolic acid, was not tried, as at the time the nature of the case was recognized stimulation seemed the only treatment indicated.

In his report of the post-mortem examination, Dr. R. H. Fitz stated that the thorax and abdomen alone were examined. An extensively diffused hæmorrhage was found in the left lung. The blood was not clotted, nor were the limits of the hæmorrhage sharply defined. The affected portion of the lung was crepitant. Both sides of the heart, especially the left, contained dark, clotted blood. The myocardium was paler than normal, its muscular fibres finely granular, the granules insoluble in acetic acid, and blackened in osmic acid.

The spleen was not enlarged nor manifestly altered.

⁵ Read before the Boston Society for Medical Improvement, March 28, 1881.

¹ New York Medical Record, March 19, 1881, page 320.

² *Gyógyászati*, xix, 41, 42.

³ *Med. chir. Rundschau*, December, 1880.

⁴ *Lancet* i, 1881, page 429.

The kidneys were enlarged, firm, and pale. On section, the cortex was decidedly increased in volume and of a yellowish-gray color, strongly contrasting with the pale reddish-gray pyramids. The tubular regions of the cortex were indistinctly defined. The microscopic examination showed a general and extensive fatty degeneration of the epithelium of the convoluted and straight tubes. The bladder contained several drachms of yellow urine, with a slightly reddish tinge.

The liver was enlarged, firm, anæmic. On section, the surface was of a grayish-yellow color, the individual acini not readily recognized. Close inspection showed that the periphery of the lobules was more opaque than the central portion. On microscopic examination, the cells were universally found to contain large and small fat drops, the former being of relatively uniform size. An enlargement of single cells was not conspicuous.

The solitary follicles and Peyer's patches throughout the lower part of the ileum were enlarged, the former gray and somewhat translucent.

The cartilage over the greater part of the head of the left femur was eroded, and replaced by a soft, red, and translucent tissue. The synovial membrane was thickened and injected. There were no appearances observed, with or without the microscope, which indicated the presence of tubercles. A vertical section through the head of the bone disclosed red marrow, without obvious alteration of the bone tissue. The sinus descending from the hip-joint contained a small quantity of curdy pus.

The lesions of greatest importance were obviously those of the heart and kidneys. It is not unlikely that the extreme quantity of fat found in the liver owed its origin to the causes producing the fatty degeneration of the heart and kidneys. The appearances of all these organs were strikingly analogous to those met with in cases of poisoning from phosphorus or arsenic. The clinical history of the case directly suggests that the lesions found may be attributed to the toxic action of carbolic acid.

Dr. Wood's analysis of urine is as follows: Name, Case of Carbolic Acid Poisoning. From Dr. Bradford. Color, slightly smoky. Reaction, acid. Urophæin, diminished. Indican, *much increased*. Urea, increased. Uric acid, increased. Albumen, slight trace. Sugar, absent. Bile pigments, absent. Sediment, few very small fatty casts. Specific gravity, 1017. Amount of sediment, considerable. Chlorides, much diminished. Sulphates, *absent*. Earthy phosphates, increased. Alkaline phosphates, normal.

Remarks. The color deepened to a very dark brown on standing.

A very large amount of a sulpho-acid (presumably sulpho-phenylic) was shown to be present in the urine by heating with hydrochloric acid after the addition of baric chloride. The baric chloride alone produced no precipitate of sulphate of barium as in normal urine, but after boiling with hydrochloric acid, which decomposes the sulpho-acid, a very abundant precipitate was produced.

— A daily edition of the *Virginia Medical Monthly* will be issued during the four days of the session of the American Medical Association for 1881. It will give full reports of the proceedings of the general sessions and of the several sections.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

MARCH 28, 1881, DR. T. B. CURTIS presided.

PODODYNIA.

DR. T. B. CURTIS read a paper on pododynia. Vide page 316 of this JOURNAL.

DR. HODGES remarked that the pain and discomfort in the feet from which so many women suffer, especially when they are stout and past middle life, is often caused by their shoes, not only from the shoes being too tight but also too loose around the instep, allowing the foot to slip forward.

A shoe should be properly supported under the instep, as by a steel shank, which is found to be very serviceable.

A great many cases can be benefited by simply having an inside lacing to the shoe, thus drawing it tightly around the instep and allowing plenty of room elsewhere.

Another method is the introduction of an inside sole of cork covered with leather so that it can be changed from shoe to shoe and so shaped that it can give more support than the steel shank.

These devices make walking much easier and are worth trying.

Old shoes which have become saturated with perspiration, and thus a source of irritation, are among the causes of pain in the feet, and especially of burning pain.

DR. PORTER stated that he considered the pain due to stretching of the ligamentum longum plantæ or the plantar fascia from lack of proper support to the arch of the foot, most commonly noticed in fat persons, in young, adult or middle life, and in weakly children. He reported two cases, first, that of a day laborer who consulted him for excruciating pains in both soles so severe as to prevent him from working: he was recommended to replace his miserable worn-out boots with soft pliable shanks by a stout well-built pair with steel shank. The advice was followed with complete relief. A second case was of a stout, middle-aged lady, who complained that she was greatly troubled in getting about the house and up and down stairs from pains in her soles so violent as at times to cripple her and compel her to sit down frequently to rest. On the street she could walk very comfortably. It was found that she wore stout button, snugly-fitting boots on the street and low, loose slippers in the house. She was advised to discard the latter and wear a stout shoe with steel shank, with complete relief.

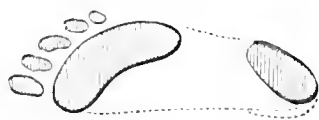
DR. EDES said that he had heard it mentioned that patients who had gone through with the cold water treatment for typhoid suffered from pododynia, but he himself had not noticed this sequela.

DR. GREENOUGH said that there was one point, which to him seemed a very important one, with regard to the evils of improperly-made shoes worn by women, and that was the present fashionable high-heeled shoe so generally worn, not only as a walking or dress shoe, but even as slippers. In this form of shoe the heel, which is two inches or more high, instead of supporting the heel gives support to the foot in front of the heel

almost at the arch of the instep. Its height is such that the weight of the body is thrown down upon the toes, which, by the pointed shape of the shoe at that part, are squeezed together so that an enlarged and tender great toe-joint is inevitable.

He said that for walking purposes the Waukenplast last seemed to him to be the best. The great advantage of this shaped shoe is that the inner line of the foot is straight, and the toe is broad and square, so that the great toe is not forced in, as must be the case in all rounded or pointed toed boots. Besides this the low and large heel gives a firm and solid support to that most important bearing in sustaining the weight of the body. The first pair of these shoes he had ever worn he had bought in London, and although he did not perhaps carry out the promise of the trade mark by making "five miles an hour," he found them as comfortable when he walked out of the shop as after having been worn a week. In short, there was none of that disagreeable process to be gone through which is called "breaking in." These shoes are imported by several of our dealers and imitations are also made here. Some of the latter, however, merely copy the general style, and do not reproduce what really is their main point of excellence, that is, the straight inner edge.

Dr. C. E. STEDMAN, when in the navy, used to notice the prints made on deck by the men going about in wet, bare feet. Those who had high insteps left a print like the cut. In proportion as a foot was



flat, the two marks were connected by a narrow or wide isthmus, till in a really flat foot the whole sole came down, and made its mark, as in the dotted lines.

CARBOLIC ACID POISONING.

Dr. E. H. BRADFORD reported a case of death from carbolic acid poisoning, following hyper-tension of an abscess with a carbolic acid solution. Vide page 324 of this JOURNAL.

Dr. HODGES spoke of an article written on this subject by Mr. Cheyne, Professor Lister's assistant, in which he lays particular stress on the danger of injecting wounds with carbolic acid or applications where there is a large surface of a wound exposed, insisting that this procedure should be scrupulously avoided. Dr. Hodges also remarked that the same objections existed to distending abscesses, and that he had known of serious symptoms arising from an injection of carbolic acid into the rectum.

Dr. FIELDS said, in reference to poisoning by carbolic acid, that he had recently prescribed for pruritus accompanying eczema of the lower part of the abdomen and upper part of the thighs, troubling an old gentleman, especially at night, a wash of carbolic acid of a strength of a teaspoonful of the acid to a pint of water, to be applied at bed-time. Nausea, feeble pulse, and black scanty urine had resulted.

After reporting the results of the post-mortem examination Dr. FITZ said, although numerous cases of carbolic acid poisoning have been reported within the past ten years, either the conditions are unlike those in the present instance, or the results of post-mortem

examinations have proven to be negative. At the same time there is suggestive evidence, to say the least, that an acute fatty degeneration of the heart, liver, and kidneys may result from the poisonous action of carbolic acid. French observers seem to have been familiar with such a possibility, and in Virchow's *Jahresbericht* for 1872, volume i. page 367, a case is referred to where a fatty degeneration of the renal epithelium was found.

In the *Annales d'Hygiène Publique* for 1880, page 236, the case of an adult is mentioned who died nine days after the injection of a five per cent. solution of carbolic acid into a cold abscess. The liver is described as being pale yellow and fatty, and the kidneys were also found to be fatty. In the same article is a reference to a case reported by Billroth. Death occurred six hours after washing out an abscess with a five per cent. solution of the acid. A cloudy swelling of the heart, liver, and kidneys was observed.

In the *Nouveau Dictionnaire de Médecine*, article *Phénique (acide)*, it is stated that in poisoning from carbolic acid the heart has been found flaccid and fatty, the liver and kidneys fatty, and the lungs decidedly congested, containing infarctions.

Notwithstanding these positive statements, in most of the cases recorded it is distinctly stated that the kidneys are found to be congested or pale, or show no fatty changes at all.

The indications for experimental research with regard to the toxic effects of carbolic acid are obvious, and a limited number of experiments have already been made. They do not suffice, however, to comply with the conditions met with in the case now before the society.

Sonnenburg,¹ having found traces of albumen in the urine of patients treated with carbolic acid, attributed this symptom to the treatment. He was familiar with a view that uræmia was thought to have arisen from the use of the acid, and had met with a case of severe nephritis in an apothecary's assistant, who was at the time engaged in the preparation of Lister's dressings. His experiments, made upon dogs and rabbits, were negative as regards the production of a fatty degeneration of the kidneys. He produced albuminuria in two instances, and found in all the animals used that the kidneys were hyperæmic, contained cortical hæmorrhages and blood casts.

The nature and severity of the lesions in Dr. Bradford's case, and their similarity to those resulting from poisoning by phosphorus and arsenic, the conflicting evidence to be found in the various journals and other publications, and the important practical side of the question, lead directly to the necessity of continued experiments with regard to the poisonous effects resulting from the absorption of carbolic acid. A series of such experiments are now being made by Dr. Whitney, whose results, it may be hoped, will be reported at a future meeting of the society.

Dr. GREENOUGH said that he had for the past five or six years used carbolic acid very extensively as an external application at the department for skin diseases at the Boston Dispensary. He used an ointment of the strength of one drachm of the crystallized carbolic acid to one ounce of simple cerate as a parasiticide (both animal and vegetable), and the solution K, five grains to one ounce, was the regular routine solution for cases of pruritus, etc. As far as he knew, no bad

¹ *Centralblatt für Chirurgie*, 1878, pages 751 and 759.

effects had resulted in any one of the large number of cases in which these preparations had been used. He did not know whether it was generally known that the cat family were especially susceptible to the toxicological effects of carbolic acid. He had applied a carbolic oil, one part to four or five, with a brush, to the scalp and around the ears of a full-grown healthy cat, who was suffering from *tinea tonsurans*, and in four hours she was found dead. He had been told that on the circular which accompanies one of the stronger carbolic soaps it is stated that it should not be used on cats.

DR. PORTER reported two cases of erysipelas complicated by carbolic-acid poisoning from the use of a lotion, used as a topical application, containing one part in ten of carbolic acid. In one case the buttocks and thighs were painted, and this was followed the next day by black urine, nausea, and vomiting. In the second the thighs as low as the knees seemed painted, and the next day there was black urine and nausea. In both cases two applications were made.

DR. ELLIOT said that while at the Massachusetts General Hospital he had collected thirty-two cases of poisoning by carbolic acid, and that he had noticed that patients with nephritis were more susceptible to the poison than those who had sound kidneys. Where only a small amount of carbolic acid was used it did not become apparent in the urine at first, but only after standing several hours.

Dr. Elliot also reported a case of ovariectomy where carbolic acid was used, and poisoning, with death, ensued.

DR. T. B. CURTIS said that the exceptional susceptibility to the toxic effects of carbolic acid observed by Dr. Elliot in patients with diseased kidneys was in accordance with our experience of the action of other drugs in such cases. It has long been recognized that, in chronic Bright's disease, opium and mercury were occasionally harmful and even dangerous in moderate doses. Professor Gubler, of Paris, has shown that in subjects with healthy kidneys, full doses of salicylic acid were usually well borne, a certain degree of diuresis attending the elimination of the drug; but that when the kidneys were at all impaired the administration of the acid or of its salts was apt to be followed by albuminuria, more or less marked, with diminished secretion of urine, and that under such conditions this remedy should be given cautiously. Dr. Chauvet, of Lyons, published in 1877 a paper on *The Danger of Active Drugs in Renal Diseases*, in which he set forth the evidence, afforded both by physiological experiment and by clinical observation, which showed that, in diseases of the kidneys, moderate or even small doses of certain remedies were apt to produce toxic effects. Elimination in such cases is defective, and takes place very slowly, so that drugs are liable to accumulate in the system, even when administered in the usual doses. The occasional impermeability of the kidneys, when diseased, to certain odoriferous substances, such as balsams, resin, and essences (turpentine, copaiba, etc.) has long been recognized.

APOMORPHIA.

DR. FIFIELD reported a case where a man swallowed one and a half pints of kerosene, and one third of a grain of apomorphia having been given as an emetic complete relief was obtained in a very few minutes.

DR. T. B. CURTIS said that, as he had himself not

only given but taken apomorphia, he could perhaps answer Dr. Reynold's inquiries about the properties of that drug. Apomorphia, of which the muriate is used, is one of the alkaloids of opium. It is said to act, when administered by subcutaneous injection, as a rapid, energetic, sure, and safe emetic. A one per cent. solution can be prepared for hypodermic use, containing, in each ten minims, one tenth of a grain of the salt of apomorphia, two minims of glycerine, and eight minims of distilled water. The solution, when fresh, as it should be, is of a clear, pale, emerald green. Before many days, when kept, it becomes brown, then quite black, by the precipitation of fine black particles, and is then probably unfit for use. The only fault to be found with the drug is the difficulty of preserving a solution.

The emetic effect is produced in from two to five minutes generally, the vomiting being violent and explosive, not of long duration, without nausea, though attended by vertigo, free perspiration, and a temporary feeling of great muscular debility. Emesis is followed by somnolence; but there is no subsequent collapse, such as follows the administration of tartar emetic; nor is any effect produced upon the bowels.

Emesis by apomorphia has been used and advocated either to empty the stomach, or to free the respiratory passages when obstructed. In cases of poisoning, it affords a rapid and sure means of evacuation within five minutes of its administration. In asphyxiating respiratory affections, such as croup (Sanné), acute capillary bronchitis (Riegel), catarrhal pneumonia (Jurgenson), pulmonary edema (Hertz), it has been used successfully, in patients of all ages, from infancy upwards. The dose for a child of eighteen months is stated by Dr. W. F. Duncan to be a fiftieth of a grain, while that of an adult ranges from a twentieth to a tenth, the intermediate doses being proportionate to the year of age. The speaker had once administered to himself six minims of the one per cent. solution, containing one sixteenth of a grain of the salt, and the effects produced were so powerful as to convince him that one twentieth of a grain would have been amply sufficient. The doses advised by most writers (from a third to a sixth or a tenth of a grain) seem needlessly large.

FRACTURE OF THE NOSE.

DR. FIFIELD related the case of a young gentleman aged nine years, to whom he had been called in consultation some weeks since, under the following circumstances:—

The patient had been amusing himself in company with other boys by running to and fro over the roofs of some freight cars standing in a station, jumping from one car to another. In the dusk of the approaching night he missed his leap and fell, striking the right side of the nose near the inner angle of the eye, breaking the bone into minute fragments. One of the fragments, apparently a portion of the right nasal bone, was picked out by the physician who first saw him, as it seemed entirely separated from any connection with remaining parts. From this compound comminuted fracture a gaping wound extended outwards along the lower border of the orbit whose bony rim seemed also to have sustained some fracture. Another gaping wound passed downwards in line of the nasal fracture to the cheek.

A female silver catheter passed up the right nostril showed its rounded end at the neighborhood of the internal angle of the eye, quite free from covering of

bone or other tissue. It raised in its passage the mass of bone fragments, which immediately dropped back into the nostril when the catheter was removed. The problem seemed to be not only how to elevate the comminuted bones, but to make them remain so.

A long hare lip pin, with a glass head, was taken, passed beneath the lowest adherent fragment into the nostril, then the head being slowly depressed the point was guided forwards and upwards, passing over the point where the right nasal bone was missing, and made to emerge well beneath the left eyebrow. It was a test of the goodness of Weiss's steel, for the pin bent like a bow. A bit of rubber was now slipped over the head and point of the pin.

The remaining wounds were sewed up in the ordinary way. The pin was left in place for six days, and then withdrawn, and although the wound healed by granulation the deformity is said to be remarkably slight; the open hole is firmly closed, no air passing. The bones remain in good line.

Dr. Fifield stated that the thought of treating fracture of the nose in this manner was not an original one with him. On the contrary, he wished publicly to express his obligation to Dr. Lewis D. Mason, whose article in the *Annals of the Anatomical and Surgical Society of Brooklyn*, New York, had directed his attention to this very useful proceeding, although he believed no case yet reported had been exactly like the one of which he had spoken. Dr. Mason's cases having been depressions of the nasal bones from blows which break and drive down the bridge of the nose between the nasal processes, which are in their turn fractured. In such cases the needle is passed to serve as a "tie rod" holding together the sides of the nasal arch."

Dr. Ma-on's articles at page 107, March number of the *Annals*, 1880, May, page 197, February, 1881, page 89, may be consulted with great profit, being an honor to American surgery.

Dr. Fifield's case had differed from Dr. Mason's in this, that whereas the latter had used the method to elevate the depressed and fractured bridge of the nose, the former had employed it to raise and sustain a fractured nasal process.

Dr. PORTER showed two specimens of rare disease of the testicle: one of cystic sarcoma (curling) of eight months' growth, size of a large orange, following injury; another of encysted hydrocele with exceptionally large and numerous cysts, varying from millet seed to size of a lime, containing spermatozoa.

Dr. T. B. CURTIS showed an anatomical specimen consisting of the bladder of a patient who had long suffered from retention of urine caused by obstructive hypertrophy of the prostate, and necessitating the habitual use of the catheter. In the prostatic urethra, on either side of the verumontanum, were several superposed *lacunae* or *infundibula*, varying in depth from a quarter of an inch to an inch, running backwards under the mucous membrane of the neck of the bladder, their orifices or mouths being directed forward, so as readily to receive the extremity of a straight and pointed instrument. They were sufficiently capacious to admit a number 18 (French) catheter, and one of them had been converted into a false passage opening into the bladder, in the *trigonum vesicae*, the bottom of the infundibulum having been perforated by catheterism.

These prostatic lacunae were first described by Vel-

peau¹ as liable to become the seat of false passages. They were subsequently mentioned by Professor Jarjavay, of Paris, and represented in one of the plates of his beautifully-illustrated monograph on the anatomy of the urethra,² which was handed round for inspection. Jarjavay ascribed them to an exaggerated development of the *fræna* which radiate from the posterior extremity of the verumontanum, and which are normally more or less pronounced in different subjects. Dr. Curtis had seen as many as four similar specimens in Paris, and had exhibited one before the Anatomical Society of that city, a full description being published in the records of the society.³

Dr. Curtis showed also the bladder, ureters, and kidneys of a patient whom he had seen in a desperate condition a fortnight before, with Dr. J. G. Pinkham, of Lynn, who had since made the autopsy and forwarded the specimen. The patient, aged forty-five years, had suffered for about three years from a painful chronic disease of the bladder and kidneys. He had been under exclusively homœopathic treatment, which had never included the use of a catheter nor the administration of opium in any form. There was partial retention, with a full bladder, and painful, frequent micturition, the bladder being distended with purulent, bloody, ammoniacal urine. Dr. Pinkham had already instituted the daily use of the catheter, to the great relief of the patient. There was acute pain and tenderness in the right flank. The age of the patient, the apparent absence of all of the usual causes of chronic vesical and renal disease (stricture, stone, obstructive hypertrophy of the prostate), the implication of both bladder and kidneys, together with a hard, lumpy enlargement of both epididymes and of the seminal vesicles, had led Dr. Pinkham to consider the disease to be genito-urinary tuberculous, in which diagnosis Dr. Curtis had fully concurred.

The specimen, examined by Dr. Curtis before the Society, showed unmistakable macroscopic evidence of advanced genito-urinary tuberculous, implicating the bladder, prostate, seminal vesicles, ureters, pelves, and kidneys. The prostate was almost totally destroyed, being converted into an excavation, with irregular walls. The vesical lesions were very advanced, deep-seated, and destructive; the mucous membrane had almost entirely disappeared from the internal surface of the bladder, so that the muscular layer, and in some points even the subperitoneal layer of adipose connective tissue, were exposed. The left kidney was sacculated and atrophied, with dilatation of the pelvis (pyonephrosis), its ureter being obliterated at several points. The right kidney was much less diseased; at its lower extremity there was a superficial erosion of the cortex, at a point where a large paraneplretic abscess was found. There was an ulcerative pyelitis, and a similar affection of the ureter.

—The Board of Health of New York has appointed eight physicians as lodging-house inspectors, for two weeks, with a view to discovering and preventing typhus. Seven physicians have been appointed for a month as auxiliary to the vaccinating corps. Dr. J. B. Taylor, chief of the Vaccinating Bureau, says nearly every person stricken with small-pox had never been vaccinated.

¹ *Anatomie chirurgicale*, volume ii., page 247.

² *Recherches anatomiques sur l'Urethre de l'Homme*. Paris, 1856, page 22, and plate iv.

³ *Bulletins de la Société anatomique*, volume viii., 1874, page 15.

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ABDOMINAL SURGERY.¹

AMONG the abdominal viscera which may, when diseased, closely simulate ovarian dropsy, and thus occasionally place the ovariologist in the predicament of having to decide at once between the abandonment of a commenced operation, with immediate closure of the abdominal incision, or an attempt at the removal of the diseased part, is the spleen. This obviously important organ, whose functions, however, are still so far from being completely understood, is liable to become the seat of various kinds of tumors, among which are comprised several forms of cystic degeneration (serous, purulent, bloody, hydatid, and acephalocystic). The real character of these splenic cysts may remain obscure and doubtful, or wholly unrecognized and even unsuspected, until an abdominal incision has exposed the morbid growth and its attachments to view and to palpation. Such a case was that of a female, aged twenty years, from whom Péan, of Paris, in 1867, successfully removed the entire spleen, the latter being found converted into a large cyst full of a thick, viscid, brownish fluid. On the tenth day after the operation the patient was so well that it was impossible to prevent her from going out. After her recovery, which was rapid and complete, she presented absolutely no symptoms, no alteration of health, which could testify to the loss which she had undergone. This striking case of splenectomy, successfully performed in a human being, corroborates the results often obtained in *anima vili* by experimental physiologists, which go to show, according to the testimony and experience of Mosler, that the spleen is not absolutely necessary for the maintenance of life, its function after extirpation, as well as after artificially-induced atrophy, being assumed by the other lymphatic organs.

Péan's case of splenectomy, with recovery, is not the only one on record. Magdelain, who was Péan's interne, and assisted the latter in the performance of his operation, published in 1868 a paper relating this remarkable achievement of abdominal surgery, in which he got together nine cases of complete or partial removal of the spleen in traumatic cases, with hernia of the organ through an accidental abdominal wound, all of which terminated in recovery; and six cases of complete splenectomy for disease of the spleen, of which the first, performed in Italy, in 1549, by Zacurelli and Floraventi, and the second, that of

Péan, were successful; the other four, by Quittenbaum (1836), by Kuehler (1855), by Spencer Wells (1866), and by Koeberlé (1867), having each a fatal termination.

Still another category of operations, relating more or less directly to our subject, comprises the various methods for the radical cure of hernia. Numerous operations have been performed of late — especially since the general adoption of antiseptic precautions has given greater confidence in dealing with the peritoneal cavity — with a view to obliterating permanently the hernial tract in the abdominal walls. This has been accomplished by various means, namely, by effecting a closure, by inflammatory adhesion, of the peritoneal diverticulum, — ring, canal, and sac, the latter being, perhaps, removed; or by uniting firmly, by suture, the margins of the hiatus in the fibrous layer of the abdominal parietes (inguinal pillars); or by a combination of both of these procedures. In a recent and valuable paper by Dr. Reverdin, of Geneva, the various operations for the radical cure of hernia are passed in review, with a careful discussion of their merits and demerits. In many of the cases recorded — the operations having been performed by Steele, Nussbaum, Mayer, Riesel, Czerny, Schede, Socin, Annandale, Buchanan, and by Reverdin himself, — successful results have apparently been attained, but a certain lapse of time was still needed in most of these cases to show whether the integrity of the abdominal walls had really been sufficiently restored to allow artificial support by means of trusses to be permanently dispensed with. Nearly every procedure, says Reverdin, seems imperfect, in that they all effect a closure only of the external orifice of the inguinal hernial tract, leaving a more or less patent internal orifice and canal.

The last illustration of abdominal surgery, as now understood and practiced, which we shall adduce, is afforded by a recent very striking case in which Koeberlé, of Strasbourg, removed over two yards (two meters, or six feet and seven inches) of a small intestine affected with multiple strictures, the patient making a complete recovery. The subject of this operation, a young lady, aged twenty-two years, had been suffering with symptoms of chronic intestinal obstruction, referred, upon careful examination, to three different points of the small intestine, and attributed to cicatricial contraction of the bowel, though no cause for the production of such lesions could be made out. The operation was performed without the usual antiseptic precautions. An incision nearly four inches long was made in the *linea alba*, this situation for the laparotomy being mostly preferred by Koeberlé in cases of intestinal obstruction. The direct examination of the abdominal organs showed the preliminary diagnosis to have been correct; the small intestine proved to be the seat of three narrow strictures, rendering necessary the removal of a portion of gut amounting in length to two meters. The details of Koeberlé's highly ingenious operation, too numerous and minute to be reproduced here, are clearly and abundantly set forth, with illustrations, in his paper,

¹ Concluded from page 29.

published in recent numbers of the *Gazette Hebdomadaire*, of Paris. The operation lasted three and a half hours, with very little loss of blood, the patient being kept all the while under chloroform. The two ends of the divided intestine were ligated and fastened in the abdominal wound, which was partially closed by sutures, a tent of lint, moistened with a solution of carbolic acid, being inserted. The wound was covered with an open dressing, and left more or less exposed to the air. The immediate consequences were of the simplest; except on the third day, the highest temperature was 100.4° F. The patient ceased at once to suffer from the colic which had previously tortured her, and expressed herself as perfectly comfortable. She was supplied with liquid nutriment by enemata until the third day, when, peritoneal adhesions being judged to be sufficiently established, the ligated ends of the intestine were opened, an artificial anus resulting; on the twelfth day enterotomy was performed, with destruction, by compression by means of a clamp, of the spur constituted by the juxtaposed intestinal walls, and forming a septum between the stomachal and anal ends of the divided intestine. This first attempt at enterotomy proving insufficient to allow the free passage of the intestinal contents, the compression was repeated a second time, a little later, with a thoroughly satisfactory result. A month after the operation there remained only a small, very narrow fistula, which in a week more had closed. At the end of six weeks in all the recovery was completed. The patient was seen and examined by E. Boeckel, Freund, Ehrmann, Czerny, and others. The portion of intestine removed was exhibited before the Strasburg Medical Society, and examined by Recklinghausen.

Koeberlé, in his report of this case, rehearsed all the operations of a similar character which he had found recorded. Resection of cancerous portions of the large intestine had been attempted by Gussenbauer, Thiersch, Schede, Baum, Czerny, Billroth, and Bardenheuer. The removal of a cancerous pylorus had been attempted by Péan, and advocated by Nussbaum. Czerny, in April, 1880, removed two portions of the large intestine, one over four inches (eleven centimeters), the other nearly three inches (seven centimeters), long. The patient survived six months and a half, and then died of generalized carcinoma. Reyhard, of Lyons, as long ago as 1833, removed four inches (ten centimeters) of a cancerous descending colon; the two ends of the gut were sutured together, and the abdomen, opened by a lateralized laparotomy, was closed. The patient recovered from the operation, and lived six months, dying of recurrent malignant growth. The foregoing experience, mainly, afforded the precedents, on consideration of which Koeberlé was induced to attempt the daring operation briefly described above. From his own experience, in this and in other analogous cases, he deduced the following conclusions:—

(1.) Resection of the small intestine can be practiced to a considerable extent, with the possibility of removing a length of over two yards of the bowel without disturbing the digestive functions in any appreciable degree.

(2.) Under suitable conditions, resection of the intestine may be considered as a perfectly justifiable operation.

(3.) The resection may be effected: (1.) By immediately suturing the cut ends of the gut together and closing the abdominal incision. (2.) By establishing an artificial anus, to be closed by a subsequent enterotomy. (3.) By means of an incomplete suture of the gut, with the formation of an artificial anus. Of these procedures, the second and the third are the safest in the end.

(4.) Resection of intestinal strictures, fibrous and cicatricial, which are probably less uncommon than is supposed, is a means by which a radical cure can be effected. Such is also the case with regard to epitheliomatous disease of the intestine. On the other hand, resection applied to obstructing carcinomatous growths can only afford a temporary relief from the disease, which is accompanied by generalization and extension to the lymphatic glands.

(5.) By keeping the intestine closed after the operation, as was done by me, the escape of the intestinal contents can be prevented for several days, until after the formation of sufficiently firm and close adhesions. On the other hand, the abdomen is thereby prevented from emptying itself too completely after the operation, so that the patient is preserved from certain subsequent risks, such as the penetration of air or of putrid fluids into the peritoneal cavity. By nourishing the patient with foods as slightly fluid as possible the discharge of alimentary matters through the first portion of the intestine is reduced to a minimum, and the patient is less liable to become debilitated.

(6.) By introducing liquids into the system through the large intestine, by administering liquids through the rectum, water is as freely absorbed as under normal conditions, the discharge of the fluid intestinal contents is diminished, and occasions less discomfort to the patient.

Such, by way of illustration, are some of the most striking and significant achievements of recent times in the special branch of practice now known as "abdominal surgery." We say designedly *special*, for is it not clearly manifest, after full consideration of the historical facts which we have briefly passed in review, that a special kind and degree of knowledge and skill, attainable only by long experience, are requisite to enable the surgeon to practice ovariectomy, as well as the kindred operations involving the exposure of the peritoneal cavity, with the necessary boldness, confidence, and security by which only such procedures are rendered beneficial and legitimate? To sustain this view, to emphasize the need of a special apprenticeship and of a long and thorough training in the art of abdominal surgery, it is only necessary to point to the constantly increasing skill and success attained by Mr. Spencer Wells, and made evident by the steady diminution of his rates of mortality in ovariectomy. McDowell himself, at the outset, when he was striving to make ovariectomy a boon to humanity, clearly recognized the need of special qualifications for its performance, and foresaw, as Spencer Wells once took occasion to recall, "the dangers of its abuse from rash and indiscriminate rivalry amongst his followers." His emphatic warning against such abuse of the operation was quoted with approval by Spencer Wells, as follows: "I think my description of the mode of operating, and of the anatomy of the parts concerned, clear enough to enable any good anatomist, possessing the judgment requisite for a surgeon, to operate with safety. I hope no operator of any other description may ever attempt it. It is my most ardent wish that this operation may remain to the mechanical surgeon forever incomprehensible. Such have been the bane of the science, intruding themselves into the ranks of the profession with no other qualifications but boldness in undertaking, ignorance of their responsibility, and indifference to the lives of their patients; pro-

ceeding according to the special dictate of some author as mechanical as themselves, they cut and tear with fearless indifference, utterly incapable of exercising any judgment of their own in cases of emergency, and sometimes without possessing the slightest knowledge of the anatomy of the parts concerned. The preposterous and injurious attempts of such pretenders can seldom fail to prove destructive to the patients and disgraceful to the science." Finally, if additional corroboration of our position were called for, it would suffice for us to recall the rare and praiseworthy frankness, modesty, and abnegation displayed by Mr. Erichsen, who, albeit one of the foremost surgeons of our time, has not hesitated, as we have shown, to avow openly and plainly his own incompetence to perform the operation out of which the *specialty* of abdominal surgery has grown, and by the practice of which alone it is to be attained.

BUCHANAN THE DIPLOMATIST AS A CONFESSOR.

THE worthy Buchanan, of diploma notoriety, is now bending all the energies of his active nature to confessing, if the account lately published in the *Philadelphia Record* is to be accepted as authentic. He is evidently determined to gratify the authorities by painting with a big brush a picture more beautiful than nature herself, and is prepared to relish the rôle of Sampson after having tried that of a Philistine. As Sampson there is apparently no medical temple so sacred but that he is eager to bring it down. If there is one thing, however, for which he seems to have a real genuine contempt it is a small diploma without much parchment.

The following are some of the most picturesque confessions:—

FOREIGN DIPLOMAS.

"I have been offered the degrees from all the institutions in Great Britain, but I never accepted one: I would not pay the expressage on them. Van der Vyver¹ has written to me that if any one wanted the title of Count or Countess, or Duke or anything, he could supply it. That furthermore, he could, for a consideration, create a man a bishop or anything.

"In Scotland there are four Universities—Edinburgh, Aberdeen, St. Andrews, and Glasgow. All teach theology, arts, law, medicine, and their collateral branches. Edinburgh in 1845 publicly advertised that it would sell one thousand diplomas at \$50 each. In 1847–8–9 I could have bought them while attending Glasgow. They were around thick. I cannot specify a case, although Sturnam said I could have all I wanted if the price would be paid.

"Besides those four bodies there are the Royal Colleges of Surgeons at Edinburgh and Glasgow. These bodies confer M. D. as well as well as their title F. R. S., E.L., etc. Those societies to the uninitiated seem great, but they are simply club houses. The Medical act has injured them very much. These are all incorporated bodies. The Andersonian University has no corporate power.

"The Dublin University is really the only school in Ireland that deserves the name of being such, and prior to 1857 it was like the others.

"England has a large number of medical schools, besides the two great universities, Cambridge and Oxford. There are also Royal Societies, but the same spirit haunts them all—they will sell degrees.

"Sturnam, Sayre, and Van der Vyver² have offered to sell me their degrees, but no sensible, practical American will pay their prices. The London University is the great medical degree depot. Admission to the various Royal Societies is easy. They

¹ A prominent diploma broker.

² Diploma brokers.

will not refuse a £5. Their certificate or diploma is about six by twelve inches!

"The German Universities are more celebrated than the English. Every school in Germany did it freely and openly for about fifteen years. I was acquainted with a number of colored men in this city who had bought them. I might enumerate Rosell, Davis, Clarke, all dead, and I know of men all over the country. I have often thought that there are at least 5000 out—probably double that number. It seemed to be done direct, inclosing the cash and getting the return. The diplomas are quite small! I have heard little of this traffic during the last twelve years. I have often been informed that all the degrees of European schools have been manufactured here. As far back as 1862 I saw in the possession of Fenton, a Canadian, a roll of European diplomas. Chicago has been mentioned as the depot. Stickney went there after them, I know, but he said they were so frightened he could do nothing with them. In the possession of Mummy I counted eleven German and Royal Society of London diplomas."

"Rev. George Sexton, of London, who was prominent in the British Medical Reform Association, to whom I sold diplomas in 1874, is a European agent of Fields. Sexton commenced his career as a missionary, then became a lecturer for Kahn, and now is the agent for the Anthropological University of St. Louis.

ANTHROPOLOGICAL UNIVERSITY OF ST. LOUIS.

"Fields, Sexton, Alford, and Thrasher have an organization as perfect as the Catholic Church. They have penetrated every city of America and Great Britain with their agencies. The Eclectic is not popular, and does not sell well, but the University of Anthropology goes off like hot cakes. I have understood I could buy five hundred of its diplomas in bulk at any time. They deal largely. Alford and Sturnam have approached me, but I never answered their communications.

"The Scotch ministers take to these university degrees like a set of hungry wolves. They will not investigate. They have the degree mania badly. Fully twenty thousand diplomas of this university have been sold in Europe to ministers, doctors, and teachers."

Buchanan was secretary of the concern at its organization. Alford was a lecturer at Buchanan's college, and the American University then embraced the Anthropological University as its theological branch.

Concerning the New England University he says: "Henry C. Stickney, who runs the concern, told me he had sold thousands of these diplomas throughout Europe. They were worthless."

The Eclectic Medical of Georgia was the only eclectic college in the country which was recognized by Buchanan as in communion with his National Medical Association. Fishblatt, who is credited as a professor of dermatology in that institution, was, Buchanan says, in an arrangement with Professor Polk to sell eclectic diplomas.

DRUID UNIVERSITY.

"This concern is chartered by the State of New York, and extends all over the United States. Drs. Brown and Davies, of Athens, Maine, are owners of the charter, stone, and seal. They adhere to Culpepper on materia medica. Davies was originally an Episcopal clergyman, but turned to medicine, and took our diploma. The Druids are confined to the Welsh. The Druids implored me, two years ago, to abandon our State charter, and begin under their auspices, but I was troubled with my head, and would not go in."

It is natural that those who wish to succeed to Buchanan's honors and emoluments should find it necessary, as well as politic, to make a little more pretense of giving medical instruction. The market must be pretty well supplied with mere parchment, according to the confessor's estimates that twenty thousand bogus diplomas are current in the United States, and forty thousand more in Europe, though we are afraid his figures are certainly not more than "fractionally accurate."

Buchanan himself seems to have a certain amount of respect for state examination and registration as insuring a tolerably definite standard. His experience should entitle his opinion on this point to confidence.

MEDICAL NOTES.

— Dr. Isaac Ray, a distinguished physician and author, died in Philadelphia on March 31st, in the seventy-fifth year of his age. Dr. Ray was born in Beverly, Mass., graduated at Bowdoin College in 1827, and studied medicine with Dr. Shattuck, of Boston, and at the Harvard Medical College. He first practiced in Portland, Me., and later removed to Eastport. Dr. Ray was appointed in 1841 to the position of superintendent of the State Hospital for the Insane at Augusta. From there he removed to Providence in 1846, to superintend the construction of the building for the Butler Hospital, of which he subsequently had charge. He resigned his position at Providence in January, 1867, and removed to Philadelphia. As a medical writer on subjects connected with insanity, and as President of the Society of the American Superintendents of Insane Asylums he was widely known and greatly esteemed.

— The *Lancet* speaks in terms of the highest praise of the experience of the Guardians of the Cork Union in boarding out pauper children. It has proved in their hands a most excellent method of dealing with one of the most difficult of social problems, and contrasts favorably with the workhouse plan. It is cheaper, the children are remarkably healthy and happy, and in a large majority of cases are adopted by the foster parents. The foster parent is appointed on the recommendation of local clergymen, and is generally either a small farmer or a well-to-do laborer. From 1862 to the present there were 650 children removed from the workhouse and boarded out in several favorable districts, seaside or mountainous, in which the Union abounds. Of this number 209 are at present boarded out, and 417 have been adopted by their foster parents, and are going on well, 20 have died, and 1 have returned to the workhouse, and are now ready to go out to service. Here are 417 children at the age of thirteen, on the application of their foster parents, taken off the roll of pauperism to start fair in the world. Much importance is attached by the committee to the supervision of relieving officers, assisted by clergymen and ladies, and to the periodical reports of the dispensary medical officers on the health of the children. This report of the boarding-out committee is worthy of the serious attention of all guardians of the poor.

Recent Literature.

A Text-Book of Human Physiology. By AUSTIN FLINT, JR., M. D. Third Edition: D. Appleton & Co. 1881.

Professor Flint may well be gratified with the flattering success of his text-book, which is entering upon its third edition within six years of its first appearance. While we congratulate the author upon this fact, and while we recognize the great pains and labor he has bestowed upon the book, we must sincerely regret the numerous glaring faults of omission of which the author is guilty. Professor Flint has often been severely criticised for attempting to portray the recent

state of physiological science while ignoring in an inexplicable manner the work and writings of his German colleagues. Some improvement in this respect may be noticed in this third edition, where we do occasionally meet the familiar name of some living German physiologist. Yet, taken as a whole, the book is mainly a history of the state of physiology in France twenty years ago rather than the expression of the achievements and hopes of modern physiology.

Perhaps the portion of the book wherein the omissions are most conspicuous is in the chapters upon secretion and digestion. On reading these chapters we are carried back to the times and triumphs of Bernard, but we search in vain for the names of Heidenhain, Kühne, Brücke, Luchsinger, Nawrocki, Adamkiewicz, Klemensiewicz, and a score of others whose works have thrown rays of light upon so many dark places. In the description of the proteolytic action of the pancreatic juice nothing is said regarding trypsin, and no mention is made of the brilliant experiments of Heidenhain and Kühne, by which the metabolic processes in the gland cells are exposed to our very gaze under the microscope. In casually referring to the fact that the activity of sweat glands is modified by nerve influence, no account or even hint is given of the exhaustive researches which have traced the course of the individual nerve fibres from the sweat glands back to their centres in the brain, and which have revealed the wonderful trophic influence of these nerves.

Again, in speaking of coagulation of the blood, while much space is devoted to a rehearsal of several old and exploded theories, the elaborate investigations of Schmidt and his followers are dismissed in one paragraph, with the supposition that fibrinogen and fibrinoplastin are products of decomposition of plasmin. In this connection we would correct an inaccuracy of the author where he says: "It is true that the so-called *fibrinogen* added to the liquid of hydrocele or other serosities not spontaneously coagulable produces coagulation." Hydrocele fluid already contains *fibrinogen*, and it is necessary to add *fibrinoplastin* in order to produce coagulation.

This list might be indefinitely extended, but enough has been said to show the reason for our condemnation of the book in its claim to be a fair or proper representation of the science of physiology. Lack of space cannot be urged in plea for its deficiencies, because the book is confessedly a full treatise, and the author does not consider it "desirable to omit any subject properly belonging to human physiology." It may be objected that some points have been omitted by reason of their uncertainty and lack of substantial proof, but we could mention scores of indubitable facts, veritable corner-stones of physiological science, which are apparently not dreamed of in Professor Flint's philosophy. A teacher of physiology should be no mere chronicler of past events, nor need he waste his time with mere theories and multiplicity of detail; but he should endeavor, in as concise and graphic a manner as possible, to spread before his readers a complete map of the work as it actually exists, and he should strive to point out those avenues of future development which lead to more remote and richer fields.

We are disappointed in this book, and we think the warm reception which it has already received from the profession merits a more complete and more comprehensive description of the present state of physiology.

G. M. G.

The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs. By HENRY SAVAGE, M. D., London. Third edition, revised and greatly extended. New York: William Wood & Co. 1880.

The physician who has not been personally familiar with the English editions of Dr. Savage's book, judging only of its great worth by the position accorded the author in so much of our standard gynecological literature, as the highest authority in the surgical anatomy of the female pelvic organs, must have longed to possess the work. The elaborate and beautiful plates in the English editions necessarily made the book expensive, and, as a consequence, its ownership has been comparatively limited.

It may now, however, be found in Wood's Library, where its appearance was a most grateful surprise. Its plates have lost their coloring; but they remain, as they have ever been, the most instructive and truthful of any with which we are familiar. With the thorough revision of the text and the thirty-six additional wood-cuts, the book cannot fail to be one of the special prizes of this library.

A Practical Treatise on the Diseases of Women. By T. GAILLARD THOMAS, M. D. Philadelphia: Henry C. Lea's Son & Co. 1880.

The determination of the author to keep his book foremost in the rank of works on gynecology is most gratifying. Recognizing the fact that this can only be accomplished by frequent and thorough revision, he has spared no pains to make the present edition more desirable even than the previous one. For in this we see not only our old friend in new and tasteful attire, but on carefully scanning its pages we find evidences of the enlarged experience of the author together with the results of his ingenuity and skill, especially in the treatment of malpositions of the uterus by mechanical appliances.

The volume is by no means the outgrowth of one man's investigation and labor, but is in every sense a thorough treatise on the Diseases of Women; and it is so systematically arranged and carefully indexed that, as a book of reference to the busy practitioner, it is unequalled. We know of no other gynecological author who can so effectually rescue from neglect or forgetfulness an important principle or method of treatment which has been once given to the profession. Seeing its value himself, he so positively asserts its claims, and so forcibly presents its merits, that its recognition and adoption become established facts.

We are glad to see the increased importance ascribed in the present edition to certain subjects, notable among which are Atresia of the Genital Tract and Laceration of the Cervix Uteri, each having a special chapter, well illustrated by diagrams, devoted to its consideration. The pathology of the book, heretofore its weak point, has also received due attention, and the advance thus inaugurated will doubtless in some future edition lead on to preëminence. It is to be regretted that more space is not allotted to the subject of development. Comparatively little has been written upon it, the volume before us containing more than its predecessors, and more than most kindred treatises, and the task of working up the subject thoroughly would

be most arduous; yet we know of no one who could so well accomplish it as Dr. Thomas, either personally or by guiding some one else.

The rapid progress made in gynecology becomes very noticeable if we compare the early editions of this work with the present one; and when we remember that it is but twelve years since the first one was issued we are the more surprised that our views should have changed so much. Take, for example, the one subject of Ulceration of the Os Uteri, to which ten or fifteen pages were devoted then. Now, except as the result of syphilitic or malignant disease, it is not mentioned. Dysmenorrhœa, Menorrhagia, Amenorrhœa, and Leucorrhœa are sharing the same fate; and we hope in his next revision the author will cast them out entirely, treating them purely as symptoms under the heads of the conditions which give rise to them. The present method can but mislead many in the profession to the establishment of a course of treatment designed to relieve a symptom; whereas they will then be guided to search after and attack the cause of the symptom.

Dictionnaire Annuel des Progres des Sciences et Institutions Médicales. Par M. P. GARNIER. Seizième année. 1880.

With its usual promptness this dictionary, now in its sixteenth year, comes to hand. The opening words of the introduction intimate that if the value of the medical productions for 1880 equals their abundance and variety, the year will certainly be one of the most propitious and fruitful in the art of healing. The grandest discovery of the year, if time confirms its value, is the inoculation of animals with the attenuated culture-liquid of the bacteria of charbon to render them insusceptible to the disease. The author regrets that the younger physicians of the present day, in their zeal for the new forms of science, are inclined to neglect clinical observations. A résumé of matters of interest in therapeutics, surgery, pathology, obstetrics, and the special branches is given in the introduction, and the body of the work — nearly 600 pages — is devoted to articles on many and varied subjects arranged in alphabetical order.

The author is somewhat inclined to disparage the work of German physicians, but that of the profession of other nationalities is well presented.

On the Bile, Jaundice, and Bilious Diseases. By J. WICKHAM LEGG, F. R. C. P. S., etc. New York: D. Appleton & Co. 1880.

This work is devoted, as the preface informs us, to that office of the liver, which, for two hundred years, was the only one allowed by physiologists, — that is, the secretion of bile. The first chapters treat of the chemistry and physiology of the bile; the latter, the author confesses, being still surrounded by a darkness almost Egyptian; then follow several chapters dealing with the phenomena caused by an obstruction to the discharge of the bile into the intestine, and others giving an account of certain species of jaundice where an obstruction to the discharge of the bile cannot at once, and without trouble, be discovered after death. The author omits any account of gall-stones, feeling that the

space required for anything like a full discussion of the phenomena caused by these bodies would exceed the limits prescribed for this work.

In the last chapter the meaning of "bilious diseases" is specially considered, and we heartily sympathize with the writer's proposition that the word "bilious" should no longer be used as an adjective to diseases, though exactly how a great many good people will console themselves should they be at length deprived of their present use of the word, we do not exactly foresee.

The book is a learned one, and in its 700 octavo pages presents a repository of past and present knowledge concerning the subjects of which it treats. It is a handsome volume, with large, clear type and several beautiful chromo-lithographic illustrations.

Miscellany.

THE EYE IN TRANCE AND OTHER SYMPTOMS.

MR. EDITOR, — In your report of my lecture on Trance, which was in the main correct and well stated, there was one error of importance.

The pupil reacts to the light even when there is anaesthesia of the eye: this fact I have observed in all my cases thus far; and it is a fact that has an interesting medico-legal bearing.

I have just returned from a visit to the case of spontaneous trance in Lehigh County poorhouse; and in that case, where the trance has existed for seven weeks without interruption, the pupils still react to the light, and, as usual in cases of trance, other automatic processes of the body go on as in health.

In regard to the local analgesia or abolition of sensation of pain of which your reporter speaks it should be stated that the area of analgesia was restricted to the *point where the needle was inserted*, instead of a space of the size of a dollar; and at the same time the whole half of the body on that side was somewhat analgesic and the other half of the body was hyperaesthetic.

In regard to the artificial induction of aphasia and agraphia in the trance orators it should be added that pressure on any part of the body, if the pressure or shock be sufficiently strong, will produce precisely the same effects as touching the back of the neck; indeed, in a virgin case — one that has not been previously experimented on — sudden and firm pressure over the ribs has, in my private experiments, stopped a trance speaker, and the same pressure in the same place has set him speaking again.

The points at the back of the neck and over the lower jaw seem, in some cases at least, to be more sensitive to reflex irritation of this kind and are certainly more convenient to operate on in a lecture. I do not regard them as centres, but only as more susceptible to irritation while the subject is in trance; the difference in this respect between these points and other parts of the body being of degree rather than of kind.

I may perhaps add here that in my private experiments, which I have been carrying on quite frequently during the past four months, I have lately been able to demonstrate that the sense of vertigo can be entirely or nearly abolished in the trance state. The experiments in this line were made at the suggestion of my friend, Dr. William James, of Harvard College, and

the method of conducting the experiments was suggested by him. The plan was to make the subject whirl rapidly round in a swing so suspended that it could be twisted up and allowed to untwist. Furthermore I have convinced myself by many experiments that the color-blindness in these subjects, whether in one eye or both eyes, is real and not feigned.

GEORGE M. BEARD.

13 WEST TWENTY-NINTH STREET, NEW YORK.

MOUTH WASHES IN ILLNESS.

MR. EDITOR, — A severe strain upon the system is often accompanied by increased decay of the teeth. For example, one sees this increased decay even during the physiological process of reproduction, after a period of financial depression, during the protracted illness of some dear relation, after a sojourn in foreign countries, and during recovery from acute exhausting diseases.

As in some of these conditions the general practitioner is likely to have the patient under his care I wish to suggest the importance of prescribing for the teeth as well as for the general condition.

No doubt in many acute cases danger to life may overshadow minor considerations, yet this is usually for a limited period.

Among the more immediate causes of this decay diminished power of resistance in the teeth ranks first; others are vitiated oral secretions, neglect of the ordinary mechanical means of cleaning, thus allowing food and the waste products of the mouth to accumulate. Aside from constitutional treatment to build up the system, the indications for local treatment are increased care in cleaning the teeth, together with the use of suitable washes to prevent decomposition, neutralize acidity, and destroy germs if these have any part in decay. As in acute prostrating diseases the patient is too weak to brush the teeth, reliance is to be placed in the frequent use of a mouth wash. Nor will any difficulty be found in this, as even in severe prostration the muscles about the mouth remain strong.

As examples of mouth washes the following are given. The use of carbolic acid alone, or in combination with an alkali, can seldom be resorted to, because patients associate it with unpleasant places. Benzoic acid, thymol,¹ eucalyptus oil, or boracic acid, answer the purpose, and some one of them is generally agreeable to the patient.

- | | | |
|-------------------------------|-----------------|----|
| 1. ℞ Sodæ boratis | 15 grams. | |
| Thymol | 200 milligrams. | |
| Aque | 1000 grams. | M. |
| 2. ℞ Sodæ boratis | 15 grams. | |
| Olei eucalypti | 2 grams. | |
| Magnesiæ carbonatis | 4 grams. | |
| Aque | 1000 grams. | M. |

Rub the oil with the magnesia, add the water gradually, having dissolved the borax in it, then filter and mark the filtrate Mouth Wash.

The patient should hold the wash in the mouth for at least a minute, forcing it constantly in and out through the spaces between the teeth, to bring the fluid in contact with the points of decay, changing their reaction from acid to alkaline, and washing out the *débris* collected about the necks of the teeth and in the spaces between them.

WILLIAM HERBERT ROLLINS.

¹ Suggested by Dr. Charles H. Williams.

BREAST-SUPPORTER.

MR. EDITOR,—There appeared in your issue of March 17th a plate representing a breast-supporter which was in use in the Boston Lying-In Hospital. Since that time quite a number of inquiries have reached the writer concerning the apparatus, and it may be that a word of description will not prove uninteresting to your readers.

The instrument was first devised at the Lying-In Hospital in the month of December last, to take the place of the old-fashioned bandages and towels that had been in use to support over-distended and painful breasts, especially in cases where an abscess was supposed to be threatening. The chief objection found to the use of the bandages lay in the difficulty of proper application, all the turns and folds having to be sewed to prevent slipping, and great care being necessary to prevent such pressure upon the painful gland as to make a bad matter worse. Add to this the fact that no matter how much care is exercised in adjusting, it will roll into cords which are especially uncomfortable to the patient, and it will become wet with milk, thereby necessitating renewal.

To obviate some of these difficulties the above apparatus was produced and was found to do more than had been hoped for it. Applying the pressure evenly and gently upon the sides of the breast merely, it

thereby lifts them from the axillary space toward the median line of the body, thus producing the desired effect and affording the greatest relief. Briefly stated, the advantages of the instrument are cheapness, ease of application, and efficiency. Its chief disadvantage is that it can only be worn in the recumbent position, but when it is remembered that the conditions calling for the use of such an apparatus rarely present themselves after the first two weeks following parturition, during which time the patient will, of course, keep her bed, it will be seen that the objection is not a serious one.

Messrs Leach & Green have consented to make the apparatus and furnish it to the profession at the lowest possible price. Yours very truly, R. A. KINGMAN.

BOSTON, 13 BERNBORGH PLACE, March 31, 1881.

WANTED: A SOLUTION OF MORPHIA.

MR. EDITOR,—Will some of your readers give in the JOURNAL a recipe for a solution of morphia or one of its salts, suitable for hypodermic use, which will keep without deterioration? Magendie's solution in a short time develops a penicillium-like growth,—at expense of the alkaloid, I suspect.

Respectfully, QUERIST.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 26, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	713	267	25.67	16.69	9.68	5.19	2.39
Philadelphia.....	846,984	384	112	21.35	7.29	2.34	1.56	.52
Brooklyn.....	566,689	243	91	22.63	16.05	10.29	4.52	1.23
Chicago.....	503,304	203	109	25.12	13.79	8.87	1.97	4.93
Boston.....	362,535	192	65	20.31	21.35	11.46	—	—
St. Louis.....	350,522	166	75	27.11	14.46	3.01	3.61	11.99
Baltimore.....	332,190	144	56	9.72	7.64	1.39	1.39	.69
Cincinnati.....	255,708	95	35	12.63	21.05	5.26	—	2.11
New Orleans.....	216,140	147	38	19.73	8.16	2.04	6.12	—
District of Columbia.....	177,638	88	40	5.68	23.86	1.14	—	—
Pittsburgh.....	156,381	62	29	45.16	11.29	12.90	12.90	6.45
Buffalo.....	155,137	44	19	13.64	9.01	6.82	6.82	—
Milwaukee.....	115,578	52	25	25.00	7.69	3.84	5.77	11.54
Providence.....	104,850	33	14	12.12	9.09	6.06	3.03	—
New Haven.....	62,882	—	—	—	—	—	—	—
Charleston.....	49,999	41	17	26.83	12.20	—	21.95	—
Nashville.....	43,461	16	3	12.50	12.50	—	6.25	—
Lowell.....	59,485	31	8	9.68	16.13	3.23	—	—
Worcester.....	58,295	26	10	26.92	26.92	15.38	3.84	3.84
Cambridge.....	52,740	22	5	—	9.09	—	—	—
Fall River.....	49,006	30	13	23.33	13.33	6.67	3.33	6.67
Lawrence.....	39,178	20	8	15.00	20.00	5.00	—	—
Lynn.....	38,284	11	3	—	—	—	—	—
Springfield.....	33,340	16	8	6.25	18.75	6.25	—	—
Salem.....	27,598	8	4	12.50	12.50	—	—	—
New Bedford.....	26,875	7	0	—	—	—	—	—
Somerville.....	24,985	8	1	25.00	12.50	—	—	—
Holyoke.....	21,851	3	2	—	66.67	—	—	—
Chelsea.....	21,785	10	4	20.00	—	20.00	—	—
Taunton.....	21,213	6	1	16.67	33.33	—	—	—
Gloucester.....	19,329	9	5	44.44	11.11	22.22	—	—
Haverhill.....	18,475	9	2	11.11	22.22	—	—	11.11
Newton.....	16,993	6	3	16.67	33.33	—	—	—
Newburyport.....	13,537	8	5	—	—	—	—	—
Fitchburg.....	12,405	1	0	—	—	—	—	—
Twenty-seven Massachusetts towns	223,452	63	15	14.29	17.62	4.76	1.59	1.59

Deaths reported 2917 (no return from New Haven); 1092 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 621, consumption 417, lung diseases 415, diphtheria and croup 190, scarlet fever 103, cerebro-spinal meningitis 70, small-pox 59, diarrhoeal diseases 52, typhoid fever 37, measles 29, malarial fevers 27, erysipelas 24, whooping-cough 15, puerperal fever 12, typhus fever three. From *small pox*, Philadelphia 43, New York 10, Chicago four, Brooklyn and Pittsburgh one. From *diarrhoeal diseases*, New York 17, Chicago six, Boston and New Orleans five, Philadelphia four, Brooklyn and Baltimore three, District of Columbia and Pittsburgh two, St. Louis, Cincinnati, Fall River, Salem, and Malden one. From *typhoid fever*, New York nine, Philadelphia eight, Baltimore three, Chicago, St. Louis, New Orleans, Lowell and Lawrence two, Boston, District of Columbia, Pittsburgh, Milwaukee, Somerville, Chicopee, and Palmer one. From *measles*, New York nine, Boston six, Baltimore, Cincinnati, and Gloucester two, Philadelphia, Chicago, St. Louis, Nashville, Worcester, Somerville, Newton, and North Adams one. From *malarial fevers*, Brooklyn and New Orleans eight, St. Louis five, Philadelphia three, Chicago, Pittsburgh, and Charleston one. From *erysipelas*, New York seven, Philadelphia, Brooklyn, and Chicago three, New Orleans two, Boston, St. Louis, Cincinnati, Pittsburgh, Charleston, and Fall River one. From *whooping-cough*, New York five, Boston and St. Louis two, Philadelphia, Chicago, Baltimore, Cincinnati, Pittsburgh, and Providence one. From *puerperal fever*, Philadelphia, Boston, and St. Louis two, Brooklyn, Chicago, District of Columbia, Pittsburgh, Milwaukee, and Taunton one. From *typhus fever*, New York three. The mortality from cerebro-spinal

meningitis has increased from 57 for the week ending March 19th to 70.

Eleven cases of small-pox were reported in Brooklyn, 14 in Chicago, two in Pittsburgh; scarlet fever 28, diphtheria eight in Milwaukee.

In 46 cities and towns of Massachusetts, with a population of 1,141,363 (population of the State 1,783,086), the total death-rate for the week was 22.20, against 20.19 and 20.44 for the previous two weeks.

For the week ending March 5th, in 149 German cities and towns, with an estimated population of 7,871,797, the death-rate was 25.8. Deaths reported 3901; 1803 under five: pulmonary consumption 589, acute diseases of the respiratory organs 412, croup and diphtheria 163, scarlet fever 82, whooping-cough 65, typhoid fever 59, measles and röteln 42, puerperal fever 16, small-pox (Königsberg five, Lübeck, Tilsit, Bremen, Aachen two) 12, typhus fever (Posen) one. The death-rates ranged from 17.5 in Frankfurt a. M. to 35.6 in Cassel; Königsberg 28.4; Breslau 35.4; Munich 33.2; Dresden 24.1; Berlin 22.8; Leipzig 19.5; Hamburg 24.1; Hanover 17.8; Bremen 19; Cologne 24.4; Strassburg 28.4.

For the week ending March 12th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 25. Deaths reported 3357; acute diseases of the respiratory organs 304, whooping-cough 84, scarlet fever 63, small-pox (London 58) 59, fever 33, measles 31, diarrhoea 29, diphtheria 12. The death-rates ranged from 15.8 in Brighton to 28.8 in Manchester: Bristol 20.9; Birmingham 21.2; London 22.4; Sheffield 23.2; Liverpool 26.7; Leeds 27.8; Manchester 28.8. In Edinburgh 20.3; Glasgow 24.6; Dublin 33.8.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hours.	Amount in inches
1881.																		
March 20	29.546	37	39	32	100	100	100	NE	NE	NW	28	20	4	Lt. R	Lt. R	Lt. R	—	—
" 21	29.518	43	53	34	91	40	58	63	SW	SW	10	14	7	F	F	C	—	—
" 22	29.448	39	50	33	80	54	72	69	SW	SW	4	12	6	F	O	C	—	—
" 23	29.399	36	42	30	79	39	80	66	W	NW	10	16	14	O	F	F	—	—
" 24	29.491	36	42	29	69	33	53	52	SW	W	12	14	13	C	O	F	—	—
" 25	29.651	36	43	30	70	27	52	50	W	W	12	20	14	C	F	C	—	—
" 26	29.458	32	37	27	68	45	68	60	W	W	12	14	15	O	F	C	—	—
Week.	29.502	37	53	27													15.02	1.61

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening; Lt. R., light rain; Lt. S., light snow

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 26, 1881, TO APRIL 1, 1881.

Browns, H. E., major and surgeon. Promoted from assistant surgeon, *via* Otis deceased.

Woodruff, E., captain and assistant surgeon. Relieved from duty in Department of Texas, to proceed to New York city, and by letter report arrival to the surgeon-general. S. O. 72, A. G. O., March 30, 1881.

Ainsworth, F. C., captain and assistant surgeon. Now awaiting orders in New York city, to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 72, C. S., A. G. O.

Worthington, J. C., captain and assistant surgeon. Now on leave of absence, to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 72, C. S., A. G. O.

Surgens E. J. DOERING, United States Marine Hospital Service, lately in charge of the hospital at Portland, Me., has tendered his resignation to the secretary of the treasury, and will return to private practice in Chicago.

A CORRECTION.

MR. EDITOR.—Your types have made me responsible for some rather peculiar views on pathology in the last sentence of my notice of Dr. Warren's work on the *Columba Adiposa*. I am

made to say "it is through these canals that the pus forms a carbuncle," but I said that "through them the pus from a carbuncle and the elements of morbid growths make their way to the surface." Perhaps this is worth correcting. I said nothing when in a recent notice the types changed "authorities" into "abscesses."

T. D.

BOOKS AND PAMPHLETS RECEIVED. — The Need of a Radical Change in the Training and Education of the American Girl, and the Physician's Duty Therein. By Hamilton Osgood, M. D. (Reprint.)

A Treatise on Albuminuria. By W. Howship Dickinson, M. D. Second Edition. New York: William Wood & Co. 1881. Wood's Library.

A Treatise on the Materia Medica and Therapeutics of the Skin. By Henry G. Pillard, M. D. New York: William Wood & Co. 1881. Wood's Library.

Second Annual Report of the Board of Health of the Taxing District of Shelby County (City of Memphis) for the Year 1880. By G. B. Thornton, M. D., President.

Strangulated Veins of the Uterus, and other Papers, Gynecological and Surgical. By Thomas H. Buckler, M. D., of Baltimore. (Reprint.)

Transactions of the Rhode Island Medical Society. Vol. II. Part IV. 1880.

Failure of Vaccination. Variolous Infection an Illusion, etc. By Carl Spinzig, M. D. (Reprint.)

Lectures.

CLINICAL LECTURE.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, OCTOBER 13, 1880.

BY PROF. A. JACOBI.

CASE I. You will remember this interesting case, gentlemen, at least those of you who were present at this clinic on Wednesday last. (The case was that of the rachitic child, aged two years, who had at various times been the subject of numerous complicated fractures of the arms, leg, thigh, etc.) There is not a single one of these fractures which has healed kindly. You remember what I said about such fractures in children, — that they are rare, and that these fractures are not complete, but ought rather to be called *infractions*. Rachitical bones rarely fracture in their entire mass. The periosteum being thicker than natural holds them together, and acts as a splint, so that often all that is necessary in these infractions of rachitical bones is to bend them back again, and then retain them in their normal position. That is the sort of fracture that has taken place in this case. You will remember that I spoke of the hereditary element here, and the probability that the rachitis in this child was due to syphilis. I mentioned the fact that George Wegner first discovered that the softening of the costal ends of the ribs was due to syphilis, and that we have in this child's thorax, but although that is so, yet the bone itself does not show whether the softening is due to rachitis or syphilis. As far as this case goes we have had the child on general anti-rachitical treatment, and it is certainly doing well. We have told the woman how to feed the child, and have given it ten drops of the syrup of the iodide of iron three times a day. As the bones of each humeri have united at a vicious angle, I should propose, when the child is older and stronger, to refracture them, and get them to heal in better position. At present, however, such a procedure is out of the question, as the child is not in a condition for it.

The next case is that of H. R., aged thirteen months. He is the youngest of four children, one of whom died in a convulsion at the age of three months. The other two, however, are living and in good health. The mother says that during her last pregnancy her then youngest child had a great number of attacks of general convulsions, occurring at irregular intervals, preceded by nausea and vomiting, and followed by high fever, but these attacks have not recurred since the child's third year. The child's mother married her first cousin, but both she and her husband are healthy. This child, which is brought here for treatment, was born at term, but was very feeble at birth. It began to smile when four months old, has cut no teeth, has never had convulsions. Until it was three months old its bowels never moved without an injection, but have been regular ever since. The muscular system is in a state of chronic contraction, and a letter from the physician who has been attending the child states that he suspects that the trouble is chronic hydrocephalus. Let us take the measurement of the head. From the occipital protuberance to the base of the nose the head measures forty-one centimeters, that is, about sixteen and one half inches, and from one mastoid process to the other, twenty-eight centimeters, or about eleven

inches. That would not be a very large head. The head of the new-born child measures from fourteen to fifteen inches, nearer fourteen inches in girls, fifteen inches in boys. A measurement, then, of sixteen and one half inches only points to an increase in size of from an inch to an inch and a half, which is not too much. I should therefore think it unlikely that the child is the subject of extensive effusion, but you remember that the child has been suffering from constipation in the early months of its life. There are but three universal causes for constipation in the very young, namely, first, improper feeding; second, a peculiar anatomical condition of the colon, which is very long in proportion to the rest of the canal, and bends back on itself, so that, as a result of this recurvature, there are two or three sigmoid flexures in which the feces accumulate, and being detained there get dry and hard. This peculiar condition cannot be cured. It will only get well when the child is five or six years old, the process of growth bringing the intestines to their normal proportions, and the sigmoid flexures becoming simplified. The third cause for constipation is debility of the muscular layer of the intestine. Children born at the seventh month of utero-gestation are subject to this form of constipation, because their muscular system has not yet developed its proper strength. A fourth cause for constipation is intestinal muscular debility dependent on rachitis. One of the first symptoms of rachitis is this muscular debility, not only affecting the voluntary muscles, but the involuntary as well, and it is this form of constipation which this child has suffered from, in all probability, but are there any other symptoms of rachitis here present? There is thickening of the epiphyses of the long bones. Both the ulna and radius show signs of rachitical swelling. The head is square, more quadrilateral than it ought to be. A child suffering from rachitis, especially when it is developed early, will often suffer from brain symptoms. Just as the rachitical swelling takes place in the periosteum of the bones, in the same manner the dura and pia mater may become the seat of softening, and effusion take place, giving rise to cerebral symptoms. The paralysis of the larynx which sometimes appears in this disease is due to a rachitical softening of the cranial bones and effusion beneath the surface of the pia mater. If that is so, and if this child has had brain symptoms, then it is very likely that they were due to rachitis. We have no evidence, certainly, of hydrocephalus, for the head is not very large, and the brain symptoms are no doubt dependent on a very slight softening of the dura and pia mater and a consequent effusion. I believe that if sufficient time is given us to change the condition of the child, — that is, if no severe form of brain symptoms occur — if we can have six or seven weeks' time, the prognosis is favorable. For in that length of time we may hope that the administration of the iodide of iron, the hypophosphite salts, and plenty of good food, beef, etc., may bring about a changed condition, although convulsions may take place at any time and terminate the case. The child should have plenty of air. Such a child will never get well unless it has plenty of oxygen. I have seen cases where the children have had convulsions continually, which, however, ceased immediately when the patients were given a full supply of oxygen. It is more important that they should have fresh air at night than in the day-time. Forty-nine out of fifty bedrooms are simply nasty in the morning from lack

of ventilation. See, then, that the children breathe pure air at night. Keep the windows open. In this case I shall rely on anti-rachitic treatment. I should not feel justified in giving iodide of potassium. I think that the syrup of the iodide of iron would be much better. Let the child bathe twice a day in warm water, not cold, so as to re-establish the cutaneous (?) circulation, its head being supported on a pillow while in the bath.

CASE II. The appearance of this child strikes you at once as being peculiar. You notice the small size of the head and its peculiar shape. It is four months old, its mother says, yet did not begin to smile until six weeks ago. It nurses well, but cries a good deal, and does not sleep well. The mother has another child two years and a half old, who is perfectly healthy. She has had no miscarriages, and there is no family history of consanguinity. Let us measure the child's head, and see how it compares in size to a normal skull of the same age. The circumference of the head is thirty-one centimeters (twelve and one half inches); from occipital protuberance to base of nose nineteen centimeters (seven and one half inches), and from ear to ear seventeen and five tenths centimeters (seven inches). The occipital portion of the head is well developed, but the frontal region recedes greatly; the anterior fontanelle is slightly open. At the age of four months this baby's head ought to have a circumference of sixteen inches at least. The head of a newborn child ought to measure fifteen inches, but this child measures only twelve and one half inches round the head, which is about the same dimension as the head of a seven months' fetus. What is wanting here, then? The frontal lobes, in all probability, although these might be pushed back to such an extent as to cover the middle lobes, and it might be that the posterior lobes were wanting.

Why is it that this head has not grown as it ought to have done? Premature ossification of the cranial bones might be the cause, or there might have been an insufficient supply of brain material. Normal closure of the skull takes place at from fourteen to fifteen months, and there are cases in which premature ossification occur at the age of six or eight months, and sometimes the baby is so born. The ossification is not always uniform or general. One suture or a part of it only may become ossified. When the ossification is general the whole head is smaller. When partial, as for instance, if it is the sagittal suture which has closed, then the head is low, but broad; if it is the coronal suture which has closed too early, then the occiput is bulging and the forehead is low, as in the negro races, in which the coronal suture normally ossifies first. If this were really premature ossification it must have taken place before birth, as the head is very small, only the size of a six or seven months' fetus. The head feels hard to the touch now, but the anterior fontanelle is not yet entirely closed, so we must exclude general ossification here and fall back on the other and more general class of cases, where there has been an arrest in the development of the brain, from some cause or other. The brain and the bones of the skull are formed at the same time and correspond. In this case it is very probable that something took place to arrest development. When this does happen the arrest of development takes place anteriorly, and the brain then looks like that of one of the higher animals. This non-development may have been caused by an insufficient supply of cell

material, from which to build the brain, or there may have been a meningitis in fetal life. When meningitis does take place in that state, it occurs in the vesicular cavities. The brain is developed from a series of three, afterward five vesicles, usually called the primitive cerebral vesicles, and when inflammation takes place in the vesicular cavities it results in atrophy, so that often there is left nothing but the pia mater, containing only cerebro-spinal fluid. The inflammation may also be external to the vesicle and then compression takes place, at all events, loss of tissue. I have seen a number of such malformations as this take place where a number of pregnancies followed each other in quick succession, not necessarily pregnancies which went to full term, but pregnancies terminating in a miscarriage. In this case, however, we can rule out any such cause as this, for the mother's last child is two and one half years old and she has had no miscarriages. Six weeks ago the child began to smile. Ordinarily a child ought to smile during the third or fourth week. When it does not there is something the matter, either the child is sick or it has a diseased or imperfect brain. Now although smiling is an intellectual faculty, the fact that a child of eight or ten weeks has smiled is not a proof that it has good faculties, for smiling is in the child an imitative act. The prognosis in this case is bad—that is as regards the development of intelligence. Where there is nothing you cannot develop it. It may be possible to aid in the development of whatever brain there is present. The case is a case of microcephalus of the class where brain and bone both failed to be developed, the arrest of development taking place about the sixth or seventh month of fetal life.

CASE III. The mother says that this child, who is seven months old, has been suffering for the last four weeks from catarrh. The baby seems to feel better when the nose discharges. It has a cough at night. The cough does not come on in spells, in that case we should suspect whooping-cough, but it comes on when the child wakes up. Such a cough as that, where there is a nasal catarrh, arises from the irritation created by an accumulation of exsiccated mucus in the pharynx, which, as the child sleeps with its mouth open, dries up in the night-time. The cough is severe but does not mean anything. It is simply pharyngeal. The mother says that the child snores a good deal when asleep. That arises from a sluggish motion of the velum, which is due to the naso-pharyngeal catarrh. The size of the tonsils alone have less to do with it, although they are very red and somewhat swollen. This is simply chronic nasal catarrh, and the cough and the chronic tonsillitis are all dependent on that for a cause. I should propose to treat the case by steam inhalations, and by frequent injections into the nares of a mild saline solution. A kettle of boiling water should be kept constantly in the room where the child is so that it will breathe in the steam continually. The main thing is, however, to keep the nares clean. A mild solution, say a teaspoonful of salt to a pint of tepid water, should be syringed into the nostrils a number of times a day. The nares here are very small because the mucous membrane is swelled, but attention to cleanliness and frequent syringings ought to change the case for the better very soon.

— There is an able and comprehensive article by Dr. E. W. Cushing in the *International Review* for April on the regulation of medical practice.

Original Articles.

CANCER OF THE CERVIX UTERI.¹

BY DR. JOHN O. BLAKE.

MALIGNANT disease of the cervix uteri is a malady often coming under the notice of the hospital physician and gynecologist. The distressing nature of the disease, the continuous pain and suffering, the duration, and the inevitable result, all appeal powerfully to our sympathies, and our professional pride is aroused to lessen, if we cannot cure, the distress it occasions. Unfortunately for both physician and patient, it often happens that the disease is not recognized or advice sought until too late. We are all familiar with the errors of patients when undertaking to diagnose their own diseases, but it has been my lot to find more than the usual number of mistakes on this subject. Unfortunately this ignorance is not by any means confined exclusively to the patient, for within a short time I have met in private practice two cases of advanced cancer of the womb in which neither examination nor diagnosis had been made, and in consequence no attempt at treatment. One of these cases died within a few weeks, the disease being already far advanced. Though experience of this kind is unfortunately too common, I must, in justice to the younger members of the profession, say that they would hardly be open to the charge of ignorance or carelessness. Twenty-four years ago the opportunities for gynecological study did not exist in Boston for medical students. I remember the only opportunity I had for viewing the cervix was occasionally when making a visit with Dr. Minot, to whom I am glad to make personal acknowledgment for his interest and kindness to the class in those days. Matters have improved a great deal since, and no excuse of this kind can any longer be alleged by the faithful student as a reason for want of familiarity with uterine lesions. At both of the large hospitals clinical instruction and demonstration are given by the medical staff throughout the year; dispensary clinics also exist, and special instructors teach the subject thoroughly during the last year or years of study. All this awakening of interest has stimulated inquiry, and the result has been a vast advance in knowledge, both of diseases to which this organ is subject and of their successful treatment. As Americans we may feel a pardonable pride that our countrymen are among the foremost of the world in this branch of medicine. Judging by the men at present engaged in this work, and their successful practice, we shall continue in the front rank. All this is simply introductory to the reports of an attempt to relieve certain cases of malignant disease of the neck of the womb, which attempts were based upon reports of similar cases treated successfully, and which in one case were helped by the personal advice and counsel of Dr. Marion Sims, to whom American gynecology is so deeply indebted.

CANCER OF PROLAPSED UTERUS.

CASE I. January 3, 1880. E. B., forty-two, widow, born in Ireland; catamenia first appeared at the age of fourteen, were regular and painless, usually lasting about a week, but occasionally being abbreviated to three days. Was married when twenty-two; has had

no children or miscarriages, but soon after marriage the flow became excessive, lasting two weeks, in the intervals the patient suffered from severe leucorrhœa until twelve or fifteen years ago, when it ceased. Says that coition was never painful, and can give no reason for her sterility. A little while after marriage began to complain of pains in back, side, and lower part of abdomen; pains were not very severe. Says her uterus came down about two years or so after marriage, so that it became visible. She treated it with a T bandage, and was comparatively comfortable until six months ago. A year ago the menstrual discharge began to diminish, and now it is very scanty indeed. Six months ago first had frequent and painful micturition with blood in the urine at times.

Appetite poor, sleeps badly; bowels always costive, being moved only by medicines. Some indigestion; tongue clean and moist. Temperature and pulse normal. No œdema or cough.

On examination find complete prolapse of vagina, terminating in a large conical shaped mass, with base outwards, measuring about five inches in diameter, of ulcerated surface, discharging pus, and bleeding from slight friction. Examination per rectum and suprapubic reveals absence of uterus in normal position. Examination by sound confirms the same.

Upon microscopical examination Dr. E. G. Cutler pronounced it cancer. Following is the result of a similar examination by Dr. R. H. Fitz: "Find your specimen covered with epithelium, resembling that from cervix rather than fundus. The tissues beneath are largely fibrous, with abundant round cells infiltrated. Still deeper are fusiform cells of muscular tissue. The tissues appeared to be continuous from the surface downwards. The examination would suggest prolapse or inversion rather than polypus, although it would be difficult to establish a diagnosis from the microscopical examination without knowing more about the relations of the specimen."

January 13th. Complains somewhat of pain, relieved by morph. sulph., p. r. n. R̄ Vin. pepsin., tr. gentian. comp., āā ʒss. t. i. d.

January 25th. Dr. J. Marion Sims saw the patient in consultation with Drs. Lyman and Blake, and strongly advised removal of diseased mass, including uterus and its appendages.

January 28th. Operation by Dr. Blake. Patient being under ether, a circular incision was made sufficiently high to avoid diseased tissue. After careful dissection vagina was cut through, and the uterus, ovaries, broad ligaments, and Fallopian tubes were carefully isolated from surrounding tissue, special pains being taken to avoid injury to rectum or bladder. Dissection in relation to latter organ was made with special care to avoid injury to urethra, base of bladder, and ureters. After uterus and appendages were well drawn forward, a ligature was passed above fundus, tied very tightly, and parts below, comprising the uterus, ovaries, round ligaments, and Fallopian tubes, were separated and removed. The operation was necessarily somewhat protracted, occupying three quarters of an hour. On account of vascularity of diseased tissue considerable hæmorrhage was unavoidable.

Patient sank a good deal during operation, and rallied but feebly in response to stimulants. Efforts to promote reaction during rest of the day were unsuccessful; patient gradually sank, and died at 9.50 p. m., about twelve hours after the operation.

¹ Read before the Obstetrical Society of Boston, October 9, 1880.

Examination of whole specimen by Dr. E. G. Cutler. Greater portion of tumor was composed of cervix and vagina. The wall was infiltrated with a new growth, cancerous, which extended up into the fundus, evident to senses of both touch and sight. The microscopical examination showed it to be of the epithelial variety, and it did not seem to have invaded glands on the broad ligament. The peritoneal surface was the seat of old inflammation, and there were numerous adhesions, old and new, in Douglas's space, between the uterus and the prolapsed portion of vagina. Left ovary was in a state of cystic degeneration. Left Fallopian tube was occluded, and contained some pus. Right tube and ovary were apparently healthy.

CASE II. March 1. S. M., fifty-five, and married; was well until two or three months ago, though previous to this time had lost some flesh and strength, and had been troubled with vague pains in back, etc., when she was attacked with flowing, coming on gradually at first, but very severe at present.

Was married at eighteen, and has had eleven children at full term, and no miscarriages. About this time first noticed a tumor in the upper part of the vagina, which has rapidly increased in size, and is now the cause of much local trouble and pain. States that any sudden exertion will cause an immediate flowing. Bowels constipated. Micturition difficult. Tongue clean. Anorexia. Pulse and temperature normal.

Examination per vaginam brings finger in contact with a large lobulated mass of diseased tissue, completely encircling and growing from cervix. Anteriorly disease presents a globular appearance, about size of hen's egg. Posteriorly, disease irregular in shape, and filling pretty well upper vagina. Disease is friable to touch, portions of mass disintegrating, and coming away as result of digital examination. Appearances are identical with those found in advanced malignant disease of the cervix.

Operation. In consultation with Dr. Lyman it was decided to remove as much of diseased tissue as possible. Patient declined being etherized. Uterus having been drawn well down it was found that the *dérasseur* would most effectually remove the disease. Wire was passed around mass, and tension applied when the wire broke. Chain was then substituted, and diseased portion, including a small section from cervix, removed without injury either to urethra or bladder. A small mass remaining on posterior wall was thoroughly removed with Lieman's scoop, and entire stump freely touched with strong nitric acid, afterwards an alkaline solution was applied, followed by a glycerine tampon. Morph. sulph., one sixth grain, subcutaneously.

March 3d. Second dressing made. Nitric acid applied, followed by glycerine tampon and dry cotton. Hot vaginal douche every morning. Dr. Cutler examined a specimen of the tissue, and pronounced it cancer.

March 9th. Incised surface covered with healthy granulations. R̄ Ferrated tr. cinchona, ʒi. t. i. d. R̄ Fowler's solution, gtt. v., t. i. d.

March 27th. Patient has had applications of nitric acid once in five days, followed by glycerine dressing. Granulating surface now contracted to size of a quarter dollar, of healthy appearance, and without discharge. General condition good.

April 2d. A growth of exuberant granulations on anterior lip (cancer?) was scooped off, and nitric acid applied, followed by glycerine tampon. General condition improving.

April 9th. Disease involves whole posterior lip, having extended with marked rapidity; cancerous nodules over incised surface of anterior lip.

April 12th. Diseased mass on posterior lip was removed with knife, when an opening was made into the peritoneum, admitting tip of finger. One silver suture inserted. Morph. sulph., p. r. n.

April 14th. Complaints of occasional darting pains in abdomen.

April 15th. No febrile disturbance.

April 23d. Diseased surface looks well, and shows only a small granulating part. Suture removed, and parts united. Patient was discharged relieved; to be examined once a month.

August 23d. After leaving hospital patient was very well for two months, when the pain returned; she kept about her work until three weeks ago, when the flowing again began. General health in the mean time has been good. Examination per vaginam shows a mass of granulations growing from posterior lip, extending up cervical canal, and beginning to invade upper vaginal wall. Mass thoroughly removed with curette, scoop, and scissors, and saturated solution of chromic acid applied. R̄ Morph. sulph., p. r. n.

August 24th. Parts looking very well. Chromic acid again applied.

August 26th. Glycerine tampon applied to cervix twice a day. R̄ Ferri et quiniæ cit., gr. v., vin. Xerici, ʒss. t. i. d.

September 6th. Slough almost entirely thrown off. Parts look much more healthy.

September 11th. Discharged, relieved.

CASE III. March 10th. C. D., forty and widow. Has had four children, the last one thirteen years ago. No miscarriages. Catamenia regular until last Christmas, when she first noticed a discharge from the vagina, with a very offensive odor, which was followed by flowing two days after, this being her regular time to be "unwell." This sort of thing continued, the flowing being much increased by any heavy work, together with pains in back, especially on left side, anorexia, constipation, etc. Micturition normal. Tongue furred. Temperature 100° F. Pulse 115.

March 18th. Examination per vaginam showed whole of both posterior and anterior lips, as well as cervix to within a quarter inch of vaginal junction, one mass of ulcerating growth, which bled freely when manipulated, the presenting surface being two inches in diameter. Vagina tamponed with Monsel's solution on cotton. R̄ Ferri et quiniæ cit., gr. v., vin. Xerici, ʒss. t. i. d.

March 19th. Patient etherized. Examination showed the whole cervix to consist of one mass of epithelioma, extending under mucous membrane beyond vaginal junction. Diseased part removed up to vaginal junction by means of curette, and as far as internal os. Hemorrhage not excessive. Nitric acid applied, and cervix tamponed with cotton soaked in Monsel's solution.

March 20th. Hot carbolized vaginal douches twice a day.

March 30th. Once in three days surface has been dressed with a nitric acid and glycerine tampon. Parts have contracted one half, but whole surface shows a sloughing condition, with here and there a prominent cancerous nodule. Free discharge of pus noticed at the time of each dressing.

April 5th. Posterior vaginal wall at junction of cer-

vix consists entirely of cancerous mass easily breaking down; same condition anteriorly. Mass removed by curette and scissors, even on to vaginal wall. Nitric acid applied, followed by dressing of Monsel's solution.

April 9th. Dressing removed, and several small cancerous nodules on posterior and one on anterior wall removed. Nitric acid applied, followed by glycerine tampon.

May 11th. Growth extending very rapidly, occupying surfaces previously denuded by operations, also involving body of uterus through the inner os and both walls of the vagina, so that any attempt to remove the growth would open into the peritoneal cavity.

General condition greatly improved. Discharged, relieved, at own request.

CASE IV. December 12, 1878. A. N., widow, aged thirty-seven, enjoyed good health till two years ago, when catamenia became irregular. Has had three children at full term, the youngest being nine years old. For the past two weeks has been flowing steadily; no offensive discharge from vagina. Appetite poor; bowels constipated. Pulse and temperature normal.

December 13th. Examination per vaginam shows the whole cavity of the cervix to be ulcerated and eroded, admitting tip of finger as far as internal os. Vaginal aspect healthy. Thin sanguineous pus exuding from cervix. Plug of cotton soaked in glacial acetic acid inserted into cervix, and glycerine tampon applied.

December 16th. Cervix secretes pus, comparatively healthy in appearance. Parts washed with carbolic solution, and ulcerations touched with glacial acetic acid: plug of lint soaked in the acid inserted into cervix.

December 20th. Carbolyzed injections, with slippery-elm tea, night and morning.

December 22d. Cervix touched with glacial acetic acid. No pain; general condition good.

January 1st. R̄ Ferri et quiniæ cit. gr. v. t. i. d. Friedrichshall before breakfast.

January 7th. Glycerine tampons inserted twice per day. Os looking well. Lunar caustic applied, followed by glycerine tampon. Suppository of morphia and belladonna at night.

January 29th. Patient has been made comfortable with morphia. General condition good. Examination per vaginam shows complete cicatrization of cervical tissue. Uterus moderately retroflexed and movable. Cicatricial tissue indurated, due to operations. A seropurulent leucorrhœa, probably of vaginal origin.

January 31st. Discharged, relieved.

CASE V. Mary P., married, aged forty-three, entered the hospital January 27th, with the following history: Has had ten children; labors normal; oldest child twenty-two, youngest three years of age. Menstruates regularly every four weeks: flows but three days; uses but two or three napkins each day. Has had more or less uterine trouble for the past year. For the past three months has had severe pain in the back and in the lower part of abdomen. An abundant watery, offensive discharge from the vagina. For the past week has noticed a swelling in the lower part of abdomen on the right side. Difficult micturition for past two months. Bowels constipated. Appetite good. An examination showed cervix much destroyed from some previous caustic application. Os open, ad-

mitting the finger freely to interior of uterine cavity. Interior of uterus found to consist of softened, somewhat pulpy, nodulated tissue, which bleeds freely, and is evidently of a malignant character. Much pale, flabby, exuberant granulations around what remains of the cervix. Uterus not much enlarged. External examination discovers a mass somewhat indistinct in right ovarian region. A portion was removed from inside uterus and sent to Dr. Cutler, who pronounced it to be epithelioma. Patient was ordered citr. quinine and iron, gr. v. t. i. d. Fowler's sol., five minims after each meal. Hot carbolyzed douches twice a day.

February 3d. Interior of uterus thoroughly curetted and all fungoid tissue removed, after which a strong solution of chromic acid was applied to curetted surface. Retention of urine followed the operation, but lasted only two days. Ordered opium p. r. n.

February 10th. Pain in back quite severe. Discharge from vagina much less offensive. Douches come away quite clear.

From February 15th there was continued improvement in both general and local condition. Expressed herself as feeling well, except that she has a pain in small of back.

March 2d. On examination no apparent evidence of disease was found.

March 5th. Discharged, relieved.

REMARKS.

These cases fairly represent disease of this organ as it usually comes under the physician's care, and the question to decide is whether surgical interference is justified by the results. While at first but little can be said in favor of operation from the account of these results, yet we must remember that temporary relief from pain and the prolongation of life for months, if not years, are considerations which control our decisions in other cases and which are entitled to great weight here. The unfortunate termination of the first case was, in a great degree, anticipated; yet I cannot but feel that the operation was called for. I may say that whatever doubt lingered in my mind was removed by Dr. Sims, who kindly saw the patient, and strongly advised extirpation as performed. Operations of such severity are naturally attended by great shock to the nervous system as well as much loss of blood, a condition dependent on the nature of the disease and length of time required. Besides, the rarity of operations of this character leaves a want of skill which is not easily remedied. I suppose I only voice the sentiment of every gentleman present in saying that in future operations many points will be treated differently, and the chances of cure increased by experience gained in each new case. The records of ovariectomy give abundant proof of this.

In relation to Case II. the result has been very different. This patient continues quite well in general health, able to attend to her household duties, free from pain and hæmorrhage, and suffering only from a leucorrhœal discharge, which disinfecant injections render inoffensive. There is as yet no cancerous cachexia or vesical irritation, and from present appearances her prospect of life appears good for many months at least. This result has been obtained only by constant supervision and removal of the disease on its reappearance. As often as once a month either the curette has scraped away exuberant granular adhesions, or applications of nitric or chromic acid have kept the disease in subjection.

As yet there is no evidence of the fundus uteri becoming invaded, though it is only a matter of time when both that and the pelvic viscera will become involved.

Case III., operated upon by Dr. Doe and kindly permitted by him to become one of this group, has, I understand, not done as well, from the fact that circumstances did not allow him to follow up the treatment so persistently. He will give us full details of the subsequent history.

Case IV. was primarily under the care of the late Dr. George H. Gay, and afterwards of our president, Dr. Lyman, who had the opportunity of treating it in its active stage. From him it descended to me as his successor in service at the hospital. At that time very little in the shape of active treatment remained to be attended to, and it is briefly alluded to here so that he may give us an accurate account of the earlier stages of the disease and treatment, while I can testify to the cure and entire absence of disease up to the present time. I recently carefully examined the patient at my office, in order to be able to report her condition one year after leaving the hospital.

Two of these cases strikingly resemble a group treated somewhat similarly by Dr. Marion Sims, and reported and commented on by him in the *American Journal of Obstetrics*. As the subject is doubtless familiar to members of this Society I have refrained from making reflections or suggestions, preferring to offer the paper as a text upon which members can express their opinions fully. I am for myself decidedly in favor of surgical interference and complete removal of the disease at the earliest possible opportunity.

I am equally decided in my opinion that the disease is primarily local in origin, often starts from a lacerated cervix, or long-continued abrasion, erosion, or so-called ulceration of the os, and that if we could prevent solution of continuity of the cervix uteri, or cure them before they become chronic, we should have fewer cases of malignant disease of that organ to treat.

PERFORATING ULCER OF THE DUODENUM.¹

BY A. F. CLARKE, M. D. HARV.

J. S. SYMONS, physician to the Bristol General Hospital, writing, upwards of forty years ago, on duodenitis, remarks that "the elevated patches which occur, both in the acute and chronic forms, are caused by turgescence or hypertrophy of the *glandule conglomerae Brunneri*, which abound in this division of the intestine." He doubted whether acute inflammation is ever confined to the duodenum. "Sometimes the bile duct is obstructed by the swollen state of the membrane, or by the accumulation of viscid mucus." He further observes that "the sympathetic derangements in duodenal are scarcely less extensive than in gastric disease." The more special exciting causes are substances passing undigested from the stomach and irritating, or even accumulating in, the duodenum, such as fruits, crude vegetables, the harder animal substances, particularly salted meats, the teguments of fish," etc. He recognized ulceration as a structural disease of the duodenum, but regarded the discrimination from similar diseases "all but impracticable."

Andral, in his Medical Clinic, Diseases of the Abdomen, says, while speaking of lesions of the digestive tube, that he had very seldom found the duodenum affected. Wood, in his Practice of Medicine, speaking of the diagnosis of duodenitis, says that perforation of the bowel (duodenum) sometimes takes place from simple ulcer, as in the stomach from gastric ulcer, with fatal effects. A duodenal ulcer may be suspected when, along with pain, at a fixed point in its structure, occurring two or three hours after a meal, with tenderness in the same spot on pressure, there are occasionally black stools from admixture of blood, without vomiting of blood. The bowels in duodenitis are generally slow, but readily acted on by cathartics. Nearly all authorities speak of the erosion or ulceration of the large blood-vessels which supply the duodenum and the consequent excessive hæmatemesis as a complication of frequent occurrence.

Jones and Sieveking, in their Manual of Pathological Anatomy, after having quoted Rokitsansky on the Seat of Ulcer in Abnormal Conditions of the Stomach, observe that "a similar ulcer may form in the upper oblique portion of the duodenum, but not as far as observation has yet shown in any other part of the intestinal canal;" that the ulcers near the pylorus are circular, from three to six lines in diameter, "with a sharp peritoneal edge as if a round piece of the parietes had been punched out." Formerly much was said in regard to the chemical action of the healthy gastric juice on the tissues after death, which action had been ascribed to disease. Watson, in his lectures on the Principles and Practice of Physic, refers to the whole subject, and makes some very pertinent remarks in relation to it. "Now and then the gastric juice passes out of the stomach into the œsophagus or into the duodenum, and these parts exhibit traces of its action." "These apertures (perforations) produced by the gastric juice have soft and ragged edges, and are irregular in their size and outline." Laube, in Ziemssen's Cyclopædia of the Practice of Medicine, says, "the prototype of the peptic ulcers is the perforating ulcer of the duodenum; the primary lesion is a local arrest of the circulation, and that the formation of the ulcer at this point is a secondary and necessary result of the action of the digestive juice has been made probable by the experiments of Panum, and has been directly demonstrated by Merkel's case, which showed at the autopsy an embolized artery in the base of a duodenal ulcer. That the ulcer has a sloping shape, and the loss in the serosa is less than in the muscularis, while the greater loss is in the mucosa; the edges are sharply cut, not thickened, and in the older ulcers are indurated." According to the same authority Krauss's compilation of forty-seven cases showed that the ulcer, in the great majority of cases, is in the upper portion of the duodenum, and that there is usually only one. Duodenal ulcer is a comparatively rare disease, being in the proportion of hardly one to thirty of those occurring in the stomach. Duodenal ulcer first manifests itself by the symptoms which immediately usher in the fatal result, or the rapidly fatal perforation takes place in the midst of apparent health; usually, however, even when the duodenal disease runs a rapid course, careful inquiry as to the general health of the patient will show that he had previously suffered from slight dyspeptic symptoms, oppression in the epigastric region, and uncomfortable feelings after meals. The diagnosis is always doubtful, and a distinction from gas-

¹ Read before the Cambridge Society for Medical Improvement, January 24, 1881.

tric ulcer is well nigh impossible. The lesion is more frequently met with at autopsies of persons between thirty and forty years of age. Da Costa, in his *Medical Diagnosis*, second edition, remarks as follows: "there is a disorder with almost identical symptoms as gastric ulceration; namely, the corrosive ulcer of the duodenum." Further, he says, "were this affection more frequent it would be a constant source of error in diagnosis." That both in the acute and chronic cases the diagnosis is, with our present means of research, impossible. Niemeyer says "this affection is not a proper ulceration, but a necrosis and a solution of the necrosed part of the intestine by gastric juice. In one thousand post-mortem examinations made at the Prague Institute for Pathological Anatomy Wilk found perforating duodenal ulcer only twice, while in seventy-four cases he found either ulcers or their cicatrices." From the analysis of the cases known it did not appear whether certain causes, such as burns of the skin, induce this disease. "Perforating ulcer of the duodenum appears to remain latent until the fatal termination more frequently than similar ulcer of the stomach. That peritonitis from duodenal runs its course more rapidly than from gastric ulcer, probably from the admixture of the bile which escapes into the abdomen." Further, he mentions that a number of cases are reported where duodenal ulcers run their course with periodical attacks of pain. That when the pain occurs several hours after meals, in connection with other symptoms, the diagnosis will be made out with great probability. Flint says that perforation is not a constant effect of an extensive burn; but a sloughing ulcer is apt to occur at the upper part of the duodenum, within a few days after an extended burn. In the *Boston Medical and Surgical Journal*, volume xc., there is mentioned a case of duodenal ulcer "occurring in a child who had been burned over the chest and abdomen." This case was taken from the *British Medical Journal*. It is so briefly reported that it is impossible to arrive at a correct conclusion as to the real cause of the ulcer. "The duodenum was perforated and glued to the surrounding surface by lymph." According to Condie, and many other able observers even before his day, acute gastritis had been recognized as a disease of frequent occurrence during infancy and childhood. Condie says, "it is seldom that the stomach is alone affected; in the great majority of instances the inflammation extends to the duodenum and other small intestines." Further, he says that the disease may so terminate as to cause perforation.

Occasionally, instead of perforations into the peritoneal cavity, adhesion (as has already been mentioned) to the pancreas, liver, or gall-bladder occurs, external perforation has happened, or an extensive sloughing along the dorsal region has occurred, and an abnormal communication with another viscus or organ has been established. Dalton, in his *Physiology*, says: "In the human subject it is rare to make an examination of the body twenty-four or even thirty-six hours after death without finding more or less softening and disintegration of the tissues from the gastric juice. In some instances all the coats of the organ are found destroyed, and a perforation is produced leading into the peritoneal cavity." "But during life the chemical changes of nutrition which are going on in the tissues guard them from this influence and effectually preserve their integrity." The chemical changes here referred to by Dalton evi-

dently mean a normal and healthy activity of the circulation in the parts, and (according to others) the alkalinity of the blood and the alkalinity of the intestinal and pyloric secretion and the reabsorption of the redundant digestive acids after chymification and chylification have taken place. According to Garland,¹ not only the secretion of the intestine but that of the pylorus is alkaline.

Having reviewed the authorities on the subject thus much, I will offer the following case of perforation of the duodenum into the abdominal cavity occurring in my practice.

H. B., aged thirty-two years, colored, a hostler, was taken suddenly ill, while he was going to his work at a stable on the morning of August 1, 1880, with intense pain in the abdomen, particularly in the epigastrium, and on the right side extending downwards. He had not been very well for two or three days before, having suffered with some pain in those regions; his sleep was disturbed by the pain the night before, but he had continued his services as usual at the stable, and had taken some breakfast that morning. Dr. Holt was immediately called; this was about ten A. M. The patient was found standing, but bending forwards, and complaining of severe pain resembling colic. A subcutaneous injection of morphia was administered, and the patient was removed to his boarding-place, and soon became easier. There was at that time no chill nor vomiting, but great tension or hardness over the abdomen. I was called at five A. M. August 2d, and took charge of the case. At that time I found the patient had suffered intensely during the night from the pain in the abdomen, especially in the epigastrium, accompanied at times with more or less tenesmus. Pulse 120 and moderately full; temperature 102° F. There had been some nausea, but no vomiting. Micturition normal, but he had had no passage since his attack began. The abdomen was exceedingly tense and hard, but there was not much flatus. Copious injections of warm water, with soap and oil, were given, but not the slightest sign of fecal or other matter was voided. Full doses of morphia and small doses of saline laxatives were employed. Also counter-irritants, including emplastrum cantharidis, were freely used. I saw the patient three times the first day, but no material changes in symptoms was developed. August 3d, eight A. M. Pulse 120, weak and compressible; temperature 103° F.; there was now vomiting, but without stercoraceous matter or blood. Tympanites had increased. Still no motion of the bowels had occurred, though enemata were repeated. Dr. Norris now saw the case with me. Enemata again resorted to, and the sphincter ani was ruptured with the view of exploring more thoroughly the parts by the insertion of the hand high up above the rectal pouch. The patient's condition, however, was so feeble that further examination was abandoned. The patient died at two P. M. August 3d, this being fifty-three hours from the commencement of the attack.

Autopsy, four P. M., August 4th, Drs. Holt and Clarke present. About three centimeters from the pylorus, on the upper portion of the duodenum, there was found a round ulcer which had perforated into the peritoneal cavity; the aperture appeared as though it had been cut out with a punch. There was no indication of any inflammation about the ulcer, the edges were smooth and not raised above the surface of the parts, and only

¹ Boston Medical and Surgical Journal, vol. ciii., No 19.

a little red around their inner margin. The stomach was healthy and contained a considerable quantity of fluid which had been swallowed by the patient. The peritoneum was red and injected and presented the first stage of inflammation. Very little fecal matter was found in the intestines, but a large quantity of fluid had already escaped into the peritoneal cavity; and on lifting the duodenum, which was greatly distended, more was seen to ooze or gush through the opening which the ulcer had made. No tuberculosis nor other lesion was observed.

In recounting the history and symptoms of this case, several important features present themselves for our consideration. First the occurrence of the lesion is comparatively rare according to nearly all authorities on the subject. In the next place is to be noticed the great difficulty or impracticability of forming a correct diagnosis during life, according to our present means of research. The first symptoms simulated ordinary cold, as there was no chill nor other constitutional disturbance in the beginning, but the great hardness and rigidity of the abdomen, and the character of the pain, which was not paroxysmal, excluded this view. Was it imagination? Repeated enemata produced no defecation; the rectum was free from any obstruction; no tumor was felt by external manipulation; the pain and disturbance were seated higher up than is usual with intussusception; moreover, this latter disease occurs more frequently, in infancy and childhood. Was it typhlitis? The original seat of the pain excluded this view. Was it peritonitis? Peritonitis for the most part is a symptomatic disease: the history, temperature and other constitutional symptoms did not indicate this. Was there gastritis? At first the stomach was able to bear whatever was prescribed, and there had been no history of such a disease. Was it enteritis? Certainly not of the mucous coat, as the disease was not attended with diarrhoea nor dysentery, though there was some tenesmus at times. There was no history nor symptoms of a previous constipation. After the autopsy had removed the uncertainty the significant words of the author already cited (Da Costa) were realized, "were this affection more frequent it would be a constant source of error in diagnosis." The treatment usually adopted by most authorities in such cases is merely palliative. But does not the science of medicine, with its recent advances, offer any aid to the diagnosis and treatment of such cases? We know that the antiseptic treatment in surgery, and more especially in abdominal surgery, has achieved many brilliant results.

A careful observer recently remarked that formerly nearly all cases of ovariectomy, even when attended by the most experienced and accomplished surgeons proved fatal, while now with the antiseptic treatment recovery in ovariectomy is the rule and death only occurs in exceptional cases, as shown in the series of cases lately reported by Dr. John Homans.¹ But this is only one item of what may be mentioned. According to T. H. Buckler,² writing from Paris (June 15, 1880), "there is no such thing as an idiopathic peritonitis; the peritoneum is less liable to become inflamed than any other tissue or structure of the body, and when inflammation does occur in this membrane it is invariably symptomatic and dependent without exception on some foreign body, mischief or pre-existing cause introduced or

applied." Several cases and autopsies are given in his paper in illustration of this statement, and some cases where the abdomen was reopened at the autopsy to establish the certainty of the symptomatic nature of the peritonitis. Dr. Buckler suggests that the cavity of the abdomen may be opened by lineal incision at almost any time required, not only for the performance of operations but for purposes of diagnosis. Thus, he says, a new field is open to both the physician and surgeon as it has been to the ovariectomist. We would incidentally remark that Dr. Buckler's paper on the inaptness of the peritoneum to inflame we cannot recommend too highly for the careful considerations and timely suggestions it offers to the profession on matters allied to that we have been treating.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

OPTICO-CILIARY NEUROTOMY.

THE operation of division of the optic and ciliary nerves as a substitute for enucleation has, since its introduction in 1879, by Schoeler, met with varying amount of approval or disapproval from different operators. Some have abandoned it on account of unsuccessful result in their first cases, others have given modified approval while restricting within narrower or wider limits the conditions under which it is to be regarded as indicated or justifiable, by others, again, it has been received and practiced with marked favor. Regeneration of the divided ciliary nerves, the danger of which has been from the beginning the strongest argument against the operation, has been in a number of cases assumed on more or less satisfactory evidence. Symptoms threatening sympathetic inflammation have induced enucleation after neurotomy has been done, and recurrence of pain has also led to enucleation in a not inconsiderable number of cases. The occurrence of hemorrhage during or shortly following the operation has in some cases been sufficient to induce immediate or subsequent enucleation or to complicate the course of healing, and is the danger which has perhaps been most frequently feared and the objection most generally urged. It is hardly to be doubted that differences in the manner of executing the details of the operation, and they have been not few nor unimportant, may be responsible for some of the imperfect results obtained, and more extended experience may very likely demonstrate the necessity of a certain selection of cases.

Schweigger, who at first contented himself with dividing the opticus, rolling the globe forward and carefully clearing its posterior surface, has since modified his method. He has now³ in a large series of cases divided the opticus ten mm. behind the sclera, then, rolling the eye by means of a sharp hook, divided the insertion of both oblique muscles, cut off the opticus close to the sclerotic and cleared the surface of the eye up to the equator, including the venae vorticosae also in the dissection. As before, he commences the operation by inserting catgut sutures in the internal rectus and then dividing it, reuniting the muscle to its tendon when the proceeding has been completed. He admits that without resection of a long piece of the opticus regeneration of the ciliary nerves may possibly occur,

¹ Boston Medical and Surgical Journal, vol. cii., p. 50.

² Boston Medical and Surgical Journal, October 28, 1880.

³ Handbuch der Augenheilkunde, 4te Ausgabe, 1880.

with such resection he believes neurotomy interrupts the communication between the two eyes with as much certainty as does enucleation.

Pflüger,¹ also, in his later cases has resected six to ten mm. of the opticus and since this modification has seen no return of pain or of sensibility of the cornea.

Boucheron, Knapp, Meyer, and others have resected more or less of the opticus. Meyer² divides both the internal and external rectus muscles, both obliqui, and resects the nerves, and in two years during which he has employed this method, in twelve cases from six to forty-six years of age, has seen no relapse. Schoeler has suggested that the danger of reunion of nerves might be obviated if thought necessary by the production of a strong deviation of the eye by sutures,³ or the advancement of a muscle⁴ as the closing step of the operation.

Widely different is the operation proposed by Smith.⁵ He divided the nerves by passing his scissors through a small opening in the conjunctiva between the internal and inferior recti, and again from above between external and superior recti. Such an operation, done in the dark, can hardly furnish proper guarantee of division of all the nerves. In the case he reports, sensibility of the cornea and sympathetic disturbance of the other eye returned. Still, more radical methods have not always given exemption from like result.

The return of sensibility in the cornea has been generally regarded of ominous significance as demonstrating reunion of the ciliary nerves. That sensibility persisted after operation in vascularized parts of the cornea was pointed out by Schoeler in the report of his first series of cases, and has been abundantly verified since. It is sensitiveness of the transparent cornea that is dreaded, and if the deduction is justified that this is reliable evidence of nerve regeneration, then regeneration has been shown in quite a number of cases. Experiments on dogs by Redard⁶ showed beginning return of sensibility in the cornea in three to four months and complete restoration in one and one half years. Dor⁷ one and one half years after operation found the cornea sensitive and that the iris reacted in consonance with that of the other eye under the stimulus of light. In a case reported by Schoeler,⁸ nine months after neurotomy the iris reacted to atropine and eserine, although the globe was not sensitive to pressure and the cornea remained completely anæsthetic.

But the cornea is supplied in part with nerves from the conjunctiva, and more than one writer has referred a sensibility limited to the peripheral parts of that membrane to the influence of these nerves; yet no one, apparently, has suggested that such an extension of the conjunctival nerve branches might occur as to render the whole corneal surface sensitive.

Recurrence of pain in the eye, of which also a number of instances have been related, is considered further evidence of reunion.

The anatomical evidence of regeneration is still but meagre. From the report of an experiment by Boucheron on the dog, given by Redard,⁹ the inference is

¹ Augenklinik in Bern. Bericht über das Jahr 1879.

² Compte-rendu du Congrès périodique international d'Ophthalmologie, 6e Session. Progrès Médical, 37-38-39, 1880. Annales d'Oculistique, 84, 149.

³ Jahresbericht der Augenklinik. 1878.

⁴ Jahresbericht der Augenklinik. 1880.

⁵ Michigan Medical News, April 26, 1880.

⁶ France Médical, xxvii., 515, 1880.

⁷ Compt-rendu du Congrès, etc., l. c.

⁸ Jahresbericht der Augenklinik. 1879.

⁹ De la Section des nerfs ciliaires et du nerf optique. Paris, 1879.

that the ciliary nerves within the eye were found regenerated. Yet Poncet at the International Congress at Milan,¹⁰ while referring to this very case and to subsequent experiments by Redard, and stating that he had demonstrated all the stages of regeneration, so that "in the dog the regeneration of the nerves is without question histologically perfect," adds, "this regeneration has, however, only been shown in the extraocular parts, [central ends?] of the ciliary nerves, it is still to be sought in the ciliary plexus and in their subchoroidal course." As Poncet himself prepared the "report" it must be accepted as accurate on this point. Moreover, that Poncet does not believe the risk of regeneration, in man at least, to be great, would appear from a paper¹¹ in which he lays much stress on the changes in choroid, retina, and vitreous excited by the operation, and proposes a method for its performance intended to reduce the amount of these changes, according to which the nerves are divided some six mm. behind the eye, but without resection, without division of any muscles, and without rolling the eye to make sure by ocular inspection that no nerves have escaped section.

Bunge¹² gives two cases from Graefe's clinic, in one of which complete sensibility of the cornea was found seven months after neurotomy, in the other neurotomy was done three times and finally enucleation for pain "in the orbit" and "behind the eye," the cornea being without sensation, but the ciliary body somewhat tender to pressure. In the former of these eyes Kuhn found one ciliary nerve in a condition indicating active regeneration, in the latter were two nerves presenting similar appearances. All other ciliary nerves in both eyes were completely degenerated. Kuhn preferred to believe that in these cases the regenerating nerves had never been divided, but only injured by stretching and contusion, a conclusion which Bunge is not disposed to share.

Finally Hirschberg¹³ reports a case of enucleation for pain and sensitiveness, after two neurotomies, from the outer and the inner side, had been done by an experienced oculist, the eye containing a long piece of iron. He states briefly "the ciliary nerves were carefully dissected out on the inner surface of the sclera, and found histologically normal." The full force of this statement can scarcely be intended, for then it would appear that in the space of eleven months, which had elapsed since the last neurotomy, all the ciliary nerves had reunited and undergone complete regeneration, almost an incredible result.

Many have reported cases of troublesome hæmorrhage, and Warlomont¹⁴ has devised *ciseaux hémostatiques*, a combination of scissors and compression forceps, to obviate the danger of this complication. In individuals with atheromatous arteries hæmorrhage may perhaps often necessitate enucleation; in others, those most familiar with the operation by personal experience do not seem to have met with special inconvenience in this respect. The method of operation may well have been at fault in some instances, and it is to be remembered that neurotomy, if successful, is only a substitute for enucleation.

So far as the reporter is aware no case of sympathetic inflammation after neurotomy has yet been published,

¹⁰ Compt-rendu du Congrès, etc., l. c.

¹¹ Archives d'Ophthalmologie, Jan.-Fev., 1881.

¹² Klinische Beobachtungen ueber die sympathische Ophthalmie. Dessau, 1880.

¹³ Archives of Ophthalmology, ix., 394.

¹⁴ Annales d'Oculistique, T. 84, p. 82. 1880.

although eyes have been removed because such inflammation threatened. Knapp¹ states he "learned" that in a case of Dr. Williams' neurotomy had to be followed by enucleation on account of sympathetic ophthalmia. This is a mistake. Hirschberg, however, in a note appended to the statement in the *Centralblatt* says, "an eminent young colleague from Germany informed me recently that he was in possession of two eyes which had been enucleated because, spite of optico-ciliary neurotomy, sympathetic inflammation had set in. Farther particulars will be published." No farther reference to the cases appears in the *Centralblatt* up to February, 1881.

The opinions expressed as to the merits of the operation have been many and various. Schoeler, as perhaps might be expected, is a warm advocate in its favor. Schweigger² asserts that if resection of the opticus be made as he describes, "the domain of the latter (enucleation) would therefore be restricted to intra ocular tumors, and eventually to eyes in which foreign bodies maintain a chronic inflammation. It is to be wholly rejected for cases in which pain in blind eyes is the reason for the operation."

Pflüger³ would prefer enucleation in persons who could not be depended on to observe proper watchfulness themselves, or could not for a long time be under the observation of the physician.

Meyer⁴ would reserve neurotomy for cases of neuritis alone; for severe cases of sympathetic ophthalmia would choose enucleation.

Knapp⁵ gives no decided opinion for or against. Hirschberg⁶ has from the first opposed the operation, which he has yet performed nine times without disagreeable accidents, but in all cases which he has had the opportunity to watch for a year sensibility of the cornea returned whenever it had been present before the operation. He believes "that we shall soon abandon our overestimation of the value of optico-ciliary neurotomy."

QUININE AMAUROSIS.

Most of the modern text-books on ophthalmology contain some reference to quinine amaurosis. The reported cases are, however, very few. Gruening⁷ could collect but eleven. He reports the case of a lady, aged thirty-five, in whom, about the sixth week of pregnancy, a slight hemorrhage followed by a fetid discharge necessitated the removal of the contents of the uterus. The operation was attended with but slight hemorrhage; a rise of temperature to 106° F. followed. In thirty hours eighty grains of sulphate of quinine, in ten-grain doses, was administered. Shortly after the last dose there was a convulsive attack, with twitching of facial muscles and jerking of limbs, but not complete loss of consciousness. When the attack had passed she was totally deaf and blind. Twenty-four hours later hearing was partially recovered, but blindness still complete. The pupils, widely dilated, did not respond to light, but contracted somewhat with strong convergence of the eyes. The media were clear; the optic discs very pale, but transparent and well defined; the retinal vessels, both arteries and

veins, so excessively attenuated as to be scarcely visible in the inverted image, while the slightest pressure on the eye caused them to become absolutely bloodless. At the macula was a cherry-colored spot surrounded by a zone of bluish-gray opacity. The patient was very pale, rational, complained of no pain, but of noise in her head. No albumen in the urine.

Generous diet, recumbent position with the head low, instillations of eserine, inhalation of nitrite of amyl, administration of digitalis. Eight days after the attack the cherry spot at the macula and the surrounding opacity had disappeared, but there was no other change. A fortnight later there was quantitative perception of light, which was lost for a time after the patient had sat up for three hours, and again lost during menstruation. Then sight gradually improved till at the end of three months central vision was $\frac{2}{3}$, but the field much contracted, and no color perception. The pupils, moderately dilated, contracted on accommodation, but not to light. The discs were very pale, transparent; the retinal vessels filiform. Six months from the attack the color sense had returned, but was still imperfect; the field was still contracted, though larger; no change in the eyes, except slight reaction of moderately dilated pupils.

A discussion of the various affections which may produce sudden and total blindness shows that all differ from quinine amaurosis in their onset, course, termination, and ophthalmoscopic appearances. Gruening concludes that the unequivocal cases of quinine poisoning, with amaurosis, offer a remarkable congruence in their essential features. "The patient, after the ingestion of a single dose or of repeated doses of quinine in varying quantities, suddenly becomes totally blind and deaf. While the deafness disappears within twenty-four hours, the blindness remains permanent as regards peripheric vision, central vision gradually returning to the normal after some days, weeks, or months. The ophthalmoscope reveals an ischæmia of the retinal arteries and veins, without any inflammatory changes. In view of the constancy of these symptoms and the uniformity of the ophthalmoscopic picture, we are entitled to demand for this distinct type of amaurosis a recognized position in the pathology of the optic nerve and the retina."

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, SECRETARY.

MARCH 12, 1881, seventy-three members present. DR. R. M. HODGES in the chair.

DR. F. A. HARRIS read a paper entitled, A Case of Abortion with Acquitall. The following is an abstract: "This case is presented to the society not because of anything remarkable in the circumstances, but because it so well illustrates the difficulties lying between the detection and punishment of a crime. It shows especially the quality of the professional so called expert testimony offered in such cases, and the necessity for a speedy and radical change in the laws governing such testimony if we wish to preserve the good name of the profession. I was summoned one evening to investigate the circumstances attending the death of Mattie S., aged twenty-two, single. The account of

¹ Report of the Meeting of the American Ophthalmological Society, 1880. Archives of Ophthalmology, ix, 3, and Centralblatt für praktische Augenheilkunde, October, 1880.

² Handbuch der Augenheilkunde, 4te Ausgabe, 1880.

³ Augenheilkunde in Wien, Bericht über das Jahr 1879.

⁴ Comptes rendus du Congrès, etc., 1, 6, 7.

⁵ Archives of Ophthalmology, ix, 1, 2.

⁶ Archives of Ophthalmology, ix, 3.

⁷ Archives of Ophthalmology, x, 1.

the officer showed that death had ensued after an illness of some weeks.

There was nothing unusual in the position or surroundings of the body, except numerous blood stains on the wall next to which the bed had stood. A superficial examination of the body showed emaciation, tympanites, enlarged breasts with dark areolæ around the nipples, a dark line extending from the navel to the pubes, one half centimeter in width, foul-smelling purulent matter issuing from the vagina, and swelling of the external genitals. It was ascertained that Mattie had come there to board some time previously; that a young man had paid her bills, and it was understood that they were to be married in the spring. She had been pretty well when she first came, but about a month previously began to suffer severely from cramps in the abdomen. About three weeks before her death she was obliged to take to the bed. The cramps continuing and growing more severe, one week later the young man, who had been taking care of her, called in a so-called doctor, who came immediately, bringing a bag of instruments. On entering the room, without asking any questions, he etherized the woman, pulled three teeth, and did some operation on her womb. He told the mother and sister of the young woman, and also the landlady, that he had found the blood congealed in the womb, and that he had had to start it or she would have been dead in three hours. After the operation a pot full of blood, with something round and white hanging over the side, was carried from the room. The sheets and mattresses were soaked with blood. No child was seen unless by the doctor and young man. After the operation he called to see the girl several times, and then went into the country. The girl got no relief from the pain, and a regular physician was called, who gave it as his opinion that the girl was suffering from peritonitis following an abortion. A homœopathic practitioner, afterwards called, gave the same opinion. The girl confessed to her sister that she had been in the family way, and was about six months along. Mattie had grown steadily worse after the operation, had had chills, high pulse, diarrhœa, abdominal pain, and swelling; as the so-called doctor expressed it, she was bloated from her neck to her knees. Foreseeing what might be one line of defense (events proved my surmise correct) I particularly questioned the landlady as to the character of the cramps that Mattie had had; she declared that they were like colic; that the girl had never had a fit. On the morning the doctor was there she had seen Mattie, and she thought that she was suffering from cramps, she was sure she did not then have anything like a fit. This evidence was sufficient to point strongly to the fact that an abortion had been committed, but recognizing the fact that such an operation may be legitimate under certain circumstances, I proceeded to get the young man's and the doctor's version. I was shown first a pocket-book the doctor had attempted to throw away after his arrest, and a bag of instruments taken from his house. These latter were such as any physician would naturally have in his house. In the pocket-book I found a note made by the young man in favor of the doctor for the sum of fifty dollars. The young man said that he had not seen the doctor for some time; he then attended him personally; he expected to pay the doctor for his services, but had given him no note. He described the operation, saying that the doctor first pulled teeth for the purpose

of starting the blood congealed in the womb, and afterward took an instrument, resembling a uterine sound, which was shown him, and passed it under the clothes; after a while something like a child came away. He denied knowing that the girl was pregnant, and although he etherized her, professed not to have understood any of the proceedings. He acknowledged removing the pot of blood, and said that the girl bled profusely. The doctor said that he had never seen the girl until the morning he was summoned. On first looking at her he discovered "that the blood was congealed in the womb" and he drew three teeth to start it. Failing in this he opened the womb with a female catheter, and delivery soon followed. The hemorrhage was not profuse. He made no examination any more than to discover that her bladder was full, and did not know that she was pregnant. He said that he had never had a note from the young man, and had not agreed to perform an illegal operation, nor had he done so. On receiving the proper authority I proceeded to make an autopsy. I present here the specimen, which will show better than any description the condition of things discovered.

Autopsy, fifteen hours after death. Body of a well-developed girl, somewhat emaciated, breasts enlarged, dark areolæ around the nipples, from which exuded on pressure a yellowish-white milky fluid. Abdomen distended, tympanitic, of a dirty brown color. A foul smelling purulent fluid issued from the vagina. On opening the abdomen the intestines protruded, being distended with gas, and much injected. The omentum was of a very dark color, and in the lower part of the abdominal cavity bound to the adjacent tissues by pretty firm adhesions. No free fluid in the cavity. Peritonæum opaque, and strongly injected. Fundus of the uterus six and one half centimeters above the pubes. Brain, dura abnormally adherent to the calvarium, vessels of the pia somewhat engorged; substance of the brain firm and rather anæmic. Otherwise not abnormal. Nothing particularly abnormal in lungs, heart, liver, kidneys, spleen, or pancreas. Intestines bound together and to the posterior surface of the uterus by firm adhesions. In the pelvis behind the womb there was found pus to the amount of about sixty c. cms. The cavity of the uterus measured ten cms. from the os to the fundus, and eight cms. in width. A ragged, irregular track or furrow was found extending from a point four cms. from the external genitals to the os. The mucous membrane in this track was wanting, and the tissues beneath ragged and sloughing; this furrow was the seat of two perforations of the vagina posteriorly, of a size varying from that of a pea to that of a filbert, with ragged and sloughy edges. The furrow terminated at a ragged, irregular opening, four cms. by five cms., embracing the whole of the posterior part of the cervix. The edges of this opening were gray and shredly, the whole being a large slough. This opening also was found to communicate with the encapsulated pus, before mentioned, and with the peritoneal cavity. The cavity of the uterus was lined with a brownish-gray shredly tissue, denser at the fundus, and floating up readily when the organ was placed in water, where was apparently the seat of the placenta. The ovaries were normal in size and bound to adjacent tissues by adhesions. In the left ovary was a yellowish oval body with cavernous centre, and scalloped edges, a corpus luteum, so called. Such were the anatomical appearances found on

autopsy. From them the following opinions were warranted: the woman had recently been pregnant, she had recently been delivered. Either before or at the time of delivery she had received severe injuries of the womb and vagina, which had taken on purulent and gangrenous inflammation. These injuries had caused peritonitis, this peritonitis had caused death by syncope.

The most probable view of the case seemed to me to be that the injuries of the vagina and uterus were caused by instruments used recklessly by an ignorant man, who, having lost his head at some real or fancied danger, attempted to forcibly dilate and remove a fetus from a uterus in which labor was already progressing. I believe that primarily an operation had been done, or drugs administered, and at length when labor had set in, finding there was an unusual hemorrhage, or wishing to get out of the woods as quickly as possible, he had torn the woman in the way described in his endeavor to effect delivery before the slowly dilating neck was in condition to admit it safely. This opinion was subsequently justified. There was an inquest and a verdict in accordance with the facts. The prisoners were held for the grand jury. They were indicted. On the day appointed a motion was made to quash the indictment on the ground that nowhere was it stated that the deceased was a woman. The judge granted the motion, and the indictment was quashed, thus illustrating again what to common-sense people seems the absurdity of laws, and how, as a rule, they are contrived so as to defeat justice rather than secure it. A new indictment was procured, and the case came to trial. Meanwhile the young man decided to make a clean breast of it, and the government used him as a witness. His story (admitting that he had lied while under arrest) was substantially as follows: He went to the doctor's office, and said, "Well, doctor, I've got a girl in the family way, six months along. Can you do anything for her?" "Yes," was the answer, "I can for fifty dollars." He, not being able to pay the sum at that time, gave his note for the amount. The next night he went with the deceased. The doctor gave her some powders, and the girl told him afterwards that a day or so later, at his office, the doctor passed an instrument up inside her. After that she had the cramps, as described, and he finally sent for the doctor, who came and performed some operation upon her, bringing away a child, which was a boy. I only propose, however, here to speak of the medical testimony on the side of the defense. Suffice it to say that the examination of the accused showed him to be a thoroughly ignorant, conceited, but cunning fellow. One of the experts testified with fairness. He was of the opinion that the girl might have had eclampsia; that all the wounds could not have been self-inflicted; that premature delivery was in general recommended for this trouble; this without stating the period of pregnancy. Another expert, who has figured largely in that line, gave the most extraordinary testimony that it has ever been my fortune to hear from the mouth of a member of the Massachusetts Medical Society. The unenviable notoriety he has gained by his testimony in grave cases, and the contempt he has brought the profession into by such conduct, make it worth while to give a sample. The statement of the accused as to the girl's condition when he entered the room was repeated to him, namely, "that she was lying on her side, her knees drawn up, and hands clenched, and groaning," and he was asked his opinion as to

diagnosis. The reply was, "I should have no hesitation in deciding that it was clearly a case of eclampsia." He testified that in eclampsia one could not perform venesection at first, and something must be done at once. That the disease was almost always fatal, and that if ether and bleeding did not stop it, the one thing to do was to deliver. That this must be done without regard to the term of pregnancy. He should do leeching and cupping, not venesection, because one could get a smaller quantity of blood. That in all cases the bladder should be emptied. He stated that some of the best authors advised delivery regardless of the period; when pressed for the names he could only give that of Barnes (who, by the way, does *not* recommend it). The wounds were, in his opinion, made by a sharp instrument, but might have been caused by the expulsion of a fetus. It was impossible to tell whether the womb of the deceased presented to him for examination was that of a pregnant woman or not. It might have been that of a fibroid tumor or a molar pregnancy. The time the doctor was there was proved, and this expert testified that the fetus could not be got out by forcible means in an hour and a half. Now, when a member of our State Medical Society, and one who has so far the confidence of the prosecuting officers that before this very jury he had, a few days before, been held up as an honest and skillful man, when such a man can with impunity go on the stand, and for money swear that the description of an ordinary labor pain was sufficient to convince him that the case was one of eclampsia; that little bleeding was better than much, thus justifying the tooth-drawing dodge; that delivery was the only thing, in face of the facts that it does not always stop it, and that artificial delivery must be resorted to in face of the success of ether and venesection; when he testifies as a matter of *fact* that the best authors advise this procedure, — when Cazeau, Leishmann, Schroeder, Playfair, Gooch, Winckel, Lee, Ramsbotham, Elliot, Murphy, Barker, Churchill, Siebold, Smith, Blundell, Dewees, Naegele, Hodge, and even Barnes himself, whom this expert quoted, not only do not advise but protest against it in the period before the eighth month in eclampsia, and many advise against it at any time, — when such a man can have the audacity to swear that the uterus I have shown you could not be pronounced that of a pregnant woman, when he can swear that the womb might be in that condition after the expulsion of a fibroid tumor, I say when a man can do *that*, and still retain his membership in our society, and gain credence in the courts, then it is time for a strict regulation as to medical expert testimony or to acknowledge that we *are* what we are represented, — members of the guessing profession, who can be retained on either side to swear to anything counsel may desire, provided we escape the statute for perjury by the slender pretext that it is opinion merely. The defense in this case was like that of the woman with the borrowed pot, who declared that she never borrowed the pot, that it was cracked when she got it, and that it was whole when she carried it home. It was proved by this expert that the girl was not pregnant, that being pregnant she operated on herself, that the doctor, who swore he never did it, did it as a justifiable measure to save life when eclampsia was present. The case was ably argued, and the jury, I am informed, at first stood eight to four for conviction. I am also informed that the foreman, a neighbor of the accused, had a dream showing

him how it was all done, and he, being the strong man, brought round the other eight, and a verdict of not guilty was rendered, and for the second time this abortionist went unwhipped of justice. My colleague testified to the fact that the accused had the reputation of being an abortionist, having had occasion to look up his record when he had brought him to book for a case very much like this. His dodge was in every case to do some legitimate operation like tooth pulling, and under the cover of that to do the abortion. Though it was a disappointment to see such a rascal go scott free, nay, be received with open arms, and be presented with a new horse and carriage, it was nevertheless a satisfaction to be informed, after the trial, by one of the counsel for the defense, that my own theory as to the crime was correct, and that the young man's story, except in minor details, was true."

DR. F. W. DRAPER said that the case reported by Dr. Harris was a good illustration of the difficulties attending the investigation of cases of criminal abortion, of the tricks of abortionists, and of the uncertainty of jury trials. But the most important lesson suggested was one pertaining to the evils and abuses of medical expert testimony. Here is a man, the defendant, with a crooked record, without credentials or recognition as a medical man, dismissed not long ago from the Boston University Medical School for misbehaviour, practicing medicine under authority derived from Buchanan's Philadelphia diploma factory, and now in court to answer a charge of the gravest nature, indicted for a crime whereby the lives of two human beings were destroyed. And the strongest allies and defenders of this man and of his practices appeared in the persons of two members of the Massachusetts Medical Society; two regular physicians; two medical experts. Their presence in court and their association with the defendant in a wholly voluntary relation opened serious medico-ethical questions as well as suggestive medico-legal ones. Would these gentlemen consult with this accused party in any of his clinical embarrassments outside the court room? if not, how could they consistently appear as his voluntary aids in this trial? The trial was a public one, and therefore Dr. Draper thought the acts of all connected with it were properly the subject of criticism, and, if need be, of censure. The character of the expert testimony had been sufficiently analyzed and described by Dr. Harris; but Dr. Draper differed from the reader somewhat as to the effect of the testimony, and the responsibility of the verdict for acquittal. The foreman of the jury may have had influence, but he in turn must have been influenced by the opinions expressed by the medical experts. The defendant was not the only one who was under obligations to the two experts who had helped him; for when the verdict was announced, every abortionist in Boston saw the effect on his own relation to the law, and on his chances of punishment if detected. Dr. Draper disclaimed any personal disfavor toward the medical experts alluded to, but he felt very strongly about the kind of testimony which they represented. The profession had come to expect such exhibitions as inevitable in the course of legal administration, and as probably incurable. But the evil was *not* incurable; many good remedies had been proposed. Suppose, for example, that the prosecuting attorney and the counsel for the defense had agreed upon any one of half a dozen well known specialists in obstetrics in this city, and had left all the technical medico-legal elements in the case to him to elaborate and to

present in evidence; or suppose, in default of such agreement, the court had appointed the expert in this case; we should then have had skilled medical evidence that would be disinterested, because there would be no temptation to partisanship; able, because it would be for the interests of both parties to secure the best; authoritative, because the expert would recognize his opportunity, as well as his duty, to give the latest and surest scientific dicta bearing on the case. So long as the profession showed itself indifferent to the matter of medical expert testimony, or hesitated, or neglected, to criticize and condemn bad exhibitions by its representatives in court, or had only occasional spasms of indignation, it need not count on any material help from the lawyers, or from any other source, toward promoting a reform which was not inferior to any now presenting in medical councils.

DR. E. G. CUTLER believed it had been made very evident by the remarks of the last speakers that some change was urgently needed. He thought that as Massachusetts had been forward in the reform of the coroner abuse, so now she should take the lead in this. He deemed it advisable for the Society to appoint a committee to confer with the other medical societies, with a view toward taking some measure to secure this much needed reform.

DR. W. F. WHITNEY said that such a perforation of the cervix as is seen here could have taken its origin from one of the slight tears which occur in a natural labor. By coincidence such a specimen was placed in my hands at about the same time as the specimen before us. This occurred in a case of normal labor where there had been no instrumental interference whatever. The facts which point to this perforation being the result of violence are first the immaturity of the child, the bones being soft and yielding and not likely to produce laceration, which could be the starting point of the perforation, without violent mechanical means had been employed at the same time as the labor; and secondly the lacerated furrow of the vagina, which could have only been made by some instrument roughly applied.

DR. BLODGETT, in referring to his experience with medical experts, said that he was acquainted with two whose opinions were highly valued in the courts. One of these was usually on the side of the government, and in several cases of trial for murder the conviction of the prisoner had probably been largely due to his testimony. This expert showed to Dr. Blodgett some specimens obtained from dried blood stains found on the clothing of the prisoner, on wood and other objects. Dr. B. asked as to the method of restoring the dried blood corpuscles, and on this being described inquired if the process employed would not cause decomposition of the corpuscles. The government expert admitted that it would, but said that by examining the specimen at just the proper moment this error might be avoided. In face of the acknowledged difficulty in deciding whether blood corpuscles were derived from the human subject, or from some other mammal, even under the most favorable conditions, this expert was ready to swear away a man's life, relying upon a method which he himself acknowledged false. This same so-called expert also showed Dr. Blodgett a slide, in which he claimed to have discovered a new form of coagulation of the blood, not mentioned by any of the authorities which he had consulted, and which was to make the discoverer famous. Examination showed the coagu-

lum to be a typical specimen of the structure of pine wood. As still another instance of his ignorance Dr. Blodgett spoke of the case of a woman who had died under suspicious circumstances during the time this expert occupied a position as coroner. After an autopsy he decided that death had occurred from criminal abortion and returned this verdict to the district attorney. He brought a specimen of the kidney, uterus, and liver to the speaker for microscopic examination. The wall of the uterus was not thicker than normal. The liver was the seat of complete fatty degeneration of the whole parenchyma, so striking in degree that Dr. Blodgett remarked that he should have suspected acute phosphorus poisoning. A few days after the coroner told Dr. B. that he had decided it to be a case of phosphorus poisoning, as he had found a partially empty box of rat poison in the house.

Dr. DOHERTY said that he was one of the so-called medical experts in this case, but that he had not taken the position in regard to it which Dr. Harris had stated. The two experts for the defense maintained that the uterus could not be emptied in from forty to forty-five minutes; the government expert admitted this. Their position was, that it was physically impossible for a man to etherize a woman, extract three teeth, and effect delivery (especially in a case of mal-presentation, as was supposed by the government) in the time that the defendant was in the house. Dr. Doherty said that there was no doubt that labor was in progress at the time the doctor was called in; he thought the history of the case would establish this as a fact. He questioned as to whether the wounds might not have been either inflicted by the woman herself or by the landlady, who was not put on the stand by the government; that probably a knitting needle bent upon its If was employed. It was admitted by the government expert that the injuries could not have been caused by a uterine sound. The speaker thought the great trouble in expert testimony was that there was an attempt to establish the possible extremes, rather than the probable mean.

Dr. HARRIS said that he had not intended to do Dr. Doherty any injustice, and that he thought the society would bear him out in the statement that he had spoken in the most complimentary manner of the fairness exhibited by Dr. Doherty in his testimony. He could only add that at the conclusion of the trial, one of the counsel for the defense admitted to him that the theory of the prosecution was correct in every respect.

Dr. HUNT read a paper, entitled *Principles of Medical Reform*. He said that one of the most discouraging studies for the physician in Massachusetts is the history of medical education and organization in this State. There have been many reforms, but they result in nothing lasting. The history of our medical school is a history of reform efforts. The school began its reform in the eighteenth century, it was reformed again early in this century. There was a reform in 1846, and still another in 1870. The chief result of all the reforms has been new buildings. When President Eliot points to-day to the fact that as a result of the reform in 1870 the students are scarcely to be distinguished from the students of the other departments of the University, he merely draws attention to the results of the high price of instruction and the long term of study; these bring together students better able to pay the price, and afford the time; also students more patient in cramming for examination. The degree bears wit-

ness to all these things, and he who believes in the means may accord the degree a higher character; on the contrary, neither the facts nor the degrees are worth much as proofs of sound professional acquirements. The chief aim of reform should be to make better doctors; that is, men truer to the claims of scientific research for the good of the future, as well as better able to give value received for the fee in the present. Our colleges have taught us by means of their graduates that degrees will lie; this is truer in medicine than in academic pursuits. Yet the medical school makes the degree its chief care, as the English schools have always done and are now doing. It might have done better to imitate the German method of selecting teachers and inciting students to better efforts; this latter method has surely succeeded better in medicine, at least. Our efforts to raise the standard and to elevate the character of the degree have placed many burdens upon the student but they have not affected the method of educating, nor have they reformed the faculty. Time alone seems to furnish all remedies for disease in the body; the present method seeks to hold the student to his work by examination; need it be said that this favors cramming rather than habits of research, habits that would make our graduates students after leaving the school? Our profession needs more of the university freedom that we hear so much of in Germany; a freedom that leaves the promotion of teachers and students to competition; that selects teachers according to proven skill in teaching, and not by the arbitrary standards of a clique held together by obsolete conceptions of professional needs and requirements. It seems strange at first to look to autocratic Germany, rather than liberal England, for our model, but in the last great European reform epoch, England turned her attention to trade and politics, while Germany, to turn attention from these matters, left her students a free field for reform efforts in the universities. As a result we see democratic ideas and methods in Germany's educational policy and the same ideas and methods in English trade and politics. Our redemption from much corruption will be obtained by copying each where they afford us the better model.

Dr. H. I. BOWDITCH trusted that Dr. Hunt's paper would not be allowed to pass without free discussion. He would like to know a little more definitely exactly what changes the reader would propose. He thought that the quality of medical education in Boston had decidedly improved in the last few years, and it was incumbent on any one who thought it could be still farther advanced to state freely in what way he believed it could be accomplished.

In reply to Dr. Bowditch, Dr. Hunt said that his paper was upon the principles of reform; consequently he had not touched on details. He thought, however, anatomy might be instanced as affording a field for practical reform effort. We hear a great deal of lack of material for dissecting; social conditions make this material common in Europe. Might the school not teach methods and principles of anatomy during the first year by means of domestic animals; and at the same time gain an opportunity of associating embryology, histology, and anatomy, in a cheap, practical, and easy manner? subjects might be used more freely later in the course. Anatomy should be studied every day during the student's stay in the school and not finished by an examination, even in the second year.

Dr. BIGELOW said he believed that the Faculty

of the Harvard Medical School were glad of free discussion as to the best methods of medical teaching; whether it relates to what exists, or what may be supposed to be needed. In looking at the late history of this school the point that presented itself most distinctly to his mind was the great improvement that had been effected in the quality and amount of medical education in Boston; much more instruction is given by the teachers; much more is acquired by the students; the quality of this learning is better to-day than ever before. He admitted a difference between the methods employed here and in Germany. The latter may be in some respects better, but this arises from the different conditions that exist there and here. As to the claim that anybody who had material should teach under the auspices of the university, there is this to be said: if we want a good corps of teachers, we must pay for them. In Germany pay is guaranteed by the government, which also retires its professors on salaries, here there is no pecuniary inducement offered to a teacher unless he can attract students who will pay him, or the university for which he teaches, — and students cannot be relied on to support the best schools; the poor schools often attract a considerable number of students. In the medical school, we attempt much the same thing as in the medical society; namely, a selection, based on scientific quality, but that is the extent of our exclusiveness; the object of the school is not to sustain teachers (we all know their salaries here are small enough) but to use an American way of sustaining a standard of teaching. He admitted his belief that there should be a constant vigilance to secure all the good teaching that could be procured, that it should be allowed an opportunity somehow, here as in Germany, to show itself. So far indeed, though there has been no system, this has practically been accomplished. But an assured system in the future would lead to further competition, and the continued success of the best talent. Another difficulty we have to contend with in this country is the fact that we have only a small class of teachers here, largely represented abroad, who devote their whole lives to science. Here medical men are eager to practice their profession; their aim is the degree, and the quickest way of getting it. There is a considerable class of men abroad who teach special science and attract a great number of students. We meet this disadvantage in part, by teaching their doctrines. The scientific atmosphere is obviously not the same, and yet a scientific future is before us not remotely. Dr. Bigelow thought the medical school was doing well under existing circumstances, further improvements would come in time. We need not be dissatisfied with our progress, the medical profession ought rather to be grateful to those who attempted this advance in medical education; which he said with less hesitation because he himself had no hand in introducing the graded system, one of its principal features, into our medical school.

Dr. HUNT insisted that Professor Bigelow had missed the point of his paper. There is no doubt that the school does more work; the question is, Does it fit better for the practice of medicine? Dr. Hunt claimed that it does not fit by present methods as well as it did by those which obtained before 1870.

Then, the student went from anatomy and physiology to surgery and medicine. He was continually reminded of the connection between the theoretical and the practical parts of the discipline; the student was left greatly to himself; it was left for self-interest

to prompt him to make the best of his opportunities; manliness was developed. At present, a cut-and-dried system is forced upon each student; he is held to it by examinations; he naturally takes to cramming, — a process more injurious in medicine than a considerable degree of neglect of method would be. In answer to Professor Bigelow's statement that the State paid the teachers and scientific men in Germany, Dr. Hunt stated that human nature is much the same the world over; if the university would open a free competition for positions of honor, and make good work the only consideration, it would give a practical value to such work here, as it has done in Germany, naturally, more work would result. All should have an opportunity, that the hopes and ambition of all may be stimulated; as it is now, only a favored few can start in the race. They may be competent, but they have no opportunity to prove it. Give all a chance; the favored ones may win, then, having earned their positions, they will secure more self-respect and honor from the profession. It is well, also, to remember that the most learned and the most eminent medical men are not necessarily the best teachers. Teaching requires peculiar abilities. The special requirements of the medical teacher can be proven only by actual experiment; hence, there should be free right of teaching; the best should be selected from the masses by a process of natural selection.

Dr. BIGELOW remarked upon the first point, that different students need different systems. No college could prosper that should adopt a system absolutely different from that of every other college in the country. Harvard had raised the standard of teaching and maintained it at a higher point than any other school. It had not retreated from it. Progress cannot be pushed faster than is wise.

Dr. HARRIS exhibited a specimen showing the result of a Barton's operation, performed twenty-five years ago. There was originally an ankylosed knee-joint, the lower leg being flexed on the thigh at an angle of seventy degrees.

Dr. HODGES said that the boy's case attracted a good deal of attention at the time, when the operation for the relief of ankylosed joints was comparatively infrequent. The usefulness of the limb after this operation was very considerable. This operation, at the present time, is rarely done, since the present methods of excision give more satisfactory results, there being less deformity and a diminished death-rate.

Dr. G. W. GAY reported a case of vesico-vaginal fistula, with entire absence of the urethra. The hole into the bladder would admit the forefinger, and was located just behind and beneath the pubes. The mucous membrane was natural, and no folds or fissures existed to show that there had ever been a urethra. The operation performed was to remedy the incontinence. A flap of mucous membrane was dissected up and brought forward. The posterior margin was united to the posterior margin of the fistula, thus forming a urethra, without a sphincter; by wearing a pad, arranged so as to bring a certain amount of pressure over the opening, the urine could be retained for several hours, the condition of the patient being thereby much ameliorated.

— A cremation society has been organized in New York city. On the evening of March 24th a large number of the members listened to a lecture on the disposal of the dead, at Cooper Institute.

RHODE ISLAND MEDICAL SOCIETY.

A quarterly meeting of the Rhode Island Medical Society was held in Providence, March 16, 1881. The president, Dr. Charles O'Leary, in the chair.

On recommendation of the board of censors, Drs. G. H. Harris, of Greenville, M. J. E. Legris, of Centreville, and F. B. Fuller, of Pawtucket, were elected to fellowship.

Dr. T. Newell, chairman of the library committee, announced that hereafter the library will be open daily from twelve to one o'clock.

Delegates to the American Medical Association were elected as follows: Drs. A. Ballou, of Woonsocket, W. J. Burge, of Pawtucket, E. P. Clark, of Hope Valley, A. C. Dedrick, of Centreville, G. W. Jenckes, of Woonsocket, J. Kenyon, of River Point, D. King, of Newport, A. A. Saunders, of Carolina Mills, and Drs. G. W. Carr, J. W. C. Ely, A. E. Ham, C. H. Leonard, J. W. Mitchell, R. F. Noyes, A. Remick, A. E. Robbins, J. W. Sawyer, and O. C. Wiggin, of Providence.

Dr. G. A. Burg presented a paper on the Chemical Analysis of Urine, and demonstrated the tests for the chlorides, albumen, sugar, bile, etc.

Dr. Peabody, a veterinary surgeon, was introduced to the society, and reported a case of embolism of the aorta and iliac arteries of a horse, and exhibited the specimen.

Dr. C. A. Maryott read a paper on the use of obstetric forceps, and advocating the administration of belladonna for three to six weeks previous to confinement, with a view to rapid relaxation of the os.

Dr. Capron deprecated an early resort to instruments. Children do not often die from rigidity of the soft parts, and he doubted whether uterine contractions endanger the child by interfering with the circulation of the placenta. So long as the pains intermit, and the head is not locked at the superior strait, it is better to wait. In cases of lingering labor, due to stubbornly hard os, the local application of belladonna is valuable.

Dr. Cone reported a successful use of extract of belladonna and cosmoline applied to the unyielding os.

Dr. Tyng observed that in the Woman's Hospital in Philadelphia this local use of belladonna ointment was frequently followed by ruptured perineum, and considered the hot douche preferable. The advantages claimed for the hot douche are uniform relaxation of all the soft parts, cleanliness, and less risk of hemorrhage.

Dr. O. C. Wiggin preferred the use of morphia for protracted rigidity of the os. Dr. Burge had found ether a valuable relaxing agent.

Dr. Noyes reported the following case: A man, aged twenty-five, was caught in a revolving shaft, and sustained a simple fracture of the humerus in its upper third. He was attended by a "natural bone-setter," who applied an external angular splint and a bandage, and neglected to see the case again. Six weeks after the accident Dr. Noyes was consulted, and found the splint and bandage loose, very little callus at the seat of fracture, and no union.

Under ether the ends of the bone were terribly rubbed together, and the whole limb put up in a plaster bandage. In five weeks free motion was permitted at the elbow, and two weeks later the patient resumed work with a strong arm.

Dr. Caswell considered this a case of delayed union rather than of ununited fracture. He had seen two cases of the latter condition. One, of the femur, was encased

in plaster for five months without benefit. The patient refused an operation and got about with crutches.

Dr. T. W. Perry reported the case of a physician who had an ununited fracture of the tibia. He wore a firm leather splint, and was able to attend to practice. Two years later he was thrown from his carriage and injured the same leg the second time, when the bone united firmly.

Dr. Caswell reported two recent hospital cases:—

(1.) A young man was admitted to Rhode Island Hospital, having a loose cartilage in each knee-joint. The operation for removal of the cartilage was first done on the right knee with all the precautions of Listerism, and was successful in every way. Two weeks later the cartilage in the left knee was removed without difficulty, and in ten days the patient was discharged.

(2.) A case of litholopaxy. The patient was a young man with a capacious urethra. Fearing a hard stone Dr. Caswell used a strong Thompson lithotrite. The calculus was composed of oxalate of lime, and weighed twenty-four grains. Time of operation, forty-five minutes. Patient discharged on the tenth day.

New Instruments.

A NEW NEEDLE-HOLDER.

BY W. THORNTON PARKER, M. D., PLYMOUTH, MASS.

MESSERS. GEORGE TIEMANN & COMPANY, of New York, have made for me a needle-holder which may possibly be acceptable to others in the profession, and, on this account, I venture a short description of it.

The needle-holder is made of metal, nickel-plated.

It consists of a cylinder for holding the needles and a simple attachment for firmly securing the needle in a forcep-like grip for operating. This holder can readily be carried in any pocket-case of instruments. It saves the trouble of searching for scattered needles, and is of service to the operator in enabling him to take a *firm* stitch and to hold the needle *securely*. It is needless to say here that it is important to sew quickly, and to be able to bring the flaps *nicely* together. In sewing without a needle-holder the surgeon, by reason of the restlessness of the patient, rapidly losing the effect of the anæsthetic, and also on account of the slippery condition of the operator's hands and fingers, not to speak of the weariness and tendency to cramp in them, finds it often very difficult to sew steadily, and, *perhaps*, on that account, may fail to make a satisfactory stitch, the needle repeatedly slipping. These accidents may cause the patient considerable suffering, and I have reason to believe are of frequent occurrence. If an apology is needed for this simple little appliance, I would say that anything which *aids* in rendering operations easier, or contributes to the comfort of the patient, is worthy of notice. I find the instrument useful, and hope that others may also. The needle-holder necessarily carries only the straight and the slightly bent needles, which are commonly used. Some of the needles contain eyelets at the points, which are often desirable. Other needles, of great curve can be carried separately in the pocket-case; but in sewing the needle-holder will be found convenient for all kinds.



Medical and Surgical Journal.

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No. 4 PARK STREET, BOSTON, MASS.

ISAAC RAY, M. D., LL. D.

No medical man during the present century has more deservedly left behind him at his death a world-wide reputation for wisdom, theoretical and practical, grandeur and yet simplicity of character, than our distinguished fellow countryman, Dr. Isaac Ray, who died in Philadelphia, March 31st, in the seventy-fifth year of his age. Though for many years of his life a resident of other States he was a native of Massachusetts, having been born in Beverly, in 1807. He studied medicine with the late Dr. Shattuck, in Boston, but graduated at Bowdoin College, and commenced the practice of medicine at Portland, Maine, in 1827, afterwards removing to Eastport. He early turned his attention to the study of mental diseases, and in 1838 published his *Medical Jurisprudence of Insanity*, a work which has passed through five editions, and is the best which has ever been written on this subject in the English language. He was appointed Superintendent of the State Hospital for the Insane, at Augusta, Maine, in 1841, and remained in charge of that institution till 1846, when he was elected Superintendent of the proposed Butler Hospital for the Insane, to be located at Providence, R. I., but then unbuilt. Dr. Ray spent several months in Europe carefully studying mental diseases and hospital work, and on his return, with the assistance of his life-long friend and confrère, Dr. Bell, of the McLean Asylum, he planned the Butler Hospital, and immediately entered upon the work of superintending its construction, every detail being finished under his personal supervision. From that time till the day of his death he was personally identified with all its interests. After twenty-one years of service his health necessitated his resignation, and he removed to Philadelphia in 1867.

He was one of the original members of the "Association of Medical Superintendents of American Institutions for the Insane," and was its president from May 22, 1855, to May 17, 1859. He received the degree of LL. D. in 1879 from Brown University, and was made an honorary member of the Medico-Psychological Society of London in 1880.

In addition to his master work, the *Medical Jurisprudence of Insanity*, he published in 1863 *Mental Hygiene*, a practical and popular work, and in 1873, *Contributions to Mental Pathology*.

His annual reports while Superintendent of the Butler Hospital were finished, learned productions, and discussed the whole ground of treatment of disease

and of hospital construction. Since his retirement his pen has rarely been idle, and he has written for many prominent medical and literary journals. He was the author of innumerable reviews and of many papers read before the Rhode Island and Pennsylvania medical societies, and the Association of Superintendents. It can be truly said that he never wrote upon any subject until he had thoroughly digested it, but when he had done so he believed it his duty to communicate his views to others. There was a conciseness and thoroughness, a purity and an earnestness, in all his writings which made them as attractive as a well written novel, and which carried conviction to readers or hearers.

As an expert in court his strength and directness, his clearness and simplicity were even more apparent. Thoroughly honest, incapable of partiality or unjust prejudice, he despised the trickery and shallowness of much that is called the practice of law. His opinions, judiciously and deliberately formed, and weighed in the balance of his discriminating mind, became firm convictions. He was always open to argument, but having once decided he was firm as truth itself, and no cross-examination or brow-beating could change his views. As a medical witness he was unsurpassed.

As the superintendent of a hospital he had great personal power; no one familiar with the Butler Hospital can fail to see in its arrangements the lasting impress which he has left upon them. To his great knowledge of mental disease he added firmness, patience, and the utmost kindness. He was as thoroughly the friend of the patients and his subordinates as he was the chief executive of the institution, and his personal character, his long experience, and his judicious counsels have helped many a darkened, deluded mind back to life and happiness.

By nature and training he was conservative; but his conservatism was not of the kind to shrink from real improvements. It demanded a deliberate judgment upon so-called advances in medicine and in the treatment of the insane; but all real progress found in him a most earnest advocate. No one can ever estimate the influence of his powerful pen upon the subject nearest his heart in the quiet and retirement of his home after the more active public duties of his life were over.

He was a person of few words; but in his own home and among his intimate friends and acquaintances he was social, cheerful, and very entertaining. No one could spend an hour with him without profit.

As a friend he was cordial and unwavering, never hesitating to give advice or to make corrections if asked, but always ready to encourage and help. Hundreds of young men have looked to him for counsel, and never have been disappointed. In all our institutions for the insane his influence has been, and will be, felt through his writings long after the generations who have known him personally have passed away.

To such a man death comes only as the completion of a life work, and has no terrors. Clear and strong in his religious convictions, as in all others, with un-

dimmed intellect, though wasted and feeble in body, he looked calmly to the end as a culmination of his labors and an entrance upon a well-earned rest.

Grand, simple, honest, warm-hearted man! may we, by following ever so humbly in his footsteps, render to our day and generation a service more useful and more efficient because of his work and his example!

ON TO RICHMOND.

THE next annual meeting of the American Medical Association is to be held at Richmond, Va., on the third, fourth, fifth, and sixth of May. It should be in many respects an enjoyable occasion, and there is reason to believe that some valuable papers will be contributed, which we hope will not be buried until the publication of the Association's Transactions, when the interest which they may excite will, in a great measure, have subsided.

The season of the year is peculiarly favorable for a visit to Richmond, the northern visitor being twice blessed, — directly in the earlier southern spring which he secures, and indirectly in the avoidance of the tedious vernal germination at home.

To physicians resident in New England the Boston, Norfolk, and Baltimore Steamship Line offers attractive facilities for reaching Richmond. The round-trip ticket from Boston to Richmond will cost \$16.50, and this includes meals and staterooms between Boston and Norfolk. Any one wishing to attend the meeting of the Association, and desiring the invigorating tonic of change and freedom from care without the fatigue of travel, will be apt to find it in the four days' trip to and from Norfolk, especially if fortunate, as at the end of this month or the beginning of next he is likely to be, in having a comfortable run around Cape Cod and over the Shoals.

MEDICAL NOTES.

—The *Lancet* considers the secondary suture of nerves one of the great advances in surgical therapeutics. Quite lately it has been practiced, not with uniform success, yet with most encouraging results. The best test cases are those of union of severed motor nerves, for the return of sensation in parts supplied by a divided and then sutured nerve is open to another explanation than that the nerve trunk has again become capable of conducting sensory impressions. For this reason a case of Langenbeck's, of secondary suture of the musculo-spiral nerve, is very valuable. A laborer, thirty-one years of age, received a severe contusion of the outer side of the right arm below the middle, which was attended with paralysis of the extensor muscles of the forearm and hand. An abscess subsequently formed and was opened. Two and a half months after the injury, as the paralysis continued, Langenbeck cut down upon the divided nerve, freed its ends, which he found two centimeters and a half apart, and united them by a catgut suture. Nine-

teen days afterwards the extensors reacted to the induced current, and after a month and a half considerable active extension movements were possible. Mr. Hulke has brought forward at the Clinical Society a case in which he had united the cut ends of the median nerve nearly six weeks after the injury, and another case in which he practiced a similar operation on the ulnar nerve fifteen weeks after division, and in each instance there was distinct evidence of restoration of function. Esmarch and Létiévant have each had a case of suture of the musculo-spiral nerve, the former successful. These and other like cases afford great encouragement not only to unite by suture the cut ends of nerves in recent wounds, but, where necessary, after cicatrization is complete.

—The Hon. Lewis Wingfield is engaged, it is said, on a thrilling story concerning lunatic asylums in England, under the title of *The Haven of Urest*, which will appear in prominent papers. Even in the country to whose system of insane asylum management appeal is so frequently made there seems to be a chance for the asylum agitator.

—Rules for ready metric writing. For fluid mixtures: Write for the same number of GRAMMES of each article as the number of grains or minims in each single dose of the article. Add sufficient vehicle to make a SIXTY GRAMME mixture. A teaspoonful will contain the proper dose. For pills or powders: Write for the same number of GRAMMES of each article as the number of grains in each single dose of the article. Divide into fifteen pills or powders. Each will contain the proper dose.

NEW YORK.

—A lioness in Barnum's show at the Madison Square Garden was recently safely delivered of a pair of fine whelps, and these, with the baby elephant, which is still unweaned, now form an interesting feature of the exhibition.

—At the last meeting of the County Medical Society Professor Alfred L. Loomis read a paper on *The Causes of Death in Acute Pneumonia*. After quoting elaborate statistics to show how very variable was the rate of mortality in this disease, both in hospital and private practice, he went on to speak of its nature. While not prepared to fully accept the view of Jurgenson, that it was an infectious constitutional affection, he could not deny that there were many facts which seemed to lend it support; but for himself he preferred, with his present light, to regard pneumonia as occupying a middle position between an essential febrile disease and a local inflammation. Blood-poisoning was undoubtedly a very frequent and prominent element in it, and failure of the heart, the most common cause of death in the disease, was generally to be ascribed to the action of the sepsis upon the nerve-centres. Pneumonia was exceedingly apt to prove fatal when complicated with pleurisy, alcoholism, Bright's disease, endocarditis, or severe malaria, all of which tended to enfeeble the action of the heart. In speaking of the treatment he spoke with great confidence of the efficacy of the very free use of morphia

by hypodermic injection during the first four days of the disease.

— At the stated meeting of the Academy of Medicine held April 7th, Dr. Isaac E. Taylor read a paper on Spontaneous Version and Evolution of the Fetus in Shoulder and Arm Presentations, and the Management of Such Cases Without Sacrificing the Child. On the same evening the annual commencement of the Columbia Veterinary College and School of Comparative Anatomy was held at Chickering Hall, when degrees were conferred upon a class of nine students, and an address to the graduates was made by Dr. T. E. Satterthwaite.

— Deaths from trichinosis seems to be increasing in frequency. The latest case is reported from Hoboken — that of a young German woman who had been eating raw ham and sausages. A microscopic examination of the muscles showed the presence of the trichinae in great numbers. The husband of the victim was also attacked with the disease, but recovered. The physician who was in attendance states that during the last twenty-six years he has seen sixteen cases of trichinosis in Hoboken, but the present is the only one that has terminated fatally.

— Typhus fever, which had diminished to such an extent that only five cases were reported during the week ending March 26th, seems again on the increase, and during the last few days as many as six or seven cases per diem have been reported. In the meanwhile the health department have been using every precaution to check the spread of the disease, and a special corps of inspectors have been visiting the lodging and tenement houses under the direction of the sanitary superintendent. Their reports are said to be generally encouraging, showing that while the cheap lodging-houses are as a rule overcrowded, they are for the most part kept clean and otherwise in a good sanitary condition. At the last meeting of the Board of Health the sanitary superintendent reported that there were at the present time fifty-one typhus fever and ninety-one small-pox patients in the hospitals on Blackwell's Island.

— A petition signed by the presidents of the various medical colleges and societies, and a number of other prominent physicians, urging the passage of the bill to secure the registration of plumbers and the inspection of plumbing and drainage in New York and Brooklyn, has been sent to the speaker of the Assembly at Albany. The bill has already passed the State Senate.

— A woman, sixty-one years of age, who had become partially insane on account of pecuniary losses, has just died in this city of voluntary starvation. For three weeks she refused to take any food, and during the last nine days of her life abstained from water as well as food.

— The St. John's Guild has now received sufficient money to enable it to begin the building of a seaside nursery at Cedar Grove, Staten Island, which has been for some time in contemplation. Into this will be received from the Floating Hospital such sick children, with their mothers, as are most in need of more fresh sea air than a single day's excursion can afford. The building is to be completed by the first of June.

Miscellany.

ABDOMINAL SURGERY.

WE are very glad to publish the interesting account of Dr. Burnham's achievements in the practice of abdominal surgery contributed by Dr. Irish; and we regret not having been cognizant of the fact, somewhat buried in the Transactions of the American Medical Association, and now for the first time brought to our notice, that to Dr. Burnham the credit of having been the first surgeon on record to successfully remove the uterus and ovaries may be attributed. The information afforded by our correspondent suggests that the above mentioned transactions may be better worth reading than we had hitherto imagined. Our readers will have noticed that the "omission" of the name of Dr. Burnham from our short list of those authors who have contributed by the publication of their experience to the secure establishment of ovariectomy and of the kindred operations is amply accounted for by the circumstance, acknowledged by our correspondent, that Dr. Burnham has hitherto neglected to publish his ovariectomies, either collectively or in series, only a few of these cases having been reported from time to time in the medical journals. This unusual reticence also explains the absence of any mention of Dr. Burnham's name in connection with the history of ovariectomy in such works as Dr. E. R. Peaslee's Ovarian Tumors and Ovariectomy, and Dr. T. G. Thomas's Treatise on the Diseases of Women. Dr. Burnham having thus refrained from publishing his experience and his results, the claim now advanced in his behalf by Dr. Irish, that to him more than to those mentioned in our article is due the present establishment of the operations of ovariectomy and hysterectomy, cannot be allowed. If Spencer Wells had contented himself with merely performing his operations, without taking the pains to enlighten the profession with regard to his methods and results, the medical world would have been little or none the wiser, and he himself would not now occupy the conspicuous position in relation to ovariectomy which will cause his name to remain forever one of the most illustrious in the history of surgery. — ED.

MR. EDITOR, — In reading the résumé of the rise and progress of Abdominal Surgery, as presented in your interesting editorial of last week, I noticed the omission of the name of one man, and that a surgeon of Massachusetts, to whom more than to many others mentioned by you in this article the present important and established position of the operations of ovariectomy and hysterectomy is very deeply indebted. I refer, of course, to Dr. Burnham, of Lowell. With your permission I will invite your attention briefly to a few facts in the history of these operations as connected with the work of Dr. Burnham in this department of surgery. Down to the year 1851, besides the series of ovariectomies by McDowell there had been, as far as known, thirty-two operations, and these had been performed by twenty-four different surgeons, or about that number; therefore the great majority of these surgeons had performed the operation but once. So disastrous, as a whole, had these cases been that the operation now rested under a cloud of disfavor, greater, if possible, than at any time before since the days of McDowell.

It was in this year of 1851 that Dr. Burnham performed his first operation. So great was the opposi-

tion to ovariectomy among the medical profession that this, joined to a certain amount of personal prejudice, went so far as to threaten him with legal proceedings in case the patient died. He performed the operation, however, and the patient recovered. Within a brief period after this first case he performed three additional operations, with two recoveries, that is, in the first four cases he had lost but one patient, and since this time he has been operating continuously, until now the whole number of cases is two hundred and fifty, of which the successful cases are not less than seventy-eight per cent. Dr. Burnham's rule of action has been to operate on all cases of ovarian tumors, even though the patient's condition seemed a desperate one, and to this rule he has made very few exceptions from the time when he began to perform the operation. Therefore this series of two hundred and fifty ovariectomies has embraced more than the proportionate number of severe and formidable cases, and when we consider that many of these operations were performed when as yet but little had been written or done in abdominal surgery, and when nothing was known of what we now consider indispensable antiseptic precautions, I think you will agree with me that that member of our profession who has done so much for the operation of ovariectomy is entitled to recognition and high consideration as being, with two or three other American surgeons, largely instrumental in changing the operation from a condemned to an approved one. A few of these cases have been reported from time to time in the medical journals, but as most of them have not been so reported I have given you the number of Dr. Burnham's cases of ovariectomy and their results.

In another department of abdominal surgery, to which I would call your attention, namely, removal of the uterus by laparotomy for fibroid and fibro-cystic disease, I would again bring to your notice Dr. Burnham's work. He was the first in the world who removed the uterus through an abdominal section, and saved his patient. This case you will find referred to in Ziemssen's *Cyclopaedia of Medicine*, and in the *Transactions of the American Medical Association* for 1878 a full report of the operations and the result. In the same article with this report are the histories of fourteen other cases in which he had removed the uterus and both ovaries.

In this brief and hurried note I have simply purposed to summarize in the fewest words possible the contributions to the advance of abdominal surgery at the hands of Dr. Burnham. I hope that even this meagre account may be of service to you in the continued discussion of the subject of your editorial article.

JOHN C. IRISH, M. D.

LOWELL, April 4, 1881.

THE ANTIQUITY OF DRAINAGE-TUBES.

MR. EDITOR, — The writer of the note published in the *Boston Medical and Surgical Journal* of February 24th (from the *British Medical Journal*), respecting the Antiquity of the Drainage Tube, has evidently overlooked the writings of that old master of surgery, Ambrose Paré. Repeated references are made by Paré to the use of "hollow tents," and on page 299 of the edition of his writings translated by Thomas Johnson, and published in London in 1649, he gives an illustration of these, with the comment that —

"The Reader must note that the pipes that are fit for this use, need not have so many holes as these here express; but only two or three in their ends: for the flesh growing and getting into the rest, make them that they cannot be plucked forth without much pain."

Speaking of the treatment Of Wounds made by Gun-Shot, Paré writes: —

"For this contained humor causeth an unnatural tension in these parts, and taints them with superfluous moisture, whereby the regeneration of flesh is hindered; for that every ulcer as it is an ulcer, requires to be dried, in Hippocrates' opinion. Many also offend in the too frequent use of Tents; for as they change them every houre, they touch the sides of the Wound, cause pain, and renew other malign symptoms; wherefore such ulcers as cast forth more abundance of matter I could wish rather to be dressed with hollow tents, like those I formerly described to be put into Wounds of the Chest."

On page 785, describing his treatment of Lord Annet, which would appear from the context to have been in 1569, shortly after the battle of Montcontour, Paré says: —

"I applied to mundise and drie the spongie and loos flesh, bolsters; at the bottom of the sinuosities, hollow tents of lead, that the *Sauies* might have passage out."

In the account of the same case the reader will find a description of a pretty good antiseptic dressing; and I will trespass on your patience by giving another extract from this very interesting case, which will serve to show the ingenuity of this great man: —

"Besides one may caus it to rain artificially in pouring down from som high place into a kettle, and that it may make such a nois that the patient may hear it, by these means sleep shall be provoked on him." Sincerely yours, F. A. CASTLE.

102 EAST FIFTY-SEVENTH STREET, }
NEW YORK, April 4, 1881. }

To the very interesting communication of our correspondent we append part of a letter from the *British Medical Journal*, brought out by the note which we copied from that journal: —

"If the gentleman who writes on this subject in the *Journal* of December 25th will turn to the *Lancet* of May 3, 1879, page 650, he will find the very identical passage about drainage-tubes he quotes from the *Memoirs of Captain Crichton* reproduced by me, *totidem verbis*, in this same connection. If he will read on further, he will further find that a drainage-tube, or something so like as to be indistinguishable from it, was used three hundred years ago by his physicians during the last illness of Philip the Second, King of Spain. The words describing this contrivance occur in a very rare book, entitled *De Felici Excessu Philippi Austriaci, Hispanarum Regis*. *Scriptis Hispanice Cerverra Turrianus, Capell Reg., etc.* They run as follows: 'Deinceps ciendo puri quo Mane et Vespere Scutellæ duæ replebantur, ut testatur Garcias de Onante, *Chirurgicâ fistulâ opus erat, quæ eademmodum locis remotis saniem educeret.*' Subsequently, for the purpose of withdrawing the pus, with which two porringers were filled morning and evening, his (Philip's) attendants required or employed, as Onante testifies, a surgical tube or pipe, which would convey the discharge from the remote parts.' If the classic tongue of Cicero, and of Horace, of Thomas à Kempis, and Father Prout — a knowledge of which has ever been to me a source of pride and pleasure — has not altered its complexion

since I was at school, these words mean a drainage-tube, and nothing else. Their etymology necessarily implies as much, especially so the words 'ciendo' and 'educeret,' and that the pipe or tube they indicate was used with this view cannot be doubted. If this be so, as it unquestionably is, why, I ask, all the fuss that is made in these days about its discovery? In my humble opinion, many, if not all, of the so-called surgical discoveries of modern times were known ages ago, — before the great-great-grandmothers of their respective votaries were born."

ANSWER TO "QUERIST."

MR. EDITOR, — In answer to "Querist" in your JOURNAL of April 7, 1881, I would say, that in the discussion which followed the reading of my paper on Soluble Compressed Pellets for Hypodermic Use¹ Dr. John B. Roberts announced the fact that salicylic acid, when added to solutions of morphia, would prevent the formation of fungus growths. It has also been recommended that dilute muriatic acid be used for the same purpose, but in my experience the addition of acids or similar extraneous materials, while they prevent the generation of fungus, increases the pain and tendency to inflammatory action at the seat of puncture.

H. AUGUSTUS WILSON, M. D.

331 SOUTH TWELFTH STREET, PHILADELPHIA.

A SOLUTION OF MORPHIA.

MR. EDITOR: If your correspondent "Querist" will add one minim of solution of carbolic acid (ninety per cent.) to each ounce of Magendie's solution his difficulty will be solved.

G. H. LYMAN.

A NOVEL METHOD OF TEACHING CLINICAL ANATOMY.

IN January last Dr. W. W. Keen of Philadelphia, Professor of Artistic Anatomy in the Pennsylvania Academy of the fine Arts, and one of the best lecturers on anatomy in America, delivered before the Anatomical and Surgical Society of Brooklyn, a strikingly interesting lecture On the Clinical Anatomy of the Lower Extremity and especially of the Knee and Ankle Joints. During the course of this lecture he suggested a novel method of teaching clinical anatomy, which not only deserves extended notice but might well be practically adopted in our medical schools.

After demonstrating a portion of his subject by means of casts and prepared bones, Dr. Keen said: "but turn from the cast of the dissection to our living model. Let him call the muscles of the knee into vigorous action, and then note here the high external vastus, there the lower and stouter internal, here the patella, and there the 'supra-patellar flat,' as artists call it, *i. e.*, the tendon chiefly of the rectus, and here the ligamentum patellæ, and then, if never before, you will appreciate not only the facts to which I have asked your attention, but also the value of this method of studying anatomy. A living interest is added which

the cadaver cannot give; muscles can be relaxed or contracted and their relations studied in relation to vessels, nerves, or other neighboring organs of importance; the lungs can be perceived in expansion and contraction; the position of the stomach, the liver, the intestines, the bladder, etc., can be shown; the course of the arteries exhibited; movable bones shown in various positions; the relation of parts in different postures shown clearly, and in their relations to medicine, surgery, obstetrics, etc., and all demonstrated at the time of most importance, *i. e.*, the very moment when they are being studied. I began this method of studying anatomy with my classes some twelve years ago, and from year to year have been more and more constantly impressed with its value. So true is this that I venture to affirm that *the living model should form as indispensable a part of the means of illustration in the anatomical lecture room as the cadaver.* In not a few respects, indeed, it is even more important. If its inconvenience and expense be urged, I may remind you that one model we always have, — ourselves, — and it is surprising how much anatomy we may learn from studying our own bodies."

The remainder of the lecture may be found in The Annals of Anatomy and Surgery for January, 1881.

SUDDEN DEATH IN DIPHTHERIA.

A PAPER on Sudden Death in Diphtheria and a discussion to which it gave rise at the Boston Society for Medical Improvement, were published in the JOURNAL for March 24th. As the subject is still fresh in the minds of our readers we print some extracts from a clinical lecture on diphtheria, by Dr. William Pepper, which appeared in the *Medical Gazette*, and a case of sudden death reported by Dr. Walsh.

DR. PEPPER'S LECTURE.

The patient, a healthy girl, six years of age, had a sharp attack of diphtheria about the 10th of last December. The membrane disappeared on the fifth, or sixth day, but recurred forty-eight hours later, and she was very much more ill than at first, with very extensive formation of pseudo-membrane. She was treated throughout both attacks with full doses of quinia, tincture ferri chloridi, chlorate of potassa, and solution of iron and chlorate of potassa was applied locally to the fauces. Again the membrane disappeared, as also the swelling of the cervical glands, and the subcutaneous infiltration, which had been extreme, slowly subsided; she regained strength and was apparently beginning to convalesce early in the third week of the attack, when she was seized with vomiting. The urine was slightly albuminous; no microscopic examination was made. The vomiting was constant, and resisted every effort of a most judicious kind for four days. On the 29th of December a consultation of the staff was held on the case and it was determined to stop all food by the mouth. The next day she seemed better, had vomited only once in the twenty-four hours, and had begun to retain a few drops at a time of milk and of lime water. On the 31st of December vomiting had entirely ceased; the child had retained teaspoonful doses of nourishment about every two hours; the injections had also been taken regularly and retained. The surface was pale and perhaps slightly cool, but this was not specially

¹ Read before Philadelphia County Medical Society, October 27, 1880. See Philadelphia Medical Times, January 1, 1881.

noticed; pulse small, but regular, 85-90 to the minute. There was no cough. The heart and lungs were examined and nothing unusual noticed. There was no valvular murmur, the sounds were faint, but neither tumultuous or confused. About twelve drops of tincture opii deodor. had been given in divided doses during the twenty-four hours. The amount of nourishment by the mouth was increased. Full doses of quinia were continued by the rectum. Two or three hours after the consultation it was noticed that the child's feet became cold, and that this soon extended to the knees and arms. The child's appearance changed; she gave a sudden gasping effort, made a motion, as though to push the mother away, and died without further struggle. At the post-mortem examination made on the following day, intense congestion of the liver was found, with enlargement and a deep purplish color. The kidneys were also deeply congested, the secreting cells of the tubules being in a state of "cloudy swelling." The spleen was slightly enlarged from engorgement. There was no pleural or pericardial effusion. The lungs were pale, retracted, and crepitant. The right cavities of the heart were enormously distended. The auricle contained much soft, dark, clotted blood. There was a firm white clot entangled in the tricuspid leaflets, and extending from there into the right ventricle, where it was very tightly attached to the muscular trabeculae by delicate prolongations; was thence prolonged into the pulmonary artery, the calibre of which was to a great extent obstructed by a firm, white, ante-mortem clot, which was moulded on to the leaflets and closely apposed to the walls. The left cavities of the heart contained less blood, but here also was a large firm ante-mortem clot, obstructing the mitral orifice, partly filling the left ventricle and prolonged into the aorta. The muscular fibres of the heart were in advanced fatty degeneration, their transverse striation being in places completely obliterated. The contents of the stomach were only ingesta. Its mucous membrane was for the most part not much congested, but at one spot near the middle of the greater curvature there was intense congestion. Otherwise the stomach was entirely normal. The occurrence of the heart clot is now known to be among the dangers in so many diseases that it demands careful study. It must be understood, of course, that I only refer to such clots as are formed in the heart some considerable time before death. It is well known that whenever the act of dying is protracted heart clots are apt to be formed. But such heart clots have little or no pathological significance. The true ante-mortem heart clot is distinguished by certain anatomical characters which are unusually well illustrated in these specimens. It is whitish, firm, and tough, it is apt to be moulded on the inequalities of the inner surface of the heart, and may be tightly attached by delicate prolongations passing around the muscular trabeculae. The tendency to heart clot in diphtheria is so very strong that it must never be forgotten or lost sight of. This accident may occur at any stage of the disease, and not rarely, as in this case, it takes place after convalescence seems to be established. I have also known it to occur at an earlier stage in cases which were apparently doing perfectly well. The only special determining influence which I have suspected in such cases has been an undue amount of muscular effort. This, therefore, should be scrupulously avoided in all cases of diphtheria, for this as well as for other reasons. Although usually followed by

death, it is important to be able to detect the occurrence of heart clot, if possible. The symptoms which may be stated as indicative of this condition are anxiety and great dyspnoea; pallor of face, and coolness of extremities; small, frequent pulse; and obscure, dull heart sounds with occasionally a blowing murmur. It will be seen that the symptoms in the present case were unusually obscure. I am inclined to regard the violent vomiting as one of the first results of the heart clot. The obstruction to the entrance of blood into the right cavities of the heart caused intense congestion of the liver and of the mucous membrane of the stomach. This would readily account for the obstinate vomiting, and careful examination of the stomach after death failed to reveal any other cause. It is true that there had been found, a few days before, a trace of albumen in the urine, and that the early stage of kidney disease, with cloudy swelling of the epithelium existed; but these do not suffice to account for the sudden occurrence of such violent and uncontrollable vomiting; without any symptoms of anaemia. Considering the marked ante-mortem characters of the clots, it must be admitted that they had existed for several days before death, yet, until a half hour before death, no symptoms arose to call special attention to the heart. It is true that they may have been masked by the frequent vomiting and the slight opiate effect which was maintained. There was no extreme dyspnoea, however, and the pulse was regular and not very rapid. There was also nothing special about the heart sounds, which were observed to be merely faint. It is important, therefore, to note how insidious may be the formation of heart clot and how closely we should be on our guard against it. When finally the clots attained such size as to seriously obstruct the orifices of the heart, and prevent the closure of the valves, very characteristic symptoms appeared, and were rapidly followed by death.

CASE OF SUDDEN DEATH IN DIPHTHERIA.

Dr. J. F. Walsh reports in the *Philadelphia Medical Times* the following case:—

July 1, 1880, called to see C. M., adult; she was suffering from a palmar abscess of diphtheritic origin; considerable general debility. The abscess treated with poultices, and opened July 3d. July 4th, general malaise, chilliness, headache, prostration, sore throat. Examination of throat revealed a diphtheritic patch on uvula; pharynx, half-arches, and soft palate very red and angry looking; tonsils enlarged, tumid, inflamed. Treatment: milk-punch, beef tea, etc.; tr. ferri chlor., gr. x., potass. chlorat., gr. v., every half hour, alternately; spray—thrown into the throat by means of an atomizer—of a mixture of acid carbol. m. xx. to liq. calcis f3 vj. every half hour. July 10th (two to three days after the first patch of exudation discovered) the whole throat was involved. Up to this date patient had been doing excellently; on this day the following conditions noted: throat devoid of exudation, returning to a healthy condition; tongue very slightly coated; pulse 60, full, but rather weak; respiration normal; slight mental confusion (but this has existed from the beginning of the sickness). Three to four hours after this last visit a messenger came in a great hurry, saying that patient had suddenly got much worse. On my arrival in the room she was dead. No violent symptoms preceded death. Husband says that she suddenly got ashy pale, and stopped breathing. No post mortem allowed.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 2, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	697	275	26.11	17.65	8.61	4.45	2.44
Philadelphia.....	846,984	370	112	21.35	8.11	1.62	2.16	.54
Brooklyn.....	566,689	251	86	23.03	16.33	12.75	3.19	.39
Chicago.....	503,304	199	89	18.59	16.08	5.04	2.01	4.52
Boston.....	362,535	161	51	22.36	11.18	14.91	—	—
St. Louis.....	350,522	156	53	37.18	7.69	2.56	2.56	20.48
Baltimore.....	332,190	160	62	16.25	8.75	3.13	5.00	1.25
Cincinnati.....	255,708	96	34	11.46	18.75	1.04	—	3.12
New Orleans.....	216,140	109	28	17.43	16.51	1.83	5.50	—
District of Columbia.....	177,638	85	25	2.35	22.35	1.18	1.18	—
Pittsburgh.....	156,381	85	46	31.76	17.65	4.71	22.35	2.36
Buffalo.....	155,137	67	24	22.39	7.46	5.97	7.46	2.99
Milwaukee.....	115,578	53	32	32.07	3.77	9.43	9.43	5.66
Providence.....	104,850	53	19	13.21	15.09	3.77	—	1.89
New Haven.....	62,882	23	5	17.39	8.69	4.35	—	4.35
Charleston.....	49,999	41	12	29.27	2.44	—	21.95	—
Nashville.....	43,461	36	12	22.22	22.22	2.78	2.78	2.78
Lowell.....	59,485	25	9	12.00	16.00	4.00	—	—
Worcester.....	58,295	22	12	13.63	27.27	—	9.09	4.54
Cambridge.....	52,740	12	7	8.33	25.00	8.33	—	—
Fall River.....	49,006	27	10	11.11	—	3.70	3.70	—
Lawrence.....	39,178	21	8	28.57	9.52	9.52	—	4.76
Lynn.....	38,284	11	1	—	18.18	—	—	—
Springfield.....	33,340	14	3	—	35.71	—	—	—
Salem.....	27,598	6	3	—	16.67	—	—	—
New Bedford.....	26,875	11	1	27.27	9.09	—	—	—
Somerville.....	24,985	10	2	10.00	30.00	10.00	—	—
Holyoke.....	21,851	10	5	10.00	10.00	—	—	10.00
Chelsea.....	21,785	9	2	11.11	—	—	—	—
Taunton.....	21,213	8	1	—	—	—	—	—
Gloucester.....	19,329	5	2	20.00	—	20.00	—	—
Haverhill.....	18,475	5	1	20.00	—	—	—	20.00
Newton.....	16,995	3	—	—	33.33	—	—	—
Newburyport.....	13,537	6	1	—	—	—	—	—
Fitchburg.....	12,405	5	2	20.00	—	20.00	—	—
Twenty-four Massachusetts towns.	195,106	71	23	16.90	8.45	5.63	2.82	—

Deaths reported 2923; 1058 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 635, consumption 428, lung diseases 401, diphtheria and croup 174, scarlet fever 114, cerebro-spinal meningitis 80, small-pox 59, typhoid fever 46, diarrhoeal diseases 43, malarial fevers 39, erysipelas 25, measles 24, whooping-cough 18, puerperal fever nine, typhus fever three, chicken-pox one. From *small-pox*, Philadelphia 41, New York 13, Chicago four, Cincinnati one. From *typhoid fever*, Philadelphia 10, New York nine, St. Louis four, Brooklyn, Chicago, and Lawrence three, Baltimore and Cincinnati two, Boston, Pittsburgh, Buffalo, Milwaukee, Charleston, Nashville, Lowell, New Bedford, Attleborough, and Clinton one. From *diarrhoeal diseases*, New York 14, Philadelphia five, St. Louis four, Chicago and Boston three, Brooklyn, Cincinnati, Milwaukee, New Haven, and New Bedford two, Pittsburgh, Charleston, North Adams, and Webster one. From *malarial fevers*, New York 14, New Orleans nine, St. Louis seven, Brooklyn five, Chicago two, Philadelphia and Baltimore one. From *erysipelas*, New York six, Brooklyn, Boston, Buffalo, and Providence three, Philadelphia and Baltimore two, St. Louis, Cincinnati, and Milwaukee one. From *measles*, New York nine, Baltimore and Nashville four, Boston two, St. Louis, Cincinnati, New Orleans, Chelsea, and North Adams one. From *whooping-cough*, New York seven, Philadelphia, Brooklyn, Chicago, Baltimore two, Providence, Lowell, and Westfield one. From *puerperal fever*, Boston three, Philadelphia two, Brooklyn, St. Louis, New Orleans, and Fall River one. From *typhus fever*, New York two, Brooklyn one. From *chicken-pox*, Charleston one. The mortality from cerebro-spinal meningitis has increased from 70 for the week ending March 26th to 80.

Two cases of small-pox were reported in Brooklyn and one in Pittsburgh; diphtheria 33, scarlet fever 22 in Boston; scarlet fever 17, diphtheria seven, in Milwaukee; measles 52, roseola eight, scarlatina 10, diphtheria nine, in Providence.

In 43 cities and towns of Massachusetts, with a population of

1,113,017 (population of the State 1,783,086), the total death-rate for the week was 20.71, against 22.20 and 20.19 for the previous two weeks.

For the week ending March 12th, in 149 German cities and towns, with an estimated population of 7,813,459, the death-rate was 27.4. Deaths reported 4113; 1954 under five: pulmonary consumption 579, acute diseases of the respiratory organs 455, croup and diphtheria 146, typhoid fever 63, whooping-cough 62, scarlet fever 55, measles and röteln 45, puerperal fever 34, small-pox (Königsberg three, Schweidnitz, Benthien two, Munich, Berlin, Aachen two) 10, typhus fever (Danzig, Elbing, Thorn, Posen, Berlin) five. The death-rates ranged from 13.8 in Wiesbaden to 40 in Augsburg; Königsberg 31.4; Breslau 35.6; Munich 29.4; Dresden 23.8; Berlin 24.5; Leipzig 19.5; Hamburg 25.7; Hanover 17; Bremen 27.8; Cologne 26.4; Frankfurt 17.1; Strasburg 30.9.

For the week ending March 19th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20.6. Deaths reported 3001: acute diseases of the respiratory organs 345, whooping-cough 66, measles 56, scarlet fever 46, small-pox (London 13) 44, fever 41, diarrhoea 23, diphtheria 11. The death-rates ranged from 15.9 in Bradford to 26.5 in Wolverhampton; Birmingham 17.3; Leeds 18.2; Sheffield 20.2; London 20.5; Bristol 21.4; Manchester 23.8; Liverpool 25.4. In Edinburgh 19.4; Glasgow 25.3; Dublin 30.4.

In the 20 chief towns in Switzerland, for the weeks ending March 12th and March 19th, census population 548,301, there were respectively 41 and 51 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 16 and 18, diphtheria and croup 15 and six, typhoid fever 10 and 17, small pox one and six, whooping-cough four and none, scarlet fever three and one, measles two and three, puerperal fever one and none. The death-rate of Geneva 19, Zurich 29.1, Basle 32.6, Berne 24.6.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	9 P. M.	Mean.	7 A. M.	9 P. M.	Mean.	7 A. M.	9 P. M.	Mean.	7 A. M.	9 P. M.	Mean.	Duration, Hours.	Amount in inches.	
1881.																				
March 27	29.322	32	36	24	75	43	53	57	NW	NW	NW	16	18	15	Lt. S	F	F	—	—	
" 28	29.532	36	41	30	58	33	53	48	W	NW	W	27	32	21	F	F	C	—	—	
" 29	29.775	41	51	29	61	34	50	48	SW	W	W	13	11	1	F	F	O	—	—	
" 30	29.410	34	43	31	90	100	100	97	NE	NE	NE	20	21	20	O	Lt. S	Lt. S	—	—	
" 31	29.119	36	40	32	100	100	90	97	NE	NE	N	16	14	12	Lt. R	T	Lt. S	—	—	
April 1	29.390	42	54	31	89	39	51	60	NW	W	NW	8	8	10	F	F	O	—	—	
" 2	29.608	36	44	30	61	41	34	45	NW	NW	NW	17	21	14	C	F	F	—	—	
Week.	29.451	37	54	24				65										35.20	1.38	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening; Lt. R., light rain; Lt. S., light snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 2, 1881, TO APRIL 8, 1881.

MORFATT, P., captain and assistant surgeon. Relieved from duty at Camp Spokane, W. T., and ordered to Fort Walla Walla, W. T., until further orders, for medical treatment. S. O. 35, Department of Columbia, March 20, 1881.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JANUARY 1, 1881, TO MARCH 31, 1881.

BAILLACHE, P. H., surgeon. Detailed as chairman, board of examiners, January 4, 1881. To proceed to Barnstable, Boston, and New Bedford, Mass., and Providence, R. I., as inspector, February 1, 1881. To proceed to Wilmington, N. C., as inspector, assume temporary charge of the service, and superintend the re-opening of the marine hospital at that port. March 12, 1881.

LONG, W. H., surgeon. Detailed as member, board of examiners. January 4, 1881.

FESSENDEN, C. S. D., surgeon. Detailed as chairman, board of survey, for the physical examination of officers of the revenue marine service. February 8, 1881.

DOLING, E. J., surgeon. Detailed as recorder, board of examiners. January 4, 1881.

GASSAWAY, J. M., passed assistant surgeon. Detailed as recorder, board of survey, for the physical examination of officers of the revenue marine service. February 8, 1881.

SMITH, HENRY, passed assistant surgeon. Granted leave of absence for thirty days from March 1, 1881, February 8, 1881. Upon expiration of leave of absence to proceed to Norfolk, Va., and assume charge of the service, relieving Surgeon R. D. Murray. March 15, 1881.

IRWIN, FAIRBAX, assistant surgeon. When relieved by Assistant Surgeon W. A. Wheeler, to proceed to Wilmington, N. C., and assume charge of the service, relieving Surgeon P. H. Baillache. March 30, 1881.

GUTHRIE, JOHN, assistant surgeon. To proceed to Key West, Fla., and assume charge of the service, relieving Passed Assistant Surgeon Smith. February 5, 1881.

WHEELER, W. A., assistant surgeon. To proceed to Charleston, S. C., and assume charge of the service, relieving Assistant Surgeon F. Irwin. March 30, 1881.

BENSON, J. A., assistant surgeon. To proceed to St. Louis, Mo., and report to Surgeon H. W. Saxatelle for duty. February 5, 1881.

CARMICHAEL, D. A., assistant surgeon. To proceed to Boston, Mass., and report to Surgeon J. Vansant for duty. February 5, 1881.

ARMSTRONG, S. T., assistant surgeon. To proceed to New Orleans, La., and report to Surgeon H. W. Austin for duty. February 5, 1881.

APPOINTMENTS. The following candidates having passed the examination required by the regulations were appointed as assistant surgeons February 4, 1881: DEWEAN A. CARMICHAEL, of New York, and SAMUEL F. ARMSTRONG, of Missouri.

A COMPETITIVE examination will be held in Washington, on the 25th of April, to fill three vacancies in the position of assistant surgeon in the United States Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, and graduates of a regular medical college. Medical gentlemen desiring to apply for examination should make their applications to "Supervising Surgeon-General U. S. M. H. S., Washington, D. C.," without delay.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — Regular meeting Monday evening, April 18th, at eight o'clock. Reader, Dr. H. C. Haven. Subject, The Systematic Weighing of Infants. Election of new members.

M. H. RICHARDSON, M. D., Secretary.

CORRECTION. — In the formula for Guttman's treatment of diphtheria by pilocarpin in the JOURNAL for April 7th, page 323, second column, near the top, for pepsin gr. 1-1½ (0.06-0.08), read pepsin gr. 9-12 (0.6-0.8).

BOOKS AND PAMPHLETS RECEIVED. — Bovine Tuberculosis in Man. An Account of the Pathology of Suspected Cases. By Charles Creighton, M. D. Cantab. With Illustrations. London: Macmillan & Co. 1881.

An Improved Self-Retaining Rectal and Vaginal Speculum. By A. F. Erich, M. D. (Reprint.)

The Asylums of Europe. By George M. Beard, M. D. (Reprint.)

The Insufficiency of the Ophthalmoscope as the Sole Test of Errors of Refraction. By Dr. C. R. Agnew, New York. (Reprint.)

Sixty-Seventh Annual Report of the Trustees of the Massachusetts General Hospital. 1880.

Sympathetic Inflammation following Operations for Cataract. By David Webster, M. D. (Reprint.)

A Guide to the Examination of Patients and the Diagnosis of Disease. By Richard Hagen, M. D. Translated from the second revised and enlarged edition, by G. E. Gramm, M. D. New York and Philadelphia: Boericke and Tafel.

Lectures upon Diseases of the Rectum and the Surgery of the Lower Bowel. Delivered at the Bellevue Hospital Medical College. By W. H. Van Buren, M. D., LL. D., etc., etc. New York: D. Appleton & Co. 1881.

First Biennial Report of the Board of Trustees and Officers of the Minnesota Hospital for the Insane for the Fiscal Years 1879 and 1880. St. Peter: J. K. Moore, State Printer. 1881.

The Metric System in Medicine, containing an Account of the Metric System of Weights and Measures Americanized and Simplified, a Comprehensive Dose Table, and Three Hundred Practical Illustrations of Metric Prescription Writing. By Oscar Oldberg, Phar. D., etc., etc. Philadelphia: Presley Blakiston. 1881.

A Treatise on Bright's Disease and Diabetes, with special reference to Pathology and Therapeutics. By James Tyson, M. D. With Illustrations. Philadelphia: Lindsay and Blakiston. 1881. (A. Williams & Co.)

First Biennial Report of the North Carolina Board of Health, 1879-80.

Original Articles.

SO-CALLED CONCUSSION OF THE SPINAL CORD.¹

BY R. M. HODGES, M. D.

A CLASS of cases spoken of as "spine cases," or cases of "concussion of the spine," has, of late years, become notoriously common. These designations are used to signify the results of a traumatic violence inflicted upon the spinal column, unaccompanied by any external physical signs of local injury, but attended by the subsequent development of medullary disease, or of various functional disturbances, the assumed source of which is a lesion of the spinal cord.

The term "concussion of the spine" is, however, misapplied and erroneous. The bones of the spinal column may be stirred with vibrations from an inflicted blow, but the effect, so far as they are concerned, is a passing one. If they are transmitted to the spinal cord certain medullary symptoms or derangements may ensue. We may therefore properly speak of "the symptoms of or following concussion of the spinal cord," but the abbreviation, which usage has made familiar, is inaccurate, because it makes the cause of injury appear to be the injury itself.

The so-called "symptoms of concussion of the spinal cord" occur with great frequency after railroad collisions or accidents. Indeed, a distinct lesion of the spinal cord, consequent upon railroad collisions, has been asserted to exist; and the term "railway spine" is used in England as a popular epithet, synonymous with "concussion of the spine."

"The true 'railway spine,' caused by concussion, without any direct contusion, only takes place in collisions, and then only when the back of the injured person is turned in the direction from which the blow comes."²

"The force which carries a person forward in any sudden stoppage of a railroad train is represented as his own weight multiplied by the square of the velocity of the car he occupies."³

The provocation of these symptoms is not, however, the exclusive prerogative of railroad accidents. Defective highways, the non-removal of snow and ice from sidewalks, open and unguarded coal-holes and cellarways, the starting of horse-cars and omnibuses, etc., are among the familiar agencies by which they are said to be occasioned. Not rarely they succeed injuries, such as strains, twists, and wrenches, in which no jar or other force implied by the term concussion can have been exerted. Mere fright is declared to be a demonstrated cause, and the apparent inadequacy of the alleged source to which the symptoms are traced is often commented on. The suspicious attitude in which the subjects of them are frequently thought to stand is not diminished by the story of their origin.

It is sometimes remarked of an individual that he was "never himself again," after a certain "shock to his nervous system." A railroad train plunged into the chasm of an open draw-bridge, forty-six persons losing their lives, and some thirty others being more or less severely injured. One car broke in two near the middle, leaving its rear portion on the edge of the abyss, while the front went down. The occupant of the seat where the break occurred was suddenly confronted with the horrors of the scene, and the sight of his struggling and drowning fellow passengers. He received no bodily injury, but a long contest with nervous symptoms ensued, similar to those attributed to concussion of the spinal cord. He was obliged to give up active business, and to

the day of his death, many years afterwards, was unable to sit except upon an air-cushion, or to bear the jar of riding in any vehicle on wheels.

"During the bombardment of Strasbourg, many persons became paralyzed in consequence of the fright incident to the bursting of shells in their apartments. Most of them recovered, and could be classed as cases of emotional paralysis. Others became worse, and exhibited all the evidences of organic spinal disease."⁴

Sudden, entire loss of hearing, never recovered from, was once alleged to me to have been the result of a great fright in a storm at sea.

The variety of influences giving rise to the symptoms under discussion attests the inexactness of the name by which they are designated, and justifies the use of the words "so-called" as a prefix. The etiological importance attached to them, however, is due, not to the specific peculiarities of the agency by which they are provoked, but to the fact that annoying litigation and exorbitant claims for pecuniary damages are constantly the grave result of their existence.

Cases in which the so called symptoms of concussion of the spinal cord are developed present themselves under several forms, namely:—

(1.) Those which, at once, or very shortly after the injury, terminate in a fatal result.

(2.) Those which, followed immediately by a greater or less degree of paralysis, or other nervous derangement, terminate favorably, recovery taking place in a few days or weeks.

(3.) Those which are followed by serious and demonstrable evidence of increasing disease of the spinal cord.

(4.) Those in which the patient, at first apparently unaffected or but slightly harmed by the injury, within a variable period, often of considerable length, develops obscure general symptoms, referred to the spinal cord, which show little disposition to increase in severity, or to disappear, and are, in great part or wholly, subjective.

It is frequently asserted that symptoms of concussion of the spinal cord may be developed very long, even a year or more, after the accident. In the famous "Sagar case" two years and a quarter had elapsed.⁵ If so, they can be traced back by connecting links of definite, though perhaps slight, indications to an early period after the patient's injury. Oversight may explain the failure to detect them, but their appearance actually for the first time, after the lapse of months, should be looked upon with distrust, so far as connection with antecedent injury is concerned. It is the characteristic of concussion that its phenomena are immediate, though the recognition of them may not be equally prompt. Their aggravation into severe and dangerous symptoms of organic disease is not likely to be deferred for any very long period.

The first class of the above division is assumed to be one in which concussion of the cord has been inflicted, because after death no lesion is found, either with or without the aid of the microscope;⁶ the symptoms, so far as any may have existed, indicating an injury of the spinal marrow, which, without any autopsy, is not otherwise explainable.

The second class is familiar to hospital surgeons as the result of falls from "aloft," from stagings, ladders, roofs, or windows; burial beneath brick walls at fires, or banks of earth being excavated; and other accidents of a similar nature. The characteristic features which belong to it are that the symptoms are most severe at the onset, and that they speedily show a tendency to improve. It is often difficult to say in the beginning, or

¹ Read before the Boston Society for Medical Improvement, January 26, 1880.

² Rigler, *Rév. médicale*, No. 29, 1879, p. 249.

³ Buzzard, *Lancet*, March 30, 1867, p. 389.

⁴ The Physician, vol. xiii., No. 2, 1880.

⁵ *Med. Times and Gaz.*, vol. i., 1869, p. 465.

⁶ Ziemssen, vol. xiii., p. 346.

for some time afterwards, that the lesion is not fracture of the vertebra, rupture of the medulla, or hemorrhagic pressure.¹ It is only when the rapidity of the recovery has begun to reveal itself, or where its completeness has been demonstrated, that, in the absence of evidence as to any other injury, a concussion of the spinal cord can be assumed to have occurred.

The third and fourth classes comprise the so-called "spine cases," familiar to lawyers and courts of law as well as to physicians. The third class embraces the cases which are known as myelitis, sclerosis, meningitis, etc., and are of comparatively rare occurrence from traumatic cause.² The fourth class includes those of functional disorder, presenting symptoms, the knowledge of which is obtained not by observation, but from the statements of patients, and which have no foundation in any recognizable medullary lesions; these being insufficient to cause fatal results, there are, consequently, no post-mortem examinations to enlighten us. Actual or anticipated litigation impresses them with exaggerated and emotional characteristics, and not infrequently provokes pure malingering.

The patient generally describes his symptoms somewhat as follows: Insensible, or greatly prostrated, or merely "out of sorts," for a certain length of time after the accident to which his ailments are attributed, evidence of settled injury gradually subsides, and he believes himself to have recovered. Such may be actually the case. But it often happens that he shortly becomes indisposed again, and unable to pursue his business with his habitual energy. He loses flesh; grows haggard and "changed;" complains of pains in his back, head, and elsewhere, and of a confused mind and failing memory. His sleep is disturbed; he has a feeble circulation; becomes irritable in temper; exhausted by slight efforts, mental or physical; tired by conversation; unable to walk without extreme fatigue; depressed in spirits; confined to the house, and finally even to the sofa. A tenderness up and down the spinous processes of the vertebra; functional disturbance of the bladder and sexual organs are or may be present; and impairment or complete abolition of one or more of the special senses, and a certain degree of paresis, are often asserted to exist. The mental condition sometimes verges on imbecility or insanity. The digestive organs are but little, if at all, disturbed.

A certain number of cases of inflammation or degeneration of the spinal cord, following concussion, find their way into the courts; but they are rare in this connection compared with those whose claims have no similar or equivalent foundation. They present many difficulties of diagnosis, not so much with reference to their general character as in regard to certain details and refinements; and in these particulars they tax the skill of the most distinguished special pathologists. While they often present exaggerations, due to collateral surroundings, their objective symptoms are not readily confounded with the vague phenomena of the constantly recurring cases, which owe their seriousness to the peculiar circumstances of a money-making nature by which they are invested.

To this latter class the following pages are devoted, their object being to call attention to the characteristic peculiarities which follow an assumed concussion of the spinal cord when the added element alluded to is present, or which are begotten by it when no real organic lesion justifies their development.

Whenever the reality, nature, extent, and future of an alleged injury, such as is under consideration, becomes the subject of legal inquiry, extreme views and antagonistic statements are sure to be advanced. The patient's own medical adviser is sometimes in the wrong. His personal relations and familiarity with the individual himself are apt to encourage an acquiescence in statements which a stranger would not hesitate to challenge. On the other hand, the injustice of overlooking genuine signs of organic lesion may, and perhaps often does, occur, from prejudice or ignorance on the part of a real or so-called expert, or because the subjective symptoms deceive him. Where both classes of symptoms are present, the objective should, and usually do, predominate, leaving little, if any, doubt in the mind of a candid observer as to their existence or significance.

The patient himself, who has instituted, or is on the point of instituting, a suit for damages, stands in a very different position as regards a liability to exaggerate from one who has no motive for deception. In mild as well as in severe and serious cases such persons, with perfect honesty of conviction, believe themselves the subjects of every symptom which conversation or cross-questioning suggest.³ A designing person may simulate a type of disease which neither exists nor has existed, or a truthful individual may overstate his account of symptoms really due to the cause assigned, but which by no means possess the seriousness attributed to them, or he may ascribe to a particular injury ailments which it has in no way occasioned. Judges of courts do not hesitate to express their opinion of the extravagant, if not dishonest, nature of a large number of the suits in which the plea of "concussion of the spine" is maintained, or, with increasing frequency, to set aside the verdicts of juries by whom they are tried as excessive or contrary to the weight of evidence.

For quite manifest reasons the simulation of disease affecting the nervous system appears to be especially chosen by impostors. In the old days of the press-gang, insanity, epilepsy, and paralysis were frequently assumed by the victims who desired to escape military service. Malingers and hysterical impostors in modern times have also successfully counterfeited various forms of spinal disease. An account of "the most extraordinary case of malingering on record," which was successfully carried out in eleven different hospitals, many eminent physicians and surgeons being deceived, by a man who, for four years, between 1868 and 1872, passed his time in various London hospitals, simulating certain nervous affections, will be found in the *Lancet*, vol. i, 1872, p. 219.

In a case not long since tried in this city (Hackett v. The Eastern R. R. Co.) the plaintiff claimed to have been injured in the spine and to be paralyzed. The jury awarded him \$39,500. This verdict was set aside as excessive, but the court determined that if the plaintiff consented to a judgment of \$30,000 a new trial would not be ordered. The case was finally settled out of court for \$20,500, a little more than half the award of the jury, the plaintiff preferring to accept that sum rather than to take the chance of a larger though uncertain amount, the payment of which would be deferred by a new trial or the arguments on exceptions taken at the first.

Of twenty-one cases where the so-called symptoms of concussion of the spinal cord were alleged to be present which have been under my personal care, ten are believed have been proved deceptions, and in six the diagnosis,

¹ American Journal of Medical Sciences, U. S. Vol. XV, p. 74. Achurst, Injuries of the Spine, page 9. St. Bartholomew Hospital Rep., 1869, page 15. *Lancet*, January 8, 1876. Rev. medical, vol. iv, p. 649.

² Transactions of the London Pathological Society, vol. X, p. 29. *Lancet*, December 13, 1876. *Medical Times and Gazette*, Vol. I, p. 475. Transactions of the London Pathological Society, vol. viii, p. 41. *Archiv für Psychiatrie*, etc., 1878. *Oesterreich. Jahrbücher*, III. 4 Heft, Wien, 1879.

³ *Lancet*, January 15, 1881, page 101.

as regarded deception, was doubtful. Of twenty-eight similar cases observed by Rigler,¹ seven were found to be simulated, and in thirteen the diagnosis in regard to fraud was doubtful. Of forty-nine cases, therefore, it would appear that thirty-six, or three fourths of the whole number, were really or probably deceptions.

This instinctive or inherent tendency to exaggerate being so generally acknowledged, it follows that in estimating the indications of any given case the first endeavor should be to eliminate the equivocal manifestations which are or may be due to a desire not to get well, to an over-eagerness for heavy damages, hypochondriasis, natural mental weakness, general bodily feebleness, and malnutrition. Rheumatism, rheumatic arthritis, uterine disease, the secret and subtle influences of syphilis,² and chronic renal disease, — both of them active and important factors in the production of disorders connected with the nervous centres — are also to be carefully considered in any attempt to discriminate between traumatic and pathological conditions. No one who remembers "spinal irritation," formerly of frequent occurrence, but which "has almost passed from the memory of the present generation of physicians" (Ziemssen) can fail to recall its indefinite features, similar to those following "concussion of the spine," and not be impressed by the reminiscence with the number of symptoms which may be viewed with suspicion as having no necessary connection with antecedent injury.

The so-called symptoms of concussion of the spinal cord are liable to be unnecessarily prolonged in other countries than our own. Rigler gives the name of siderodromophobia to a particular phase of nervous irritability exhibited by railroad employees, the result of prolonged service and exposure to constant jar, which is liable to be exacerbated by traumatic influences in a very active and disturbing manner, especially in those who have shown any predisposition to its existence. He describes it as a spinal irritation, more or less intense, with a general disposition to hysteria, and a morbid aversion to the habitual occupation. Before the law of 1871, by which the German railroads became liable for injury to their workmen as well as their passengers, employees thus affected, being anxious to gain their living and to keep at work, managed by an energetic effort of the will to control their nervous condition. He attributes the increased number of injured employees since 1871 to the absence of any further motive for this endeavor. The number of accidents which were the subject of claims in the five years, 1871-76, was, on one road at least, nine times greater than before the new law, and the sums claimed were much larger. In fifteen derailments before 1871 there were but two injuries leading to claims for disabilities incurred. Seven derailments subsequent to 1871, occasioned eighteen suits at law.³

I have met with what I suppose to be siderodromophobia but once. In this case an engineer of superb physique, and twenty-six years' experience in his vocation, although thrown from his locomotive into an adjoining ditch by a collision, was so little hurt that he immediately set to work drawing the fire from under his boiler. The hysteric condition above described developed itself almost at once, and after the lapse of more than two years he still had such a dread of his occupation that he was practically disqualified for its continuance.

In by far the larger proportion of litigation cases, where so-called symptoms of concussion of the spinal cord are alleged to exist, purely subjective phenomena are the predominant features. If the nervous centres are really involved the changes in most instances are secondary, and result from anemia and malnutrition, developed by circumstances only indirectly connected with a traumatic cause, such, for example, as are due to poverty, demoralizing mental influences, particularly

those peculiar to the female sex, or which arise from indignation at the cause of the injury received, loss of employment and wages, anxiety on account of responsibilities left unguarded, or the accumulating indebtedness being incurred.

Certain uniform and prominent points connected with cases in which claims for compensation are set up call for special comment.

Sprains of the ligaments of the vertebrae, rupture of the complicated aponeuroses and muscles of the back are common and enduring lesions, too obvious in their symptoms to need detailed description. They are, without exception, the most frequent cause of the phenomena assumed to be those following concussion of the spinal cord. They give rise to much local pain, to a rigidity of the spine, a difficulty in rising from the seat, a stiffness in walking, and contribute readily to any disposition on the patient's part to make much of his injury. The attitude, or the cautious and constrained movements of the body, may be made to suggest inferences which cannot be too guardedly accepted.

The tenderness to touch, as well as the intermitting pain characterizing periosteal inflammation of the vertebrae, which occasionally follows blows on the spine, often leads to the impression, on the part of patients at least, that they are symptoms of so-called concussion of the spinal cord.

In three cases that have come under my observation the thickening of the bones which attended the above-named condition was made much of by the counsel for the plaintiff. In one, occasioned by the fall of a snow-slide on the back of the neck, great deformity and discomfort resulted from the increased growth in the cervical and dorsal vertebrae. In all recovery took place, so far as pain and general symptoms were concerned, though the osseous hypertrophy remained permanent. Mr. Birckett has, however, reported a case in which the exudation reached such a degree as to occasion paraplegia from pressure on the cord, leading finally to a fatal result.⁴

Neuralgic and hysterical phenomena, due to injury of the coccyx or sacrum, from falls or blows, and resembling in some degree those attributed to concussion, are by no means uncommon.⁵ The ligaments of the pelvis, which help to form foramina for the passage of important nerves, may be more or less damaged in the manner just alluded to, and the abiding pain (if not the nervous manifestations), which attends the injury, is precisely that which follows ligamentous sprain elsewhere. Deep-seated pelvic inflammation, and uterine displacement, give rise to painful sitting and walking, accompanied by neuralgic sensations and hysterical symptoms.⁶

In all cases where concussion is said to have been inflicted, pain on pressure over the spines of the vertebrae is adduced as almost conclusive evidence of its results. It is, however, very questionable proof of a lesion connected with the spinal cord. Pressure on these processes, especially on those of the upper dorsal vertebrae, produces pain and other symptoms in persons who present no signs of medullary disease.⁷ "It is probably no exaggeration to say that of one hundred patients who complain of spinal pain, in ninety-nine there is no spinal disease."⁸

Derangements of sensation are so decidedly subjective

⁴ *Lancet*, vol. ii., 1868, p. 763.

⁵ Periostitis of the coccyx is not an infrequent result of a direct blow. I have twice had occasion to remove this bone for subsequent necrosis.

⁶ *Duncan*, *Med. Times and Gaz.*, Nov. 30, 1878.

⁷ *Westphal*, *Lond. Med. Record*, 1876, p. 92.

⁸ *Gowers*, *Med. Times and Gaz.*, Nov. 8, 22, and Dec. 13, 20 1879.

¹ *Rév. médicale*, No. 29, January, 1879, p. 249.

² "Seventy-five per cent. of all cases of locomotor ataxia are of syphilitic origin." (*Gowers*, *Medical Times and Gazette*, October 16, 1880.)

³ *Rév. Méd.*, Jan. 1879, page 249.

symptoms, perceptible to the patient alone, that they must always be accepted with hesitation, especially when described under the terms of "burning," "flashes of pain," "formication," etc. "Modified sensitiveness to touch is inexactly appreciated by compasses or the aesthesiometer; the individual variations, and those of the same parts on the two sides of the body ("tactile squint," as it has been called), often depriving these instruments of any positive value.

Derangements of motility, as shown in a complete or partial loss of muscular power or control, are readily simulated, and can be accurately estimated only by the aid of electricity, by etherization, and by the presence or absence, in a greater or less degree, of the various reflexes.

Unfortunately, the tests of electricity, the experimentum crucis of etherization, and various physical explorations, are often refused when they are proposed. Indeed, the privilege of any medical examination is sometimes denied the defendant, and justice is deprived of evidence which, in certain instances, can alone distinguish real from unreal symptoms in a conclusive manner.

In 1872 the Metropolitan Railroad was mulcted in the sum of \$10,000 by a man, the detailed account of whose symptoms satisfied the jury that, as the result of a concussion of his spinal cord, he was utterly enfeebled in body, and wholly unable to earn his living, or to perform the ordinary acts of life with comfort. It required the united strength of three policemen to take him to the station-house, when, at the close of the trial, he celebrated his victory by getting too uproariously drunk. He has ever since followed the active and laborious calling of a junk dealer. Etherization, in this instance, would, undoubtedly, have shown the injustice of the man's claim.

The inspectors of the state prison at Charlestown asked me, some years ago, to see an apparently paralyzed convict, whom they suspected of malingering for the sake of escaping hard labor and of getting the better food given as hospital diet. He had been in the prison hospital for a year, and, in fact, was about being "pardonned out" on account of his incurable condition. Suspicion had led to his being closely watched; but no one had ever seen him move his lower extremities, which were said to be paralyzed to such a degree that he could neither get out of bed nor turn over. No pricking, pinching, or tickling, or any other familiar test, could elicit the least sign of motion or sensation. His food, at one time, was placed so far out of his reach as to oblige him to get out of bed if the pangs of hunger compelled him to seek it. This experiment was persisted in so long that the man was nearly starved, his food remaining untouched; and the inspectors finally put an end to a procedure which seemed to them too cruel. The test of ether was then proposed and tried. Not a limb stirred during its administration; but after it had been pushed to complete anesthesia he was allowed partially to come out from its influence. He then got down from the table on which he had been lying, walked and danced about in his semi-conscious state, desired to fight the bystanders, and, later in the day, was given his choice between solitary confinement and going to work.

Assertions are common in regard to frequent micturition and incontinence of urine. Without exploration of the urethra and bladder statements in regard to disturbances so capable of simulation can have little value as indications of injury. No single symptom is more frequently and emphatically advanced than the alleged existence of sexual impotence, or "loss of power." The actual fact is obviously incapable of verification.

In an instance where a claim of impotence was strenuously put before the jury, and their sympathy given expression to in a verdict of \$18,000, the plaintiff was convicted of bastardy not long after the trial.

In another case, where the claim was settled for \$10,000, this alleged disability being the chief ground for damages, the claimant was married a year afterwards, and his wife in due time gave birth to a child, presumably legitimate. Fifteen months after the Wollaston accident a similar event occurred in the family of one of the injured on that occasion, who claimed to have been made wholly impotent, and was paid \$5,500.

Physiologists have given much study to the nerves controlling the genital organs, bladder, and rectum. The functions of the genital organs "depend on the integrity of the reflex loop to and from a special centre situated in the lumbar enlargement. Disease of this centre, or of nerves leading up to or from it, abolishes sexual action. If the disease is higher up this centre participates in the overaction of the reflex functions. It is, however, one of the superficial reflexes, the excitation being from the skin, and it shares the excess of the superficial rather than the deep reflexes, being especially intense when the conduction of sensation is impaired. Sexual power, however, is affected, even in these cases, on account of the fact that *psychical influences* are an essential for the due action of the centre."¹ It would seem, therefore, that the symptom of impotence may be a functional one; that it does not necessarily imply an organic lesion, or permanency of existence, and that its importance as bearing on the question of damages has been overestimated.

The special senses of sight and hearing cannot be lost or impaired without ready recognition.² By tests well known to ophthalmology and otology attempts at simulation can readily be detected. Patients often assert that they are unable to read, but the disability generally depends upon other causes than actual impairment of vision. With regard to the sense of taste and smell there are no means at present known by which deception can be recognized. In one instance where both of these senses were annihilated by concussion, and responded to no tests which ingenuity could devise,³ although twelve years afterwards, by the report of the patient's husband, the general health was regained, they still remained impaired. At the time of trial, and when evidence in regard to the point was put in, there were those who did not believe that they were so completely lost as was asserted to be the case. In a case of chronic myelitis from railroad injury, which occurred in 1872, absence of the sense of taste has never been restored.

At the Medical Society of London, March 7, 1881, "Mr. Wordsworth read a paper on the Defects of Vision attributed to Railway Collisions, speaking only of those cases in which no structural lesions can be discovered, of which he had seen about twelve who complained of dimness of vision, etc., and inability to apply themselves continuously to any occupation requiring the use of their eyes. On examination no signs of injury beyond slight hyperæmia of the fundus oculi were discovered. Yet in all the cases they received considerable pecuniary compensation for the injuries, on account of the unfavorable prognosis that had been given. He had ventured to give a more cheerful opinion as to the ultimate recovery, and, so far as he had been able to trace the cases since, he believed they all recovered on the settlement of their claims, and had resumed their wonted occupation. He remarked on the fact that medical men were seldom consulted in these cases, except with a view to their assisting to obtain compensation; stated that in a long experience in hospital and private practice he had never seen any of these cases simply as a patient either before or after the settlement of their claim for compensation. These are circumstances which give rise to a doubt whether they are really *bona fide* cases, and are entitled to the importance that has hitherto been attached to

¹ Gowers, Med. Times and Gaz., December 13, 1879.

² The eye in its relation to spinal injuries is discussed in the Archives Gen. de Med., 1869, vol. ii, p. 236; the Lancet, January 15, 1870, page 76, and British Med. Jour., July 2, 1869.

³ Quinine, salt, red pepper, aloes, assafoetida were put on the tongue and swallowed without any apparent impression being made. Fine cut tobacco mixed with sugar was chewed as an agreeable morsel. Valerianate of ammonia, ether, and a most villainous stuff known as "Hartford cicuta" were snuffed up without any apparent perception of odor.

them. The cases referred to by him manifested no retinal changes."¹

The apparently trilling but continuous jar to which traveling railroad officials are subjected is declared sufficient in itself to provoke nervous disease, "characterized by a loss of visual power, and of hearing, and a sensation of feebleness and numbness which renders the acts of walking and standing painful. Persons affected grow thin; the generative power dies out; the body is agitated by starting and convulsions, and the intelligence is weakened." One fifteenth of the drivers and firemen of the Lyons and Paris Railroad, in 1857, were found to be suffering from affections of the brain and nervous system.² I am informed by one of the most experienced railroad superintendents in New England, that in his opinion, this statement would apply with equal truth to engineers and conductors in this country.

If constant traveling by railroad engenders a morbid predisposition to disease, the motto *periculum privatum, publica utilitas*, which George Stevenson inscribed on the first car, drawn by the first engine, along the first railroad track, would not inaptly adorn the panels of those which nowadays carry many a half-invalid, middle-aged, and over-worked professional or business man, fifty or more miles a day, from a house in the country, or at the seaside, to his office or counting-room. The wear and tear of engrossing affairs; the high-pressure work of a day which is shortened to the interval between morning and evening trains; the strain of the hurry and running to reach the station, aggravate the pernicious jar of habitual travel, by which railroad men are, as they say, "torn to pieces," and reveal their combined effects in the "nervous exhaustion" so often experienced by the class of persons alluded to, and constitute a circumstance, not without importance, in connection with many cases where the injuries of a collision, or other accident become the subject of litigation.

The opinion is sometimes expressed in evidence for the defense given before juries that the injury was inflicted at a point so low down in the back that the spinal cord cannot have been hurt; that the cauda equina is alone involved, and consequently that symptoms such as might occur if the cord itself were implicated do not exist in reality, or must be otherwise explained.³ No more erroneous statement could be made. The severest form of myelitis as well as the subjective symptoms of concussion of the spinal cord may follow such an injury. A case reported by Mr. Curling⁴ is in point. A fall on the nates while sliding, which did not prevent the boy from getting home unaided, was followed in five days by paralysis of the lower extremities, subsequently by loss of reflex action, retention of urine, bed sores, etc., and finally by a fatal result. At the autopsy no injury of the spinal column was found, but the cord was softened and the seat of universal pathological changes. Here there was no motive for deception and the symptoms followed the course of a recognized disease. In a case, however, reported by Dr. S. Cabot, where a woman fell on the floor in a sitting posture, a child having pulled away the chair in which she was about to place herself, no part of the spine being struck, insensibility and con-

vulsions occurred at once, followed by blindness, deafness, and loss of the sense of smell.⁵ These anomalous, if not hysterical symptoms, together with others assumed to be those of concussion of the spinal cord, made the subject of them a permanent pensioner on the bounty of the family with whom she lived. In the estimation of those who knew her, complete restoration eventually took place.

(To be concluded.)

FOREIGN BODIES IN THE BLADDER.⁶

BY ARNER POST, M. D.

THE little specimen I have to show to-night as a basis of this paper is a lead pencil about three inches long, covered with urinary salts. Its history is as follows: The patient, while at sea, fell from aloft, striking astride of some object on deck, bruising his perineum, but not otherwise injuring himself. This contusion was followed by retention of urine. The ship's medicine chest not being furnished with either a catheter or a bougie, with a sailor's ingenuity he constructed an instrument by fastening a lead pencil to the end of a wire. The lead pencil had the additional portion, which is glued on to retain the lead, removed. When the instrument was passed into the bladder the urine escaped by its side. Catheterization was successfully performed three or four times, but at the succeeding attempt the pencil separated from the wire and slipped into the bladder. There it remained about three months without causing much inconvenience. At the end of that time, being then ashore, he was seized with retention. Consulting an apothecary in whose skill in urinary difficulties he had reason to have confidence, he was given a diuretic, with instructions to hold his water as long as possible, then to pass it suddenly with all his force. Following directions, he failed to pass his water, and came into my hands in the anxious condition common to patients with retention, with the end of the pencil just visible within the meatus. He was immediately etherized, and the pencil extracted (not without the application of considerable force) by means of a pair of dressing forceps. Well-marked cystitis was present, but the patient almost immediately passed out of my care, and his subsequent history is unknown. There was nothing to particularly awaken suspicion at the time, and his story was accepted as probably true, the not uncommon use among sailors of bougies of their own manufacture giving an additional air of probability to the account. At present I should be a little less ready to accept a similar history, and be more inclined to believe this might have been one of the very numerous cases in which a foreign body is passed into the bladder from other motives than the very legitimate one of relieving strangury.

The possession of this little specimen has interested me in the various accounts of foreign bodies in the bladder, and led me to give a short *résumé* of such cases as seemed of more than usual interest. This paper has no other value than the slight interest attaching to a superficial history of unusual cases.

Foreign bodies in the bladder (calculi not being under consideration) may be classed under the following heads:—

¹ Lancet, March 19, 1881, page 462.

² Lancet, Jan. 18, 1862, page 80.

³ The spinal cord terminates and the cauda equina begins at the lower border of the first lumbar vertebra. They occupy respectively three fourths and one fourth of the spinal canal.

⁴ Transactions of the London Pathological Society, vol. viii., p. 31.

⁵ Boston Med. & Surg. Journal, Feb. 5, 1880, p. 132.

⁶ Read before the Boston Society for Medical Improvement, April 12, 1881.

(1.) Portions of instruments introduced by surgeons and accidentally broken off.

(2.) Articles not ordinarily classed as surgical instruments, but introduced by patients for legitimate purposes.

(3.) Articles introduced accidentally in some other way than through the urethra.

(4.) Articles introduced for other than legitimate purposes.

A very large proportion of foreign bodies in the bladder consists of portions of urinary instruments which have broken while in use or have accidentally slipped from the surgeon's hands. Certain instruments are particularly liable to break, as gutta-percha bougies, which grow brittle with age, and fortunately are now seldom used. The elm-bark bougies, which are said to have been very common at one time in the South, were specially liable to fracture. In the earlier days of lithotomy it was not very unusual for the lithotrite to separate, and Lallemand's *porte-cau-fique* has often left the cup behind. Cases in which the whole or parts of instruments have slipped into the bladder are known to every surgeon of large experience; they occasionally appear in every hospital, and the specimens adorn every well-furnished museum. Of such ordinary cases it is unnecessary to make further mention.

One of the most curious cases in this category was a calculus removed by Sir Astley Cooper, which had formed around a female catheter which had lain for months in a woman's bladder. The instrument had escaped from the surgeon's hands into the urethra, and fearing to meet the responsibility of the accident he said nothing about it, but allowed it to remain. The affair was unknown until the extraction of the stone by Sir Astley.

Patients are often led by necessity or a desire for economy to substitute, for instruments regularly made, articles of domestic manufacture. Wooden bougies were not unfrequently exhibited by patients at the marine hospital during my residence there, and a similar instrument is mentioned incidentally in a case of cystitis reported some years since by Dr. Arthur Cabot as occurring in the practice of his father. I have so far hit upon no accident from the breaking of such an instrument, though several pieces of wood have been found in the bladder. I have no doubt some of them were introduced in this way.

The accidents that befall these extemporized instruments cause strange revelations of domestic economy, and are of particular interest in connection with this specimen, which would probably be classed under this head. From among the many curious cases of this character the following may be taken as samples:—

Sir Astley Cooper tells a case occurring in the practice of a provincial surgeon as follows: A man had had difficulty in passing water for two or three years, and for many months before his death had been in the habit of relieving his bladder by introducing a piece of straw. He became quite expert in the use of this instrument. One day, however, he unfortunately let the straw slip, or it broke off, and from this day he became worse. Notwithstanding his sufferings, he never made known the real cause of them, and the matter was revealed only by the post mortem; further details were then given by the wife. There were found in his bladder, behind an enormous prostate, several calculi, with bits of straw for a nucleus, three such concretions being formed at intervals along a single straw.

In the *New York Medical Gazette* for 1852 is an account of an attempt to use a piece of sealing-wax as an instrument for dilation. An old gentleman, the Hon. Mr. H., had been troubled for some years with difficulty in urinating. Various medicines giving no relief, he resorted to the mechanical assistance of a piece of sealing-wax three eighths of an inch in circumference. Of this bougie he left a portion two and one half inches long in the urethra; to remove this the gentleman had recourse to a wire, and pushed the sealing-wax on into the bladder. There it was made the subject of various experiments in regard to the solvent action of chloroform, which were successful in causing it to adhere to the walls of the bladder, whence it was finally removed by lithotomy, many small portions adhering so firmly as to necessitate their being left to separate by themselves.

In Guy's Hospital Report for 1837 is figured a calculus formed about a piece of the stem of an ordinary clay pipe, which had been used as a bougie by a man while intoxicated.

An important case in the history of surgery is given in the *Medico-Chirurgical Transactions* for 1807. Mr. Thomas, in whose practice it occurred, related the case substantially as follows: A lady was seized with retention of urine, and her husband, "who had read much in surgical books," undertook to relieve her; for this purpose he used an ivory ear-pick, and was successful in causing the urine to flow. The stream, however, was not satisfactory to him, and he re-introduced the ear-pick, which slipped from his fingers into the bladder. This gentleman's reading had given him a very well-grounded horror of incision of the urethra, and he declined the operation when proposed by the surgeon; Mr. Thomas accordingly dilated the urethra with sponge tents, and succeeded in removing the extemporized bougie.

Mr. Thomas did not claim originality in this matter. It had been previously proposed, at least. A case had also been reported by Mr. Broomfield, where he had effected dilatation in a young girl by introducing the caecum of a small animal in a collapsed state into the bladder and filling it afterwards with water.

[Incidentally, it is worthy of mention that at the close of the same article Mr. Thomas gave an account of the introduction of his whole hand into the rectum in pursuit of a stick which a young man had passed in to bring about an evacuation.]

This case of Mr. Thomas's had very important results. In 1817 Sir Astley Cooper published a paper in which he said he had resolved to employ Mr. Thomas's principle on the first opportunity, and having used it successfully and told his cases in his lectures, two others had been communicated to him by former pupils. The use of the sponge was not only painful, but very disagreeable, as the woman was usually obliged to retain her urine while the tent remained in place, which must have been almost impossible in bladders rendered irritable by the presence of a foreign body. To meet this difficulty Sir Astley first proposed a groove by the side of the sponge or a catheter through the middle. It finally occurred to him that the dilatation might be mechanically done by an instrument which would allow the escape of the urine. He acted on this idea, and in 1822 read a paper on the removal of a stone and a piece of catheter by a dilator made for him by Mr. Weiss, who, as Sir Astley says, "with his accustomed ingenuity immediately suggested an instrument infinitely better devised

than any I could have contrived for the purpose." In his first case the dilator was retained in place from eight A. M. to four P. M., when the finger could be introduced. The patient never lost the power of retaining her urine.

From the ease of dilation Sir Astley determined to do the operation in minutes instead of hours, and gave the history of his second case: A patient, occasionally subject to retention, had acquired the art of catheterizing herself; on one occasion the catheter broke, and a part remained in the bladder. The dilator was introduced, and in two minutes the urethra was sufficiently dilated to allow the introduction of a finger. Her urine passed involuntarily until the next menstrual period, after which she gained control of it.

The same article contains in an appendix an account of a case by Thomas Chapman, of Wandsworth, in which a female catheter slipped into the bladder while the operator left the bedside to reach a basin from a table. The extraction was accomplished by digital dilatation, forceps, little finger, and forefinger being successively introduced, without patient or anybody else being aware of the accident or the means taken for the recovery of the instrument.

Such are some of the steps which have led up to the now not unusual operation of rapid dilatation of the female urethra. Sir Astley Cooper's lead was not steadily followed, however, and his connection with the operation has for the most part been forgotten.

The annals of military surgery contain numerous cases in which shot-wounds of the bladder were complicated by the presence of foreign bodies in the viscus. These bodies may be either the projectile or fragments of bone, bits of clothing, or splinters of wood. Sometimes these bodies, if small, may be evacuated through the urethra. More often they form the nucleus of a calculus, which can be removed only by surgical interference. During the war of the Peninsula a sailor was struck by a ball which penetrated the right ilium. After suffering from retention for five days he passed per urethram a roll of shirting and trousers material, two inches in length. A month later lithotomy was done by the elder Cline, and a flattened ball with a piece of bone adhering to it, and encrusted with urinary salts, was removed.

One of the specimens of the Army Medical Museum is a calculus formed about an arrow-head, removed from the body of an Indian.

The cabinet of this society contains a large phosphatic calculus which formed about a conical musket-ball. The man was shot through the sacrum at Gettysburg, and the calculus was removed by lithotomy, in 1871, by Dr. Cabot.

The medical history of the war gives a table of twenty-one cases of lithotomy for the removal of traumatic vesical calculi, with extended accounts of several cases, and exceedingly interesting notes from a very wide field.

In several cases pins have been found in the bladders of children a few months old, which had apparently penetrated either from the rectum or by some other indirect passage, and parasites of various kinds have gained admission, and been passed per urethram.

In Eve's Remarkable Cases is the story of a young woman who passed from her urethra, one week before the birth of an illegitimate child, a hair-pin, which she

claimed to have swallowed two years before. She produced three witnesses who were in the room when the hair pin had gone down her throat.

The catalogue of substances introduced for other than legitimate purposes is a very long and curious one. Pieces of French chalk, barometer tubes, a watch chain, stilettos, pins, hair-pins, hair, feathers, pencil cases, pen holders, matches, an ivory whistle, small keys, a mustard-spoon handle, a leather boot lace, grass heads, and a portion of a suspender buckle.

It is but charitable to suppose that some of the individuals who thus abused their urethra were insane, as was certainly the case with the patient at the McLean Asylum who introduced the portion of the suspender buckle, which is now preserved in the museum of this society.

The most prominent position in this list must be given to the hair-pin; as a foreign body in the bladder it knows no limits of age, sex, or nationality. Its occurrence in that situation is almost too common to need more than mention, though the difficulty of extraction will always make it a subject of interest.

Dr. Bigelow reported a case, some years ago, where a girl repeatedly introduced both hair-pins and common pins.

Of the other cases some few are worth giving in detail. In the *Lancet* for August 23, 1873, is reported the case of a woman who on admission to hospital complained of intense pain in the abdomen. The urethra, which was abnormally dilated, easily admitted the introduction of a finger into the bladder where there was felt a hard voluminous body, evidently the cause of the pain. The woman then mentioned that on account of great difficulty in making water she had passed a candle through the urethra and had let it fall accidentally into the bladder; forceps were easily passed through the canal, and after some efforts the candle was caught by the wick and drawn out. The end of the candle, which had been rounded with a knife, was seen to be covered with calcareous matter.

The reasons assigned for the introduction are often as singular as the articles introduced. Mr. Beckett, in Holmes's System of Surgery, tells the case of a man who introduced the wooden handle of a steel penholder with the intention of stirring up some sediment which he believed to be there. It was necessary to open the urethra for its removal.

One of the most ludicrous cases was that of a man who introduced a piece of French chalk of convenient size and shape to the middle of which was attached a piece of string, to the other end was tied a piece of an ordinary shoe-horn. The man actually entered Gay's Hospital with this dangling from his penis.

Patients are sometimes made the subject of experiments by others. Mr. Harrison, of Liverpool, tells the story of a militiaman who was thus made the subject of a practical joke; while under the influence of liquor a prostitute, in whose company he was, introduced up his urethra a pencil case about four inches long, which Mr. Harrison was fortunate enough to remove the next day.

In 1851 Dr. Mackenzie, of Edinburgh, removed five calculi from the bladder of a laborer which were remarkable for their uniform size and shape. They were found to contain ordinary field beans as nuclei. Six months previous, while intoxicated, he had quarreled with two companions who had knocked him down and, while he was insensible from the combined effects of

liquor and the blow, had crowded beans into his urethra, as well as into his mouth and his rectum.

In 1853 Dr. Van Buren removed a stone formed upon a piece of slate pencil which the young man claimed had been slipped into his urethra by a boy with whom he was in the habit of playing.

When I was first told of the directions given by the apothecary to my patient I was inclined to look upon it as the advice of a man, unable to carry out further treatment, more desirous of receiving a fee than of returning a proper equivalent (as without doubt it was), and the result as a happy accident; but the number of cases in which similar means have been followed by an equally fortunate result would seem to show that it is not an altogether irrational procedure. A most extraordinary result of this kind is given in the *Philadelphia Medical Times* for 1872. Dr. W. Hunt reports a case of a boy who passed a galvanized watch chain down his urethra. The watch chain, which had a string attached to the middle, slipped into the bladder; in pulling upon the string the watch chain doubled upon itself, and at last the string broke. The boy was directed to drink copiously, and to resist the desire to micturate as long as possible. Fortunately the chain presented longitudinally and was passed with the first force of the full stream.

Mr. Hutchinson, as quoted by Coulson, gives directions for distending the bladder by injections in cases in which the symptoms are not urgent. Several cases are recorded in which different articles have been ejected from the bladder after repeated attempts to find and extract them have been fruitless.

Since the establishment of the greater tolerance of the bladder of operative interference such failures are less likely to occur. It is perhaps well to know that such attempts to induce the bladder to empty itself are occasionally successful, as it does not leave a man entirely helpless who does not possess proper instruments for extraction. Possibly Dr. Bigelow's straight tubes and repeated washings might be of service with certain small substances.

Cases left to themselves are not always by any means so fortunate in results, as in a case from Cooper's Surgical Dictionary: a surgeon, during catheterization of a female, was noticed to exhibit signs of confusion. He quitted his patient abruptly. The same day he left his home, and was never seen afterwards. The lady's urinary difficulty continued for several years until an abscess in the sacral region gave exit, to the astonishment of all concerned, to a blackened female catheter.

Mr. Harrison figures in his *Urinary Surgery* a head of meadow foxtail grass with a long portion of the stalk. It had been passed into the bladder, through the coats of which the stalk passed into the peritoneal cavity, causing peritonitis and death.

Articles introduced into the male urethra seem to have a tendency to pass into the bladder; certain it is that a small body once beyond the meatus is most likely to fall at last into the bladder. An attempt at an explanation was made by Christopher Heath, in 1866, in a short article on the endoscope. "I have noticed," he writes, "in perfectly healthy urethrae that there is a constant vermicular contraction of the wall of the canal, apparently passing towards the bladder, and this accounts for the well-known fact that foreign bodies in the urethra tend to pass in that direction. This is wanting in cases where any induration exists."

Sir Henry (then Mr.) Thompson took exceptions to

this statement, and maintained that the motion was in exactly the opposite direction and that foreign bodies have a strong tendency to pass outwards to the meatus and not inwards to the bladder. Several letters were exchanged but without any positive settlement of the question at issue.

The tendency of deposit to form about the central portion of an elongated object is hinted at by the deposit on the pencil, which is much thicker a short distance from the pointed end than at either extremity. Probably the roughened spot left by the knife in sharpening the pencil was the first point upon which deposit was made. The ends must naturally be subject to more or less attrition unfavorable to deposition. In certain cases, however, the deposit has taken place at the end.

An article on Foreign Bodies in the Bladder, in 1856, by M. Denncé, was copied from a French journal into the *Medical-Chirurgical Review*. The writer had collected particulars of three hundred and ninety-one cases. In closing his article the author compares the termination of cases prior to and after the introduction of lithotripsy. Before 1830, when lithotripsy may be considered to have been generally established as an operation, but four cases of extraction were recorded in the male and sixteen in women to one hundred cases of lithotomy for similar causes; while from 1830 to 1856 forty-six cases of extraction in males and twenty-seven in females are recorded, while lithotomy had sunk to twenty-one times, — a marked progress in favor of the less serious method.

An equal improvement is shown since his day when we compare his remark that "urethral lithotomy is generally to be preferred in women, but we must remember that in women the urethral operation is almost always followed by incontinence of urine, and the vaginal by vesico-vaginal fistulae," with our present method of extraction through a rapidly dilated urethra and our more successful means of dealing with vesico-vaginal fistulae.

A MEDICAL SKETCH OF LIMA.

BY A. C. BEFFINGER, M. D.
Passed Assistant Surgeon United States Navy.

It is seldom that our medical periodicals contain notices of medicine in South America, and indeed there is so little progress that it is rarely necessary; a sketch of the history and present state of the profession in Lima, the most advanced city on the west coast, may not, however, prove uninteresting to the readers of the JOURNAL.

The medical history of Lima dates from the sixteenth century or from the founding of the *University of San Marcos* by royal decree of Charles V., May 12, 1551. Twenty years later Pope Pius V. conceded special privileges to this off-shoot of Salamanca, and the title was changed to *The Royal and Pontifical University of San Marcos*.

The first university of the new world was established at the instigation of the Dominican friars, who controlled and supported it during its infancy, and for many years thereafter. Its scope was sufficiently comprehensive even for a much later period; it embraced the classics, the sciences, and professions, and polite learning in general. It was probably the first school west of the Atlantic to give medical instruction and issue medical diplomas, which privileges it held exclusively, in Peru, for two and a half centuries.

The medical department of San Marcos was under the control of a medical council, termed the proto-medico, whose presiding officer, the proto-medico, had almost absolute powers. It flourished for nearly a hundred years, but gradually declined in company with the other departments, and became defunct about the beginning of the present century. An honorary proto-medico, however, continued to exist, and through its influence the present School of Medicine was founded in the year 1810 by the Viceroy Abascal, under the title of *Colegio de San Fernando*, which was subsequently changed into that of *Colegio de la Independencia*. The school remained subject to the direction of the proto-medico till, by government decree, 1856, that body was abolished and replaced by the faculty of medicine of the University of Lima, the old proto-medico becoming the new dean.

Dr. Gayetano Heredia was the last of the proto-medicos, and the first dean; his praises, as sung by his pupils, show him to have been an able physician and scientist, with views much in advance of his age.

Immediately after the organization of the faculty the *Colegio de la Independencia* became the *Escuela de Medicina*, which name it bears at the present time. This is the only medical school in Peru, yet the yearly graduates do not number over twenty-five, the long course, seven years, influencing students to seek their medical education in countries where the goal is reached in a shorter time. The teaching ought to be good, for the faculty have been chosen since the presidency of Dr. Heredia by competitive examination. When a vacancy occurs candidates are invited to compete for it, each one being required to submit a written theme, deliver an oral composition, and finally an oral argumentation; the examiners selecting by ballot, presumably, the most deserving man. The duties of the faculty, as determined by government decree, are to manage the medical school, examine candidates for physicians and surgeons, pharmaceutical chemists, dentists, matrons, and phlebotomists, and test the qualifications of foreign physicians.

It may be useful to state here for the information of any of your readers who may contemplate settling in Peru, that before being allowed to practice they will have to pass an examination, conducted in Spanish. The professional tests need frighten no one, and very little Spanish suffices, in fact only those wishing to practice in Lima and Callao present themselves for examination, as in other parts they are never called upon for the faculty certificate.

The following scale of prices I have taken from Señor Fuentes' Statistics of Lima, from which source, indeed, I must acknowledge much valuable information:—

Por el diploma de doctor en medicina y Cirujia	\$125.
“ “ farmaceutica	\$60.
“ “ dentista	\$50.
“ “ matrona	\$30.
“ “ flebotómico	\$25.

It is rather amusing to see the M. D. placed in a diploma classification with the ancient phlebotomist, but was it not a wise move to make the apothecaries, dentists, and matrons subject to examination and control by a government faculty of medicine?

On September 7, 1854, twenty-three of the leading physicians of Lima met in the hall of the university, and organized the *Sociedad de Medicina*. The objects of the society were, (1) the advancement of medicine

in general; (2) the advancement of medicine in its special requirements in Peru; (3) the maintenance of the rights and dignity of the profession. The founders of the society deserve much praise for their energetic endeavors to make it a success and real benefit to their country. An official organ, the *Gaceta Medica*, was started, that the views of the society might penetrate all parts of the republic, but it soon languished, and from a weekly journal became a monthly, then was only published at irregular intervals, till 1866, when four of the most enterprising members took hold of it, and not only restored it to its ancient credit, but made it a really useful and instructive periodical.

The *Gaceta* now contains interesting American and European reviews, original articles and statistics upon national medicine, hygienic notices of the coast, etc., etc., which, if read by the Peruvian practitioner, would prove a great boon to his now unfortunate patients. The Society of Medicine, and *Gaceta Medica*, as far as I can learn, stand alone in Peru, and are likely to continue so for some time to come. In 1827 a few venturesome spirits started the *Anales de Medicina*, but a speedy reproof followed their temerity, for the organ died after a year's shameful neglect by the profession.

The hospitals of Lima, with but a single exception, the *Dos de Mayo*, deserve scarcely a passing notice. The great necessity for a large city hospital with modern appointments, was severely felt during the yellow fever epidemic in 1868, and immediately afterward the Municipality of Lima invited plans and proposals for the construction of one. It was determined to name the new hospital *Dos de Mayo*, in honor of the victory over the Spaniards, May 2, 1866, in the bombardment of Callao. Excellent judgment was exhibited in the selection of a design, unique, and in every way adapted to the country. The foundation was laid in 1869, and the building completed and occupied in 1870.

The construction is upon the pavilion system, the plan embracing eighteen wards, two to each pavilion, radiating from a circular patio, and connected at their inner extremities by a portal.

The patio is made into a lovely flower garden, and the spaces between each pavilion are decorated with flowers, walks, and rustic seats.

Twelve of the wards are public and contain fifty-five beds each, the remaining six being private or paying, and accommodating about twenty-four patients each; thus the hospital will dispose comfortably of about eight hundred patients. The ventilation is excellent, the absence of rain and the equable temperature permitting constant perfusion by the southern sea winds, which blow moderately the year round. The water supply is drawn from the Rimac River several miles above the city, and, with the exception of a little hardness, is pure and cold. The sewage system is good, and efficient, the value of secure trapping and frequent flushing being fully appreciated.

The administration is by the Sisters of Charity, a Sister Superior being in charge, with sixty assistants. They keep everything scrupulously clean, and their nursing is all that could be desired. There are two internes to each ward, who serve one year. They are students in the Medical School and are selected in the main by favoritism, as a consequence of which their service is by no means efficient.

Their medical staff consists of seven members and two auxiliaries, and as the practice is general, each member is physician, surgeon, and specialist. These

gentlemen are well selected, and represent the best talent in the city, several of them being professors in the Medical School.

The following statistics are for the year 1879.

Number of patients remaining from previous year	494
Admitted during the year	7927
	<hr/> 8421

Of these, 7339 were discharged, 681 died, and 401 remained at the end of the year. Of the total 8421 there were 8088 non-paying, and 333 paying, patients.

The total number of sick days was 200,663, giving a daily average of 549 inmates. A little over eight per cent. of the whole number died; the causes of death being as follows:

Pulmonary affections	{ Phthisis 279
	{ Pneumonia 92
	<hr/> 371
Dysentery	90
Hepatitis	35
Pernicious fevers	34
Alcoholism	10
General affections	141
	<hr/> 681

The large number of deaths from pulmonary affections reminds one of Boston statistics, and would seem out of place in this latitude, but the intense humidity of the atmosphere due to the fogs which prevail here nine months in the year, readily explains it.

The expenses of the hospital amounted to \$107,860.11, making the value of each ration \$0.537.

The other hospitals of Lima may be briefly touched upon.

The *Santa Ana* is the general women's hospital, but is an old building, ill-suited for the purpose. It contains twelve wards, and is capable of accommodating about five hundred patients. It is served by twelve Sisters of Charity, who take excellent care of the patients and wards. Here, as at home, the sewing-machine victims present a goodly share of the womb cases; and the great color cast in the population adds noticeably to the ratio of fibroids.

There are five officers upon the medical staff, who have their hands full.

Attached to the *Santa Ana* is a small lying-in hospital, in which about one hundred parturients are delivered yearly.

There were 10,556 patients treated in the *Santa Ana* during 1879, with 676 deaths, phthisis and pneumonia, as usual, taking the lead.

San Bartolomé is the military hospital, though originally intended and used for sick negroes. It contains ten wards for privates and two for officers, the total capacity being about nine hundred. The administration is by the Sisters of Charity, and is exceedingly bad. The patients are poorly cared for, and the wards filthy. In one ward was observable typhus, typhoid, and erysipelatos patients mixed indiscriminately with the recently wounded. Overcrowding was the rule, and a death-rate of fifteen per cent. criminally accused the management. There being no medical organization in the army, the staff of the hospital is composed of civilians, and numbers sixteen. The want of experience in military surgery and discipline in these gentlemen was evident in every part of the building, and seemed to be the cause of the total badness of things. The charge of several hundred soldiers needs the discipline of the officer, as well as the care of the surgeon.

The statistics of San Bartolomé are very meagre; no advantage seems to have been taken of the surgical offerings. During 1879 there were treated 529 officers and 9,731 men; of these, 493 officers and 8,473 men were discharged, and 4 officers and 122 men died. The statistics for 1880-81 will show very differently, but I doubt if they will ever be published truthfully.

There are a half-dozen more small public and private hospitals, not necessary to enumerate, and many public buildings have been converted into provisional ones since the campaign upon Lima. There are at present at least three thousand Chilean and Peruvian wounded distributed among the various hospitals, but not the slightest benefit to surgery can be hoped for in all this wide field. There are not ten capable surgeons in the entire Chilean army. The weakness and inefficiency of this service brought a most interesting case of strangulated scrotal hernia under the care of Surgeon C. H. White, U. S. Navy, the successful treatment of which warrants its record. The man was a trooper, and was thrown from his horse during exercise, producing a strangulated scrotal hernia of the left side. Dr. White chanced to be on shore at the time, and was called in consultation. The Chileans were at a loss what to do, so Dr. White took charge of the case. After several hours' fruitless efforts at reduction by the usual method, aspiration was decided upon, the needle being passed into different parts of the tumor, which immediately began to diminish, and in a few minutes was not more than a third of its original size. The needle was then withdrawn, and a slight taxis at once effected reduction. The patient was seen eight days afterward, and was doing splendidly, not the least constitutional trouble having followed.

I have not heard of this treatment being used before, and its rapid and complete success entitles it to general consideration.

U. S. STEAMER "LACKAWANA,"
Pacific Squadron.

Hospital Practice and Clinical Memoranda.

UNUSUAL URETHRAL CASES.¹

BY C. B. PORTER, M. D.

TRAUMATIC STRICTURE, WITH FOREIGN BODY IN PROSTATIC URETHRA; PERINEAL ABSCESS.

CASE I. J. R. The patient was thrown from a wagon sixteen years ago, striking astride the wheel. Passing water shortly after he found it extremely bloody and the act very painful. For several days this bloody urine persisted, gradually growing fainter in color until at last all traces of blood disappeared. Before long he noticed there was some difficulty in micturition, especially in starting the stream. He delayed consulting a surgeon until matters had advanced so far that he was obliged to pass water at very short intervals, often rising five to ten times nightly and walking the floor ten to twenty minutes before he could start the stream, which then came only in drops. This was his condition on entrance to the hospital; in addition there was a perineal abscess, so that he was in pain more or less

¹ Read before the Boston Society for Medical Improvement, April 11, 1881.

severe throughout the whole day. The urine was alkaline and full of pus, some blood.

Under ether the smallest guide to the Voillemier was with difficulty introduced, locating the stricture in the membranous portion of the urethra. As it passed in a peculiar grating sensation was felt, suggestive of stone, but no examination was possible until the calibre of the urethra had been enlarged by divulsion, when careful exploration failed to detect any stone, and as the grating was less marked after divulsion it was thought to be probably due to a deposit of phosphates from the alkaline urine on the wall of the urethra. A catheter was fastened into the bladder and the perineal abscess opened.

During convalescence the patient declared from day to day there was constant improvement in his symptoms, that the pain was gone, and that he could retain his urine without difficulty, but still there was almost no change in the character of his urine. At the end of a week the sound was passed to ensure patency of the stricture, and as before it glided over some calcareous body in the vicinity of the prostate; at the same time it was learned that the patient, from dread of operation, had been deceiving about his symptoms, and that the improvement was in reality very slight. The diagnosis was then made of the presence of some foreign body in the urethra, at the neck of the bladder. This opinion was verified under ether. From the position of the body it was impossible to engage it between the blade of the lithotrite or to push it into the bladder, and a staff was introduced and the urethra opened as in lithotomy. A dissection was carefully made through a mass of old inflammatory tissue into the substance of the prostate and a jagged, irregular sequestrum of bone removed from its bed in the prostatic urethra. There was very little blood lost at the operation. While recovering from ether the patient was very violent and noisy and was given a small hypodermic of morphia. Soon he became very quiet, his pulse rose to 132, very soft and compressible, respirations were labored and dyspnoea urgent. There were no evidences of hæmorrhage, either external or concealed, but his condition grew very alarming, and it was only by the use of stimulants hypodermically that he rallied from a state of collapse. The following day the patient was quite comfortable and made an interrupted recovery. The catheter was kept in until the perineal wound was closed, and three weeks after the operation the patient was discharged, the urethra admitting thirty F. Micturition a little more frequent than normal, probably due to a contracted bladder, but painless and free. Urine normal. Subsequent reports from the patient state that there is no return of his old symptoms.

CASE II. S. F. The patient has known that he had stricture for fourteen years. In that time he has had retention many times and has been operated upon by divulsion at least twice, but has never been taught to keep his stricture open. He admits only the smallest capillary. This was passed daily from March 9th to March 12th, then a fair sized guide to Voillemier was introduced and the stricture divulsed, after slitting the meatus. The stricture was extremely difficult to split and a catheter could not be introduced afterwards, seeming to catch on a fold of mucous membrane. Soon after the operation he passed his urine in a large stream. During the night he had a severe chill which did not yield to the ordinary remedies, and at the morning visit he seemed very sick. Temperature

104.4° F. Pulse rapid and soft, skin hot, very restless, and severe pain referred to base of sternum. At eight A. M. he passed a few drops of urine when on the bed-pan. This was all he passed except that just after the operation. One sixth of a grain of nitrate of pilocarpin was given hypodermically; this immediately induced profuse diaphoresis which continued several hours and from which he experienced great relief. Stimulants and counter irritants over the kidney were kept up through the afternoon and evening, and the condition of the patient seemed rather better. At four P. M. temperature 105.3° F. At six P. M. 100° F. No urine, however, was excreted and the pain at tip of sternum persisted. At midnight, quite suddenly, there was a change for the worse. The pulse became quite imperceptible. The face grew livid and respirations labored, and there was no response to stimulants. At times there was slight delirium, but usually the mind was clear. There was very little vomiting. There was steady failure of the vital powers, and patient died forty-four hours after the operation. No autopsy could be procured, and the case was considered one of urethral fever, with probable surgical kidney. Thomson¹ seems worthy of quotation in this connection.

"There are some patients, the subjects of stricture, who invariably experience rigors after the passage of a bougie, or if an instrument but one number larger than the accustomed size be passed; in some, even without any apparent exciting cause, more especially in those who have inhabited warm climates for any length of time, these attacks are prone to occur. The application of an irritant or corrosive substance to the urethra is also not uncommonly followed by some general fever. So well known and characteristic is this phenomenon, that it has received the special name, and not inappropriately, of 'urethral intermittent fever.' It may occur in the absence of stricture from various kinds of irritation to the canal.² In many instances it occurs only after the first act of micturition following the application of the irritant, as if from contact of urine with the abraded urethra, or with the wound, if the incisions have been made.

"I have, however, frequently noticed that when evidence of organic renal disease exists, the symptoms described are almost certain to occur; so much so that we are justified in suspecting its presence to some extent when severe rigors constantly follow slight urethral irritation in patients not predisposed, by climate or otherwise, to experience them, and who have suffered for some time from stricture. I have observed on more than one occasion suppression of urine, rapidly followed by death, to result from the introduction of an instrument larger than the patient has been accustomed to, in the hands of a surgeon who, from some accidental cause, has replaced the ordinary attendant, and who has unwittingly endeavored to carry dilatation beyond the usual limit; or, again, when the ordinary instrument has been less skillfully employed, and an abrasion, although only an exceedingly slight one, has been made in the mucous membrane of the urethra. The rapidity with which death may occur, under these circumstances, in patients who are the subjects of extensive chronic disease of the kidneys, from an apparently exceedingly

¹ Stricture of the Urethra, page 111.

² M. Chassaignac has made the observation, that the "urethral intermittent" occurs from some irritating contact with the *bulbous* and *anterior part* of the urethra, not with the prostatic and membranous portions; remarking that thus it never occurs in women, whatever the amount of instrumental application. *Mon. des Hop.*, 1857, No. 135.

trifling lesion so caused, appears almost unaccountable. The fatal event seems to occur through poisoning of the system by urea: the post-mortem appearances, to the naked eye, do not resolve the problem in the cases referred to, by exhibiting traces of acute disease resulting from the particular lesion. It may be imagined that the function which determines the elimination of urea suddenly and absolutely ceases after a very slight injury to the urethra, as by the propagation of some shock to the excreting organ, in cases where its structure is largely disorganized. I have even seen one case of old standing and narrow stricture, in which death was thus caused within fifty-four hours of the passing of an instrument, the same that had been habitually employed on at least a hundred occasions before, no damage whatever having been inflicted by it upon the urethra, as verified by several careful observers on close post-mortem examination of the parts. Rigors and vomiting commenced about an hour after the catheterism, and not another ounce of urine was secreted from that time until death. In this case the kidneys were found to be congested to an extraordinary degree, and their substance was so soft and friable as to give way under gentle pressure. Very rapid changes had evidently taken place in these organs, but no signs whatever of inflammation existed in any other part of the urinary apparatus. So also a catastrophe, equally, but not quite so rapidly, fatal, may happen from another affection, namely, purulent infection of the blood, with deposits in the joints or other parts, and which may occasionally happen as a result of injury to the urethra inflicted by rapid or extreme dilatation."

RETENTION, STRICTURE, PUNCTURE PER RECTUM,
PERITONITIS, DEATH, ABNORMAL ARRANGEMENT OF
THE PERITONEUM.

CASE III. J. K., aged twenty-five, entered hospital April 5th, at three p. m. He had passed no urine since the previous day. Attempts had been made by two doctors outside to draw it but without success, and in consequence of their efforts he had bled considerably. The overdistended bladder was prominent above the pubes, extending well up towards the umbilicus. Under ether an attempt was made to introduce a small catheter which brought up against a stricture in the membranous urethra, and the capillary guides to the Voillemier entered only false passages. Examining by the rectum the bladder was prominently bulging down and the rectal trocar was thrust into it just at the apex of the triangle formed by the prostate and vesiculae seminales. The urine at once flowed freely through the canula, and the amount, although not accurately measured, was not less than three pints. As there was no soft rubber catheter small enough to pass through the canula, a gum-elastic bougie catheter was introduced and tied in, through which the bladder was entirely drained. At six p. m., two hours after the operation, the patient was perfectly comfortable, at twelve he was sleeping quietly and the bladder entirely empty.

April 6th, four a. m. Patient suddenly complained of most intense pain just at the tip of the sternum, extending towards, but not beyond, the umbilicus. He was relieved by hot fomentations and one eighth grain of morphia. There was no collection in the bladder, no tympanitis, and very slight tenderness.

Eight a. m. After a few hours' intermission the pain returned, not very severely, however, but the patient

looked very sick. His facies was that of threatening collapse, with a fast and feeble pulse. There had been no flow of urine through the catheter since four a. m.

Eleven a. m. Patient had rallied considerably and was both feeling and looking better. He had passed four ounces of urine through the penis, and was taking nourishment very well. The bowels had moved three times. Throughout the day there seemed to be a continued improvement in his condition. The pain had entirely disappeared, leaving only a sense of soreness, and up to four p. m. he had passed twelve ounces of urine through the natural channel.

Half-past eight p. m. As in the morning he had suddenly intense pain, which in a few minutes was eased by one sixth grain of morphia that he fell asleep.

At nine p. m. he woke, asked for a basin, which he nearly filled with vomitus and fell back dead, thirty-four hours after operation.

In his history he stated that he had had gonorrhœa twice—once many years ago, and the last time three years ago. Since the last attack he has noticed a diminution in the size of his stream with greater difficulty in passing it, and eight months ago he had retention, which was relieved by the introduction of a small catheter.

From four p. m. until he died, at nine, there was no urine passed, and as the autopsy showed an empty bladder there must have been suppression during that time.

AUTOPSY.—*Lungs.* The pleura were somewhat thickened, and adherent by strong fibrous bands, especially on the left side. On both sides they were injected and covered with a layer of fibrin, which at the bottom of both cavities had collected into masses. The lung tissue was normal except for post-mortem œdema.

Heart. Results of acute endocarditis seen, especially marked at the bases of mitral and bicuspid valves.

Liver and Spleen. Normal.

Intestines. When the abdomen was opened the omentum and intestines showed most vivid injection, and were covered with a delicate membrane, with here and there more opaque spots of a thicker deposit, but were nowhere adherent to each other. Moving the coils one side, the pelvic cavity was seen filled with pus of creamy consistency, amounting, with what little serous exudation there was, to six ounces. Other than inflammation of the peritoneal coat the intestines were normal.

Bladder. The bladder was contracted to the size of a large English walnut. Between the bladder and the rectum the peritoneum lay in a series of rugæ, beneath one of which was a perforation, a little larger than a knitting needle, leading into the rectum.

Pelvic and External Organs. The lower part of the rectum, the kidneys, ureters, and penis were removed entire. Passing a probe through the opening made by the trocar in the rectum it went directly into the bladder just below the opening of the left ureter, or, if it were directed a little backwards, entered the peritoneal cavity with equal ease through the perforation mentioned above. The bladder contained no urine, but about half a drachm of pus. The walls were much thickened, and the mucous membrane of dark-blue color.

Kidneys. Kidneys congested but otherwise normal.

Penis. Opening from the meatus a healthy urethra was exposed until the membranous portion was reached, beyond which the scissors could not be advanced.

Cutting from the bladder outward the urethra was traced to a minute opening into its anterior portion, not in the median line, but high up on the left side. The anterior portion terminated in a large false passage, which showed evidences of recent laceration.

This case died from peritonitis, induced, probably, by wound of the peritonæum in puncture of the bladder by the rectum. Upon examination of the specimen, and the arrangement of the peritonæum at the base of the bladder, this is readily explained. Normally, the peritonæum is reflected from the posterior surface of the bladder to the rectum, leaving the triangular space bounded in front by the prostate and on the sides by the vesiculæ seminales resting upon the rectum and free from peritonæum. Gray states that in the distended bladder the distance from the anus to the point of this reflection is four inches. Roser, in his *Surgical Anatomy*, says: "In adults there is a pretty good interval from the edge of the prostate to the inferior extremity of the peritonæum." Quain states: "In front of the line of reflection of the serous membrane, the base of the bladder is destitute of peritonæum and adherent to the rectum by dense fibro-areolar tissue over the extent of a triangular area bounded at the sides by the vasa deferentia and vesiculæ seminales, whilst its apex in front reaches the prostate gland. It is in this space . . . that the bladder may be punctured from the rectum without injury to the peritonæum." Other authorities might be quoted to confirm the arrangement just described as the normal one. In my case the peritonæum passes down more deeply than usual, covering entirely the triangular space, and in the state of non-distention reaching the prostate, and the only wonder is that it was not punctured twice on the way to the bladder, instead of being simply nicked.

A parallel case is reported by Berkeley Hill in the *Lancet*, August, 1876, page 187.

"At the post-mortem examination extensive general peritonitis was found, most intense at the pelvis. The pelvic viscera were removed in one mass. The recto-vesical pouch of the peritonæum (very long) was found to extend completely past the trigone of the bladder and to reach quite up to the prostate; accordingly, both the punctures from the anterior wall of the rectum to the trigone of the bladder passed twice through the peritonæum. A very tight stricture occupied the membranous and bulbous part of the urethra, which only admitted a fine probe. A short, false passage passed into the dense tissues surrounding the urethra. The tissues of the perinæum were immensely thickened, and traversed by a narrow fistula from the urethra just behind the stricture to the wound in the perinæum. The prostate was enlarged; the bladder distended, hypertrophied, and sacculated. The mucous membrane was dark-colored from old cystitis; it was marked with two trocar punctures at the trigone, about half an inch in front of the orifices of the ureters, but near the middle line, and half an inch behind the prostate. The ureters and pelves of the kidneys were also greatly enlarged, the kidneys much wasted by interstitial nephritis."

TRICHINOSIS. — *Punch* thus trifles with serious matters: —

"Says Aaron to Moses,
'I have got trichinosis';
Says Moses to Aaron,
'Tis because you pork fare on.'"

CASE OF INTUSSUSCEPTION OF THE LARGE INTESTINE.¹

BY C. P. PUTNAM, M. D.

JAMES A. H., five months old, nursed on the breast, and perfectly healthy until February 10, 1881. On that day, about two P. M. he had cried and twisted in such an unusual and peculiar way that it was supposed a pin might be sticking into him, and he was undressed to get rid of it. Soon after he had a solid defecation, followed by much straining, and a discharge of liquid blood. Before long he vomited, and though he took the breast he continued to vomit at intervals. When first seen, about twenty-eight hours after he was attacked, he had had about eight stools consisting only of blood.

He looked languid; the legs were flabby; he nursed a little while when the breast was offered, but soon gave it up, and generally vomited a brown fluid, which had no stercoraceous odor.

The muscles of the abdomen, like those of the legs, were quite flabby, and the abdomen could be thoroughly explored. A cylindrical tumor, about three inches in length and one and a quarter in diameter, was to be felt between the umbilicus and the left costal cartilages, and parallel to the latter, which suggested nothing but an invagination of the bowel. It was easily movable within narrow limits, and occasionally would fall so far back under the liver as to be hard to find.

Gentle massage was applied to this tumor with the intention of diminishing the hyperæmia and edema, and possibly of reducing it. It was evident that the former of the two ends was attained, for the tumor became softer, and it seemed as if it became a little shorter. Water was then injected into the bowel by means of a douche pail, which was held by a man as high as his head when standing on a chair, making a column of about five feet. The water was prevented from returning through the distended anus by an arrangement to be described. The pressure was kept up about two minutes, but on allowing the water to flow out of the bowel the tumor was still there, though perhaps somewhat smaller than before. A second attempt appeared to be more successful. The pressure was kept up somewhat longer, and at the end of it no tumor could be found, and the child nursed without vomiting, and went to sleep. This was at ten P. M. Towards morning there were three bloody stools, and the tumor was found in the same condition as on the previous evening. The abdominal walls, however, were less flaccid, and the skin was hot; the temperature 101° F. The water was again injected, and the pressure kept up until the child began to get livid, and the respiration was seriously interfered with. When the water was let out the tumor was not to be felt. One drop of deodorized tincture of opium was given every two hours unless the child was quiet. He slept a large part of the afternoon, and at eight P. M. passed a liquid stool of stercoraceous character. From this time he appeared perfectly well.

It is not easy to make a plug for the anus that will fit everywhere and not press too hard anywhere. In this case a very soft rubber bulb, such as is used with the hard atomizer, was employed in such a way that the water flowed into it by one tube, and out again by

¹ Read before the Boston Society for Medical Improvement, April 11, 1880.

another tube, which went into the rectum. By this means the bulb was distended by the same pressure that was exerted on the inside of the rectum, and by holding the bulb firmly against the anus exactly the required pressure was obtained. For if the bulb was not pressed on hard enough the water would flow out round it, and if it was pressed on too hard the bulb would collapse.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

APRIL 11, 1881, DR. T. B. CURTIS presided.

FOREIGN BODIES IN THE BLADDER.

DR. POST read a paper on this subject. Vide page 365 of this journal.

DR. C. P. PUTNAM mentioned the case of a manservant who, thinking that he had retention of urine and that it was from a stricture, made use of a bodkin which, as he expressed it, was "sucked in" and could not be withdrawn. Dr. Putnam found no difficulty in extracting it.

DR. T. B. CURTIS showed a list of three hundred and ninety-two foreign bodies in the bladder, collected by Dr. Mignon, and cited by Dr. Charles Monod in his articles upon Foreign Bodies (*corps étrangers*) in the *Dictionnaire Encyclopédique*, which was evidently the same referred to by Dr. Post.

Dr. Curtis also recalled a curious case related by Dr. E. L. Keyes.¹ Speaking of Squire's "vertebrated catheter," and of the danger attending its use, Dr. Keyes gave as an instance the case of an old man who had long employed this catheter upon himself; the chain had given way in two instruments successively, leaving all the links in the bladder; but the patient nevertheless still desired to procure another catheter of the same description. In 1877 Dr. Curtis saw, among the out-patients of the Massachusetts General Hospital, a man who, a year before, procured a vertebrated catheter; on using it for the fourth time it came to pieces in the urethra, and all the links, fifteen in number, had to be extracted from the canal with forceps, at the Salem Hospital.

URETHRAL CASES.

DR. PORTER reported some exceptional urethral cases. (See p. 370.)

Commenting upon Dr. Porter's case of urethral fever, DR. CURTIS called attention to the circumstance, mentioned by the reader, that the patient, after his first operation for stricture, had not been instructed to use a bougie at suitable intervals during the remainder of his life, and had, therefore, before long undergone a relapse, rendering necessary a second operation, which in such cases was very apt to prove fatal. This history is a very common one in the experience of hospital surgeons. It is the duty of the practitioner, when treating stricture by urethrotomy or by division, not to content himself with merely restoring the ability to urinate freely; but he should also render the urethra sufficiently patent and pervious to allow of easy self-catheterism; and furthermore, he should take pains to instruct the patient fully, with regard to the subsequent

indispensable use of the bougie, and forewarn him of the dangers attending neglect of this simple prophylactic measure.

The reader had quoted a passage on urethral fever from Sir Henry Thompson's work on Stricture, in which it was asserted that the fatal event seemed to occur through poisoning of the system by urea. It should be observed that no proof whatever had ever been adduced to show that the retention of urea was the cause of the severe febrile symptoms observed in such cases. Uremia, far from being a pyrexial disorder, is almost invariably attended by abnormally low temperatures, often considerably below the normal, as has been abundantly shown by Bourneville, Charcot, Roberts, Girard, and others.

DR. GREENOUGH asked if the urine in Dr. Porter's second case was ammoniacal, and remarked that he had heard Oppolzer speak of the danger of operating in these cases where the urine is ammoniacal or decomposed.

DR. PORTER replied that the urine had not been examined in this case.

In connection with Dr. Porter's case of fatal peritonitis following the rectal puncture of the full bladder, and due to perforation of the peritoneal pouch, descending in this case abnormally low between the floor of the bladder, seminal vesicles, and prostate in front, and the rectum behind, DR. CURTIS, who had mistrusted the recto-vesical puncture ever since the publication of Berkeley Hill's case in 1876, showed three large lithographic plates, in Jarjavay's monograph on the anatomy of the urethra, representing life-size, median, antero-posterior sections of the male genito-urinary organs, made in frozen bodies. A copy from a plate in Braune's Atlas, representing a similar frozen section, was also shown. From an examination and comparison of these four sections it was evident that the disposition of the peritoneum in the pelvic cavity, and its relations to the bladder, were subject to much variation; in some individuals the peritoneal cul-de-sac between the bladder and the rectum descends much lower, much nearer to the anus, than in others, and is much more accessible to the finger and to the trocar.

INTUSSUSCEPTION.

DR. C. P. PUTNAM reported a successful case of intussusception. (See page 373.)

OVARIOTOMY.

DR. JOHN HOMANS showed two tumors, removed a week ago, from a single woman, aged forty. It was the first time Dr. Homans had operated for the removal of a solid ovarian tumor, and the first time that he had removed a uterine tumor by abdominal section. The patient was a small woman, affected with curvature of the spine and disease of the heart. There was well-marked mitral regurgitation, some hypertrophy of the heart, and more or less cyanosis of the face and hands, with a weak, radial pulse. After some weeks of preparation and administration of digitalis by Dr. E. G. Cutler, who kindly undertook the preparatory treatment, ether was administered without the slightest embarrassment, and the operation was easily performed. First, the solid ovarian tumor was raised through an incision extending from a couple of inches above the umbilicus to the pubes; the dermoid cyst (described below by Dr. Gannett) was attached to the lower part of this solid tumor, and had the usual ova-

¹ New York Medical Record, May, 1877, 235.

rian pedicle. After the pedicle had been secured, the fibroid tumor was lifted up and found to be continuous with the fundus of the uterus; but there was a rather narrow cystic portion just above the fundus of the uterus, and Dawson's clamp was applied, and this cystic portion compressed and divided by Paquelin's cautery, and the stump tied. Since the operation the temperature has risen but once above 99° , and the patient bids fair to recover rapidly. The uterine cavity was not opened. Dr. Homans read Dr. Gannett's excellent description of the tumors.

The following is Dr. W. W. Gannett's report of the specimens.

Uterine Tumor. Size of a big fist [8 c. m. \times 10 c. m. \times 10 c. m.] and weighs 491 grammes [17½ oz.], very dense, external surface lobulated and irregular, with a few small vessels. On cutting into, found to be very dense, the tissue creaking under the knife. The cut surface presents a striated appearance, some portions being white, others of a pinkish tint. Towards the periphery a cavity with irregular walls, capable of containing about 5 c. m. fluid. *Microscopically* the tumor found to be made up of bundles of large, nucleated, spindle cells and connective tissue fibres, running in various directions. *Diagnosis*, Fibromyoma.

Ovarian Tumor consists of two portions, a larger and a smaller. The larger is a more or less globular growth, size of a child's head [16 c. m. \times 12 c. m. \times 12 c. m.], and weighs 1080 grammes [38 oz.], is rather dense, capsule smooth, and in it several large vessels. In some portions the external surface has a homogeneous, opaque, pinkish appearance, in other places a peculiar gelatinous appearance. On cutting into these gelatinous places they are found to be perfectly transparent and yield a slight amount of an albuminous but not mucous fluid. Section of the tumor, as a whole, shows an almost homogeneous, flesh-like, rather moist, surface of a pinkish-white color. On pressure, the surface yields a small amount of clear fluid similar to that just described.

Microscopically, found to be made up of small spindle cells with oval nuclei and very delicate protoplasm, and also an intercellular substance made up of connective tissue; in some portions this connective tissue is in the form of delicate anastomosing fibres arranged in a network, with spaces between, in other portions, in the form of wavy fibres arranged in horizontal bundles. The blood-vessels are rather few in number. Sections of the gelatinous portion show an exceedingly delicate connective-tissue net-work enclosing spaces [which contained the previously mentioned fluid].

Attached to this tumor just described, by a small base, was another the size of an orange, of a doughy consistency and from a rent in which there projected a mass of hair and a yellow, curd-like material. This was found to be a cyst with a wall about 2 mm. thick, filled with a yellow material of about the consistency of cream, at the temperature of the body, but on cooling, becoming as hard as butter; microscopically this material found to be fat. In this were very numerous hairs. The inner surface of the wall is in some places white, in other places of a dirty, opaque yellow, and in many places there were hairs projecting from the wall into the cavity of the cyst. In one portion of the inner wall is imbedded a bit of bone size of the second phalanx of a finger, showing spongy structure, and from this project three or four hard bodies closely resembling teeth. The

latter imbedded in a tissue made up, superficially, of a many-layered, flat epithelium, and in the deeper portions of a connective tissue infiltrated with round cells and containing numerous blood-vessels. Sections of the wall of the cyst show a structure closely resembling external skin, a many-layered flat epithelium upon a connective tissue layer. In the latter numerous hair follicles with hairs in them and also numerous sebaceous glands. In some places are groups of very large sebaceous glands and no hairs.

Diagnosis. Fibro-myoma from uterus; small-spindle-cell sarcoma of ovary; dermoid cyst of ovary.

Recent Literature.

Fever: A Study in Morbid and Normal Physiology.
By H. C. Wood, A. M., M. D. Philadelphia: J. B. Lippincott & Co. 1880.

One of the ablest and most interesting records of physiological research done in America has been recently given us by Prof. H. C. Wood, of Philadelphia, in a monograph on Fever. This memoir is the result of many years of study, and must have required an immense amount of time and patient labor. The experiments are numerous, and were conducted with scientific rigor. The deductions made from them are logically and carefully drawn up, and the conclusions reached are presented as matters of firm conviction and belief. The work is a model of skillful physiological investigation. The expense of publishing was assumed by the Smithsonian Institute, which is in itself a compliment. The details of the subject are so interesting that they deserve a longer review than we can give them at this time, and accordingly we shall notice the book again and at length in the next report on Physiology. G. M. G.

—A curious suit against a physician, which illustrates one of the perils of the profession, was brought to a close lately in Philadelphia. The facts were these: a man having been injured by a street car passing over his limbs, a passing physician's carriage was stopped, and the physician — who happened to be Dr. William B. Atkinson, the affable permanent secretary of the American Medical Association — made to descend and give an opinion as to treatment. The advice given was to send for an ambulance, and have the case taken to a hospital. The man dying a few days later, the widow brings suit against Dr. Atkinson for substantial damages for not yielding more prompt and efficient service to the patient, although no consideration had passed, and no special claim for such service shown to exist. When the case came up Judge Ludlow ordered a non-suit to be entered for the plaintiff. Although this case did not go to a jury where the issue would be uncertain, yet the defendant was put to considerable expense and loss of time, and a great deal of annoyance, by the prosecution, which made it an ordeal to which one would not willingly be subjected. Happily, prosecutions of the profession by adventurers seeking for black-mail are quite rare in this State, Should they become more frequent in the future a physician's life will be anything but a happy one.

Medical and Surgical Journal.

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Houghton, Mifflin and Company,
No. 4 PARK STREET, BOSTON, MASS.

SPARKS FLYING ABOUT OUR POWDER MAG-AZINE.

Our readers have doubtless seen in the daily papers the account of a poor woman who was found by the police last Monday morning, April 11th, wandering about the Old Colony Station, carrying in her arms a large bundle wrapped up in shawls. Suspicious were soon aroused by her furtive manner, and by her evident desire to conceal the object which she bore. Upon investigation the latter proved to be a child whose skin was covered with a pustular eruption resembling that of small-pox. The mother and child were conveyed to the station-house, the city Board of Health was immediately notified, and the child, soon after examination and confirmation of the suspicions excited by its appearance, was conveyed to the special hospital on Canterbury Street.

This case, taken in connection with the report, which reaches us whilst writing, of two cases of small-pox in Lowell, and of still another case in Boston, very recently brought to the attention of our Board of Health, exemplifies the constant danger in which our community is now living in consequence of the prevalence of small pox in neighboring cities; it also illustrates the almost insuperable difficulties of the task of warding off the epidemic devolving upon our sanitary authorities, and hitherto successfully accomplished, thanks to their ceaseless vigilance and energy. With sparks freely flying from all directions, the chances of an explosion depend, of course, upon the extent to which gunpowder is left lying about, accumulated and exposed. An unvaccinated community is sure, sooner or later, to furnish the material for an epidemic explosion of small-pox, all that is then lacking being a case or two to start the spread of the contagion. To a certain extent, and for a while, perhaps, the community can be protected by the prompt recognition and enforced isolation of such individual cases of small-pox as may make their appearance among us; but this means of prevention is, at best, but aleatory, and may at any time fail us, as came near being the case the other day, when this poor woman was doing her best to escape with her sick child from sanitary supervision and control. The case just alluded to, however, shows how precarious our immunity from small-pox has been and is, and how easily the disease may at any day gain access to our hitherto favored community.

It is our earnest hope and wish that the protective resources afforded by vaccination may have been so

thoroughly and extensively utilized that the epidemic now about us may turn out to have been completely warded off, the flying sparks having failed to alight upon any explosive material. Should this happy but improbable consummation be realized we shall be prepared and consoled for seeing our present admonitions regarded as having been wholly superfluous and uncalled for; for such is not unlikely to be the view which will be taken, should the precautions which we advocate have all the efficacy which we desire and hope for.

THE PLAGUE IN MESOPOTAMIA: TYPHUS FEVER IN NEW YORK.

THE plague is spreading very considerably in Mesopotamia. How soon it will reach New York we will not venture to predict. A nasty custom, dear to the Mussulman inhabitants of Asia Minor, of transporting the putrescent bodies of the devout dead by caravans across long distances to sacred places for interment has been many times accused of favoring the development and spread of the plague in that old-fashioned country. Being an old-fashioned disease it is probably still unaware of the hospitable reception which the peculiar nastinesses of the streets of the metropolis — unique in filth as in much else — of our modern republic would gladly hold out to it; a hospitality not at all exhausted by typhus fever (a disease of which even the Polish provinces of Prussia now see very little), diphtheria, ophthalmia, small-pox, etc.

We wonder if a good active immigration of plague would induce the lower house of the New York Legislature to allow the mayor of New York city, or any one competent individual, to actually clean its streets. Apparently not; for the mayor would still be a democrat, and the appropriation to be spent would still be about a million dollars. Moreover, the mayor is suspected of owning some rather barren acres on Staten Island, and it is surmised that if the excrement and filth were removed from the streets of the city the mayor's country property might be rendered more fertile thereby. Better disease and death a hundred times than profit to a democrat! This is the doctrine of state-rights as expounded by members of the republican party with a vengeance.

THE MEDICO-LEGAL RELATIONS OF HYPNOTISM.

THE fact of the irresponsibility of individuals while in a state of mesmeric trance has long been recognized by the best authorities; but the desirability of having the law take cognizance of the existence of such a condition (by means of which it is in the power of the evil-minded to cause innocent persons to commit crime unconsciously) was brought to the attention of the New York Medico-Legal Society at a recent meeting, when Dr. Hammond sought to give a practical demonstration of the manner in which a proper subject could be made to commit supposed acts of felony with the utmost disregard of consequences. The young man selected for the experiments, having

been put into the trance-state, was first charged to commit a burglary. A brown-stone front house was described to him, having a window in the basement, and in a room up two flights of stairs Dr. Hammond told him there was a chest at the foot of the bed, containing money, which he must steal. Immediately he crawled under a large easy chair, which he supposed to be the basement-window, and climbed up a step-ladder which had been placed against the wall; after which he filled his pockets with imaginary money from the supposed chest, and returned by the same way as cautiously as a genuine burglar would have done. He was then apparently made to believe that he was arrested, taken to prison, released on bail, and finally persuaded to return the money to the chamber from which he took it on the promise of a pardon by the Governor. The subject was next made to commit an imaginary murder. A gentleman standing in the doorway was pointed out to him as the murderer of his mother, and he was told to kill him with a dagger, while a folded piece of paper was handed him to represent the weapon. Obediently to the command he crept stealthily up behind the gentleman, and struck him twice in the back with the paper dagger, which he then threw away. His attention now being called to an angel with a flaming sword, that stood before him as a minister of vengeance, he clasped his hands in terror, and with a shriek threw himself upon the floor. The last experiment was to cause him to forge a check for \$25,000 by imitating the signature of Dr. C. S. Wood, the president of the society. This he did very creditably, and then presenting it at an imaginary bank drew the money on it, as he supposed. To show that the man was not shamming, but really in the trance-state, Dr. Hammond passed a needle through a fold of skin at the back of the neck, and burned him with a red-hot cautery; both of which tests he bore without showing the slightest evidence of sensitiveness.

In the place of hypnotism or mesmeric trance, Dr. Hammond would suggest the word *syggignocism* (signifying agreement with), which he believes describes the condition more accurately than any other. While admitting that many of the facts observed in connection with this state are very difficult to explain satisfactorily, he ventures to advance the theory that during its continuance the action of the superior or intellectual part of the cerebrum is cut off, as offering the most philosophical solution of the problem. All individuals, it is acknowledged, sometimes act in an automatic manner, performing various actions without conscious volition, and without calling into activity the superior portion of the brain. This, he claims, is practically the state of affairs in *syggignocism*; the function of the superior portion of the brain being cut off, but perception and the transmission of impressions down to the muscles remaining. In this condition, while a person would act in accordance with the perception, he would not be able to originate anything,—the transmission of impressions from the gray matter at the base of the brain to that of the cortex, and their elaboration into ideas being inter-

fered with,—and would be completely controlled by another in all things.

Some weeks since we published a report of a lecture by Dr. Beard, in which some of the phenomena of hypnotism were exhibited and described. Dr. Hammond's exhibition was a practical application of similar experiments. We give them without comment as contributions to a subject which at the present time, in various forms, is exciting much attention.

BIOLOGY AT THE JOHNS HOPKINS UNIVERSITY.

THE Johns Hopkins University has lately issued its ninth University Circular. This is especially devoted to biology, details being given of what has already been accomplished, and of the facilities offered by the university for the prosecution of this branch of science, the study of which is so desirable for young men who would lay a suitable foundation for the subsequent study of medicine.

It was the wish of the founder of this university, and of the hospital likewise bearing his name, that the two should coöperate in the promotion of medical and sanitary science. It has been the purpose of the trustees to put this wish into execution, and in the judicious pursuit of this end, the time in their estimation not yet having arrived for the appointment of a medical faculty or the announcement of professional courses of study, their first care was to give a thorough foundation for such courses by instruction in physics, chemistry, and biology. Under the term biology, as understood by the university, physiology and morphology, both animal and vegetable, are included. There is no lack of medical schools, such as they are, in the country now, but there is a want of preliminary scientific training which shall fit men to make the most of subsequent advantages. The authorities of Johns Hopkins University, moreover, deserve the thanks of all interested in the best application of that noble foundation to the public good for the adoption of the general policy that, when a choice is possible between two subjects in which to afford special facilities for the most advanced study and to encourage research, the one should be selected in which such facilities are less commonly met with elsewhere in the United States. In this way an attempt is made rather to complement than to rival the work of other institutions, whether giving preliminary or higher instruction.

It is a pity that this same admirable policy has not been more generally cultivated in this country by founders and trustees. It is in these matters that our country exhibits preëminently the want of economy of force so characteristic of youth.

The university allows an undergraduate student to select his plan of study from any one of several schedules. Among the subjects which he may take up, after studying physics and chemistry, is biology, and this study is recommended to those preparing to enter subsequently upon the professional study of medicine. A systematic course of instruction has been thrown

open to those who do not intend to take the B. A. degree, who intend hereafter to study medicine, and who can pass an entrance examination showing a fair general education. This practically extends the time occupied in medical studies, and gives a sound scientific education as a basis for them.

The regular course of instruction in biology for undergraduates comprises, the first year, general biology, embryology, human and comparative osteology, the second year, animal physiology and histology, zoology, and comparative anatomy. The laboratory is daily open for practical instruction in connection with lectures and recitations.

Under the instruction of Professor Martin and his associate, Dr. Brooks, with the advantages of an excellent laboratory, a very extensive and well-selected apparatus, with the stimulus of congenial scientific companionship, and with the temptations of the zoölogical laboratory at Beaufort, N. C., and of its elementary seaside school, one may readily anticipate that preliminary studies will in some instances insensibly glide in the course of time into valuable original work, the university thus getting back in the higher morphological development of a ripe harvest the seed which she is now so trustfully sowing.

MEDICAL NOTES.

— We regret to have to record the death of Dr. R. O. Cowling, of Louisville, the founder and editor of the *Louisville Medical News*, at the early age of forty-two years, from rheumatic endocarditis.

— At a late meeting of the board of overseers of Harvard University, Thomas B. Curtis, M. D., was appointed instructor in the medical school for the current year in diseases of the urinary organs; E. H. Bradford, M. D., in orthopaedic surgery; O. F. Wadsworth, M. D., in ophthalmoscopy.

— We understand that Mr. Spencer Wells has lately operated successfully for the removal of an ovarian tumor from a child seven years of age.

— The daily papers have contained accounts lately of the progress in voluntary starvation of a young woman at the West, who was evidently insane. She remained forty-seven days without food before death released her. The reports seemed more reliable than those of similar sensational occurrences are apt to be.

— The Royal College of Physicians of London is somewhat agitated over the course pursued by Dr. Quain in consulting with Dr. Kidd, a quasi-homoeopathist, in the case of the Earl of Beaconsfield, some account of which is given in a letter, on another page, from our London correspondent. This topic has moved a much-respected daily contemporary to query, "Is there any such thing as a science of medicine? . . . Chemists do not quarrel as to the effects of two substances upon each other, why should doctors disagree, after centuries of recorded experience and study, as to the effects of drugs upon the human system?" etc., etc. — We are considering the wisdom of

offering a prize for an answer which will serve to prevent people from continuing to ask similarly foolish questions.

— Under the head of Physiology for Fools the London *Lancet* thus commences a very interesting note:—

The Rev. Joseph Cook, a well-known American pulpit-orator, has come over to this benighted country to overthrow Huxley, Michael Foster, and other philosophers. The plea for this special mission appears to be that, having himself attained to an accurate knowledge of scientific research, he is competent to expose the fallacies of men of science. Judging, however, from some extraordinary statements which this lecturer is reported to have made with reference to the action of alcohol on the living brain, our modern scientific inquirers may take heart of grace, and rest in peace a little longer.

— Carlyle once rode sixty miles to Edinburgh, "to consult a doctor, having," as he says, "at last reduced my complexities to a single question. Is this disease curable by medicine? or is it chronic, incurable except by regimen, if even so? This question I earnestly put; got response, 'It is all tobacco, sir; give up tobacco.' Gave it instantly and strictly up. Found, after long months, that I might as well have ridden sixty miles in the opposite direction, and poured my sorrows into the long hairy ear of the first jackass I came upon as into this medical man's, whose name I will not mention."

— Milk vendors, it is stated, in the *Sanitary Record*, are in the habit, at present, of largely adding salicylic acid to milk, for the purpose of preventing its turning sour when kept. This addition has recently been prohibited in France by the minister of health, and M. Girard recommends the following tests for revealing the presence of salicylic acid in milk: In one hundred cc. of suspected milk place one hundred cc. of warm water and five drops of acetic acid. Filter to separate the casein, shake the filtered fluid with fifty cc. of ether. Decant the ethereal layer, and evaporate it on a watch-glass. To the residue of evaporation add one per cent. solution of iron; the salicylic acid presents an intense violet color.

— The *Reporter* gives the following interesting decision: Under a marriage settlement the fund was to go to the survivor for life, and then in trust for the children of the marriage, as the husband and wife should appoint, and in default of such appointment for all the children of the wife by her then intended or any future husband equally. The husband died, and but one child was born, who died unmarried and intestate, and the widow did not marry again. After the death of the child, the widow, then fifty years old, applied to have the fund paid over to her, and the trustees presented a petition for advice. The vice-chancellor said: "I do not believe there is an instance known of a woman over fifty-two having a child. I do not think, however often the widow may marry, she will have any more children, and I advise the trustees that they may safely pay the money to her."

PHILADELPHIA.

—There is every indication that the bill creating a State Board of Health will become a law at the present session of the legislature. It is in charge of a committee of the State Medical Society, who seem thoroughly in earnest in the matter, and determined to see it through this time. When it passed to a second reading there were one hundred and thirty-one for and only five votes against the bill. The proposed board is to consist of six persons appointed by the governor, subject to confirmation by the senate. Besides the general supervision of the public health and the conduct of sanitary investigations, it shall superintend the collection of vital statistics, report for legislative action a code of sanitary laws, and presents an annual report to the governor. The board also has the power to pass upon the competency of practitioners of medicine, and to compel registration, and give licenses to practice medicine. The latter authority has an element of danger in it, if the board should ever fall under the control of persons inimical to the regular medical profession.

—There is such a thing as too much legislative interference with medical affairs, as witness two bills now before the legislature, — one requiring all prescriptions to be written in English, and a copy of them pasted upon the outside of the bottle, the other declaring it to be a misdemeanor for a medical society to punish any member for consultation with practitioners of "other schools" of medicine! It is scarcely surprising that a legislature capable of originating and entertaining such bills is slow to see the necessity of having a State Board of Health.

—Hon. Thomas A. Scott, of the Pennsylvania railroad, it is reported, has lately presented fifty thousand dollars each to the University of Pennsylvania and the Jefferson Medical College, and thirty thousand dollars to the Orthopædic Hospital of this city.

—A poor family in this city was made sick last week by eating a ham which had been given to them, and the two younger children, aged one and three years, respectively, died from the effects. It was at first thought that trichiniasis was the explanation, but as no evidence of the parasite was detected the cases were set down as fatal entero-colitis, caused by spoiled meat.

—Ex-Dean Miller is again in trouble, this time on a serious charge. The coroner, Dr. Janney, on the 5th inst., held an inquest upon the body of the infant of a young woman named Mary Butler, employed as a servant in a family. The sworn deposition of the mother accused Dr. I. J. Hathaway with criminal malpractice, and Dr. Thomas B. Miller, formerly connected with the college on North Tenth Street, with being an accessory. Miller and Hathaway were in custody at the inquest. The deposition was read, and the jury, in their verdict, found Hathaway guilty of criminal malpractice, and Miller and another party not arrested accessories before the fact. Miller and Hathaway were committed to await the action of the district attorney.

—The coroner, a few days ago, also held an inquest on a child of three years, who was killed by

overdoses of a patent medicine, the composition of which was unknown to the parents, but it is known to the profession to contain a poisonous proportion of digitalis. Should not proprietors of patented preparations be compelled to publish and affix to each package of medicine the working formula or at least the definite composition of the medicine exposed for public sale?

WASHINGTON.

—On March 17th the medical department of Columbian University held its annual commencement with a class of five graduates, at the same time granting certificates of successful examination in the primary branches to seven undergraduates.

—On March 31st the medical department of the University of Georgetown held its annual commencement with a class of five graduates, at the same time granting certificates of successful examinations in the primary branches to five undergraduates.

—In the Medical Association, D. C., the much-vexed question of the interference of druggists by prescribing over the counter, and renewing prescriptions independently of the wish of the prescriber, has been discussed during two separate meetings, the discussion has found its way into the daily newspapers, and the druggists and their friends have replied through the same medium by the present fashion of interviews. The result has been that very little good has been accomplished, and a good deal of hostile feeling has been engendered. The doctors cannot afford to foster such a feeling of hostility on the part of the druggists, as it will deprive so many of them of an occupation and place of resort, in the corner drug store, which furnishes much of the benefits of a club to them; they will probably continue to send their patients to the druggist, and order the old bottles to be refilled, and time-worn prescriptions to be renewed, as usual, and the druggists will continue to furnish quack medicines, favorite special prescriptions, and to renew medicines at their discretion.

The committee appointed by the Medical Association reported a preamble and set of resolutions, which were adopted. The preamble was carefully worded, and set forth fairly the relations between doctor and druggist; it laid stress upon the fact that many fatal diseases have their commencement in slight and apparently unimportant symptoms, and showed the danger of treating these symptoms at hap-hazard, citing instances where unwarranted renewal of prescriptions had established the opium habit, produced insanity from chloral hydrate (?) and brought on a violent attack of colica pictonum. The resolutions were in themselves of a negative character, except with two clauses: one that prescriptions marked "Not to be renewed" should not be renewed, and the other, that when this is disregarded by druggists the Association should withhold its support and patronage from the offending parties.

The druggists, on their part, raise the cry that young doctors are the only ones interested; undoubtedly they are, but the older men have advised and acted with them. They lay stress upon the pharma-

ceutical knowledge required to compound prescriptions, and claim that but a small proportion of the medical practitioners of the present day possess that knowledge, which is probably very true, but they seem to forget that yearly they themselves are losing this knowledge by receiving and dispensing the preparations of manufacturing houses, which have now almost entire control of the drug market. For example, it has been somewhat difficult for some time past to get a druggist to prepare a fresh quinine pill, uncoated with sugar, gelatine, or what not. So that if the matter should ever come to this final test it would be much easier for the doctors to procure and dispense their own medicines for themselves than for the druggists to show that any pharmaceutical knowledge is necessary for the purpose. A knowledge of weights and measures, and faith in the most reliable drug manufacturers would be all that was requisite.

CHICAGO.

—The commencement of the Chicago Medical College occurred March 29th. Forty-five gentlemen received the degree of doctor of medicine, one of whom received the honorary degree. The address of the occasion was made by Prof. J. H. Hollister. It treated of the history of the college and its work in behalf of medical education. The secretary read a report of the work of the college for the past year. The showing was regarded very favorable for the college. In the evening the faculty entertained the alumni of the college at a banquet at the Tremont House. Previous to the banquet there was a business meeting of the alumni association.

—A competitive examination for internes and externes occurred at the Cook County Hospital, March 31st. In a class of five applicants one was a lady, Miss Bates, a recent graduate of the Woman's College. She won the second position, it being one of the internships. This is the second instance of an application by a woman for such a position at this hospital, and the first instance of her success. The recent examination was, on the part of the class of applicants, the most creditable one that has occurred for several years.

—Dr. Moses Gunn and wife sailed for Europe on the 26th ult. They will be absent six months.

—We are in the midst of an epidemic of *rötheln*. It commenced several weeks ago, and the cases in the aggregate have been quite numerous. Different physicians have characterized it by different names, some calling it a bastard measles, some a mild epidemic of measles, others anomalous measles, and a few by the name *rötheln*, or German measles.

In the average of the cases so far there has been very little initial fever, the rash and catarrhal symptoms appearing almost simultaneously with the fever. The rash resembles that of measles most, while the throat is like that of scarlet fever; the rash remains only two or three days, and with its subsidence the fever departs, but the pharyngitis remains in some cases for a number of days. The patients have neither felt nor appeared very sick, and no complications or sequels have been noted. The patients are of course

mostly children, but a few are adults. In some cases whole families of children have in succession had the disease; in most cases the patients had previously had true measles, and no cases of true measles, so far as the writer knows, have occurred under circumstances that made it even probable that they were induced by the present epidemic of *rötheln*.

—Chicago is getting to be a great medical centre. While Boston can support only one college of regular medicine Chicago has already three, and we are now promised a fourth. It is impossible to say anything definitely of the scheme of the new college, because the writer's knowledge of it is gained by rumor and in fragments. It is safe to say of it, however, that it will be strictly regular and respectable, it will take male students only, and in its organization it will be similar to most of the colleges in this country. It will start out with no new idea or principle for its foundation or platform, and will endeavor to secure a part of the patronage now bestowed upon the existing colleges here.

Miscellany.

LETTER FROM LONDON.

MR. EDITOR,—The present serious illness of the ex-Premier, the Earl of Beaconsfield, formerly Mr. Benjamin Disraeli, who is suffering from an unusually severe asthmatical and gouty attack, is the occasion for much speculative gossip on a question of medical ethics in aristocratic and medical circles. His regular medical attendant for some time past has been Dr. Joseph Kidd, an eminently fashionable practitioner, a Doctor of Medicine of Aberdeen, where he graduated in 1853, and a Member of the Royal College of Surgeons of England, where he took his diploma in 1846. Dr. Kidd displayed considerable ability, and earned no small credit for himself, in the eyes of his professional brethren, by his work in connection with the Irish famine fever; but he has subsequently identified a profession of homoeopathy with his practice, though few would be found to doubt, as indeed it is very generally stated, that he, regardless of the shackles of either homoeopathy or "allopathy," would prescribe whatever appeared in his judgment best calculated to promote the recovery of his patient. However, having identified himself with homoeopathic practitioners in a discussion concerning them and the regular practitioners, a decided obstacle has been thrown in the way of the latter meeting him in consultation. For it would be an obvious incongruity for an "allopath" to pretend to consult with a homoeopath. Therefore it is urged that the only plea upon which such a consultation could be defended would be the very questionable one that Dr. Kidd practiced "allopathically" whilst announcing himself to be a homoeopathic practitioner.

It was commonly thought that Sir William Jenner would decline, if asked, as he very probably might be, to meet Dr. Kidd in this case; for Sir William's very high standard of medical ethics is proverbial, and he is justly looked up to in this respect. To-day's papers announce that Dr. Quain has been in consultation with Dr. Kidd; and if this be true, as doubtless it is, your readers may expect to see some correspondence and comments on the subject in your medical and so-

ciety contemporaries on this side. It was Dr. Kidd who was summoned to attend the Earl of Beaconsfield when he was unwell during his labors at the Berlin conference.

Dr. Whipple and Mr. Pick communicated to the clinical society, last Friday evening, the particulars of the case in which, as I mentioned in a previous letter, the latter performed extirpation of the entire larynx.

The patient, a commercial traveler, aged thirty-nine, has been under Dr. Whipple's observation, for laryngeal troubles, since early in 1876. In June, 1876, a warty growth was seen on the left ventricular cord, and removal of the tumor, by an intra-laryngeal operation, afforded marked relief. The macroscopic and microscopic appearances then alike indicated the thoroughly papillomatous character of the disease, which recurred, and was again similarly removed in February, 1877.

Repeated recurrences and removals of similar new formation occurred. In March, 1879, the ventricular band on the right side was seen to be implicated in the disease, but up to this date there was no external manifestation of the tumor. By June, 1879, however, the growth, which had attained considerable size within the larynx, was indicated outside by a small, painful, hard, tumor over the left ala of the thyroid. At this time, except that it had penetrated the cartilage, the tumor presented all the appearances of benign papillomatous disease.

Tracheotomy was performed on May 1, 1880, for the relief of urgent dyspnoea, and the patient's condition was so much ameliorated by this operation that he was discharged, wearing a tracheotomy tube, and declining to submit to further surgical treatment.

July, 1880, the laryngeal passage was completely blocked by the growth which could be felt externally to extend on the left side below the thyroid cartilage. In November, 1880, during attacks of cough there was occasional bleeding from the growth, and the patient was wasting markedly. Dr. Whipple called attention to the distinctly papillomatous nature of the disease at its onset, to its retention of an entirely benign appearance during three years, and to the rapidity and clinical malignancy of its progress subsequently to the performance of tracheotomy. Mr. Pick stated that it had been his desire to follow up the operation of tracheotomy, after but a brief interval, by thyrotomy, as even at that time a smooth, nodulated, tender mass was prominent on the left ala of the thyroid which was distended. But, when the effects of that mutilation were explained to the patient, relieved by the tracheotomy, he withheld his consent.

Mr. Pick saw the patient again on January 16, 1881, when he was emaciated, and blanched through a recent loss of blood, and the tumor could be recognized as reaching to the cricoid cartilage, but apparently not extending up to the hyoid bone. On this day, the patient having been placed under ether, the tracheotomy opening was enlarged sufficiently to permit of the introduction of Dr. Semon's modified tampon canula, and the ether administration was continued through the tracheotomy tube. The thyrotomy was accomplished through a vertical incision, in the median line, bisected by a horizontal incision. The thyroid cartilage was at once split down the centre of its front, the halves widely separated, and the whole mass exposed to the full extent of its limit. Next, dealing with one side at a time, each half was well drawn forward and severed from its surrounding attachments. The cricoid was similarly

treated. The arytenoid cartilages were removed, as were the epiglottis, which had been invaded by the disease. The tampon canula answered admirably. The entire operation occupied but forty-five minutes, at no time occasioned formidable hemorrhage, and did not demand the application of a single ligature. The patient succumbed on the fifth day apparently from nervous shock.

Mr. Pick strongly advocated splitting the larynx into its lateral halves prior to attempting its extirpation, as thus the risk of wounding the important neighboring structures was greatly diminished, and furthermore an exact knowledge was gained early as to the extent of parts involved in the disease, and therefore demanding removal. The operator pronounced extirpation of the larynx to be an established operation, which, despite the terrible character of the mutilation, should not be too long postponed when definitely malignant disease had invaded the organ; he considered that the case under discussion was one in which that radical proceeding might have been practiced six months earlier with propriety. He quoted some interesting statistics relating to the operation, which had in most instances been performed for carcinoma, mentioning eighteen cases, particulars of which had been recorded by Morrell Mackenzie. Seven of these eighteen died from the immediate effects of the operation, one from a bougie perforating the pericardium, in eight the disease subsequently proved speedily fatal, but the fatal issue had been deferred in two cases of spindle-celled sarcoma.

Dr. Felix Semon, whose modified tampon canula had been used in the operation, at which he was present, bore well-merited testimony to the operative skill displayed on the occasion, saying that to Mr. Pick was due the unobtrusiveness of those difficulties and dangers which so usually crowd around this extreme surgical procedure. Dr. Felix Semon mentioned the importance of neither too rapidly nor too fully inflating the tampon canula, as in either case inconvenient symptoms (arrest of respiration) may result, probably from influences conveyed to the vagus through its tracheal branches. This caution and suggestion he had made two years previously, at a time when it was but little received; however, his subsequent experience, and that which had been communicated to him by others, led him to repeat the hint with greater confidence. He was ardent in urging that the radical measure of extirpation of the larynx, with all its attendant consequences, should be reserved for only such cases as the microscope had shown to be malignant. He quoted a case recently published at Berlin, in which the operation had been recommended and rejected after disease had recurred subsequently to removal through the mouth, but in which the child had been enjoying a long period of exemption from any recurrence of the mischief, after it had been repeatedly removed with the sharp spoon. He urged persistent removals per vias naturales until there was microscopic confirmation of the malignant characters of the parts removed.

IMPORTANT ORIGINAL PHYSIOLOGICAL RESEARCH.

At the meeting of the Royal Society, on Thursday last, Professors Ferrier and Gerald Yeo contributed a most interesting account of the results furnished by some highly important investigations which they had carried out with a view to ascertaining the functions subserved by the plexiform arrangement of the nerves of the limbs, and the mode of distribution of the sev-

eral roots of the brachial and crural plexuses, which afford a subject of considerable physiological and pathological interest.

The authors referred to investigations into the subject by Johannes Müller, Van Deen, Kronenberg, Bartolomeo Panizza, Peyer, and Krause; quoting the experiment, on a monkey, in which the last named found that no degeneration ensued in the ulnar or median sensory nerves of the hand after division of the fifth and sixth cervical nerves; and concluded, by analogy from the ascertained distribution in the rabbit, that the ulnar and median digital nerves were derived from the first dorsal and eighth cervical respectively. Alluding to Erb's discovery, that by faradization over the brachial plexus, at a point corresponding with the exit of the sixth cervical nerve from between the *scaleni* muscles, the *deltoid*, *biceps*, *brachialis*, and *supinator longus* can be thrown into simultaneous contraction; and his statement that at the same time it is difficult to avoid the *musculo-spiral* nerve, which can also, however, be separately excited, the authors had themselves found extension of the wrist constantly accompanying all distinct actions of the above muscular group. From the collocation of the muscles affected in atrophic spinal paralysis, Remak argued that functionally related or synergic muscles are represented together on the anterior horns of the spinal cord.

Professors Ferrier and Yeo have made a series of experiments on the motor roots of the brachial and lumbo-sacral plexuses in monkeys. The brachial plexus in the monkey corresponds closely with that of man. Though the lumbar and sacral plexuses do not at first appear to correspond, owing to there being seven lumbar vertebrae in the monkeys. The authors showed that by reckoning the first and last lumbar vertebrae to be dorsal and sacral respectively, the harmony, as regards the mode of distribution of the several roots, becomes complete; and suggested that it appeared warrantable to make the constitution of the lumbar and sacral plexuses a means of determining to which group the variable dorsal, lumbar, and sacral vertebrae in monkeys should be referred.

The operation was performed when the animals were deeply narcotized. The vertebra over the cervical or lumbar nerves were exposed, and the arches removed so as to expose the cord. The dura mater was opened, and in the case of the cervical and dorsal nerves the posterior roots were cut, to avoid all reflex movements on stimulation. The motor roots were stimulated by closely approximated needle electrodes, by means of the induced current of Du Bois Reymond's secondary coil. Every precaution was taken to insulate the roots, and unavoidable diffusion was more or less eliminated by frequent repetition and uniformity in the results. In observing the effects of stimulation, attention was given more especially to the resultant muscular combination rather than to the mere number of muscles thrown into action. This is of importance, as the actions excited are all complex, coordinated movements of great significance, and it is difficult, where so many events are occurring simultaneously, to analyze each muscular combination into the individual factors at work; therefore the muscles which the authors state to be in action are those collected from various observations.

They had experimented seven times on the brachial plexus, once unsuccessfully, and six times on the lumbo-sacral plexus, twice with but partial success. The resultant actions had been very uniform. The authors

treating of the brachial plexus gave the results afforded by their stimulation of the roots of the first dorsal and eighth to fourth cervical individually. Similarly, in reference to the crural plexus, they recorded action induced by stimulation of the motor roots of the first sacral, seventh, sixth, fifth, and fourth lumbar in the monkey; corresponding, as explained, to the second and first sacral, fifth, fourth, and third lumbar in man. But space will not admit a full account, and justice cannot be done in any condensed report of these intricate and important observations, so I will briefly summarize the result obtained by the stimulation of some single root in either plexus, and leave the reader to form an estimate of the value of the communication which he must wait to peruse in the *Transactions of the Royal Society*.

Stimulation of the motor root of the eighth cervical induced a complex action, comprising firm closure of the fist, flexion of the wrist to the ulnar side, extension of the forearm with retraction of the upper arm, the long head of the *triceps* being especially in action. This complex movement may be exactly imitated by pulling some object hanging in front downwards and towards the hip, or by drawing a scimitar from heel to point through some object lying in front. The muscles involved imply stimulation of nerves converged in the ulnar, median, and *musculo-spiral*. Stimulation of the monkey's fifth lumbar (fourth lumbar in man) induced extension of the thigh, extension of the leg, and pointing of the great toe, with the combined result of straightening the whole limb directly backwards, as in the movement which immediately precedes the lifting of the foot to take another step forward in walking. The muscles observed in action were the *gluteal*, the *adductors*, *extensor cruris*, and the *peroneus longus*. This latter explaining the pointing of the great toe by depression of the base of the first metatarsal bone; and at the same time the raising of the outer edge of the foot. The sacral muscles did not appear to contract. This action involves stimulation of nerves conveyed by the superior *gluteal* obturator and *musculo-cutaneous* branch of the external popliteal nerve.

The movements which resulted from stimulation of the individual roots of the brachial and crural plexuses were not mere contractions, more or less strong, of various muscles, though many muscles were excited to contraction by more than one root, as previous experimenters had found, but a highly coördinated synergy in each case, as Remak supposed.

The muscles thrown into action by each root are innervated in most cases by several nerve-trunks, when it would appear that the plexiform functions of the various roots are for the purpose of distributing the requisite motor fibres in different trunks to the various muscles engaged in each functional combination.

The result of section of each motor root would, therefore, be paralysis of the corresponding combination; not necessarily, however, of the individual muscles involved, for, as many of these are innervated by more than one root, the degree of paralysis of the muscles would depend on the degree of motor innervation by the root divided, and therefore while weakened they might yet act in other combinations in so far as they were supplied by other roots. Such appears to Ferrier and Yeo the real explanation of the fact stated by Panizza, that there was no absolute immobility of the limb in his experiments until every root was cut.

London, March 30, 1881.

A TRIBUTE TO THE LATE SURGEON OTIS.

The following letter from the Surgeon-General of the British Army is circulated by Surgeon-General Barnes, and we take great pleasure in reproducing it. It shows a just appreciation of the talents and services of Dr. Otis.

ARMY MEDICAL SCHOOL, ROYAL VICTORIA }
HOSPITAL, NETLEY, March 30, 1881. }

MY DEAR SIR, — I cannot describe the sorrow I feel at the sad tidings which your circular note of the 25th ultimo has just conveyed to me, nor can I in any adequate manner express my sense of the immense loss surgical science has sustained — especially the science of military surgery — by the death of your indefatigable and talented assistant, Surgeon Otis. Still I feel I must write a few words to say how deeply I sympathize with you, and with all the medical officers under your

direction, in the grievous loss you and they have sustained in the death of so distinguished a member of your corps. Military surgery, and all who are engaged in its practice, in every part of the world, and, I might add, every one who may happen to be in need of military surgical help, owe, under the liberality of the United State Government and your auspices, a debt of gratitude to Surgeon Otis which, though it can never be repaid, will never be forgotten as long as the great surgical history of the War of the Rebellion and his other valuable works exist. It is with perfect truth that you remark the death of Surgeon Otis will be deeply deplored, not only by the members of the medical profession in his own service and country, but also by the medical profession of the whole world. Believe me to be, very dear sir, very faithfully yours,

THOMAS LONGMORE, Surgeon-General.

MAJOR-GENERAL, J. K. BARNES,
Surgeon-General, United States Army.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 9, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	722	253	24.52	16.76	8.31	5.02	1.25
Philadelphia.....	846,984	429	141	17.95	8.39	1.63	2.80	.23
Brooklyn.....	566,689	242	100	21.49	15.70	11.16	5.79	.41
Chicago.....	503,304	172	77	19.19	19.19	6.98	1.74	2.91
Boston.....	362,535	187	58	16.58	18.18	9.63	1.07	.53
St. Louis.....	350,522	177	57	23.16	11.30	1.13	2.26	10.17
Baltimore.....	332,190	150	45	15.33	8.67	4.67	4.00	.67
Cincinnati.....	255,708	110	45	11.82	24.55	2.73	.91	.91
New Orleans.....	216,140	131	34	16.80	4.58	—	10.70	—
District of Columbia.....	177,638	96	34	7.30	13.54	2.08	—	—
Pittsburgh.....	156,381	87	42	35.63	12.64	3.45	13.80	9.20
Buffalo.....	155,137	41	13	17.07	7.32	14.63	2.44	—
Milwaukee.....	115,578	50	27	26.00	12.00	2.00	12.00	4.00
Providence.....	104,855	50	15	22.00	22.00	12.00	—	—
New Haven.....	62,882	20	9	25.00	10.00	15.00	5.00	—
Charleston.....	49,999	43	11	34.88	6.98	6.98	23.26	—
Nashville.....	43,461	26	11	26.92	7.69	3.85	3.85	3.85
Lowell.....	59,485	32	11	6.25	9.38	3.13	—	—
Worcester.....	58,295	32	18	18.75	31.25	3.13	6.25	3.13
Cambridge.....	52,740	36	14	13.90	13.90	11.11	—	—
Fall River.....	49,006	21	7	4.77	—	4.77	—	—
Lawrence.....	39,178	15	3	33.33	—	—	—	—
Lynn.....	38,284	17	5	17.65	5.88	17.65	—	—
Springfield.....	33,340	13	3	15.38	15.38	15.38	—	—
Salem.....	27,598	10	2	10.00	30.00	—	—	—
New Bedford.....	26,875	10	1	40.00	—	—	10.00	—
Somerville.....	24,985	14	2	14.29	14.29	14.29	—	—
Holyoke.....	21,851	14	10	71.43	21.43	7.14	—	35.72
Chelsea.....	21,785	14	4	21.43	35.71	7.14	—	—
Taunton.....	21,213	6	2	33.33	33.33	16.67	—	—
Gloicester.....	19,329	7	2	—	—	—	—	—
Haverhill.....	18,475	2	—	—	—	—	—	—
Newton.....	16,995	7	1	42.86	—	—	—	—
Newburyport.....	13,537	4	0	—	—	—	—	—
Fitchburg.....	12,405	3	2	33.33	—	33.33	—	—
Twenty-six Massachusetts towns..	202,176	75	15	9.33	14.67	1.33	1.33	2.67

Deaths reported 3065; 1074 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 622, consumption 485, lung diseases 426, diphtheria and croup 180, scarlet fever 128, cerebro-spinal meningitis 65, typhoid fever 62, small-pox 49, diarrhoeal diseases 37, measles 33, malarial fevers 26, erysipelas 18, whooping-cough 17, puerperal fever seven. From *typhoid fever*, New York and Philadelphia 12, Pittsburgh six, Lawrence five, Boston and St. Louis four, Holyoke and Newton two, Brooklyn, Chicago, Baltimore, Cincinnati, New Orleans, District of Columbia, Milwaukee, Prov-

idence, New Haven, Charleston, Lowell, Salem, New Bedford, North Adams, and Clinton one. From *small-pox*, Philadelphia 36, New York nine, Chicago three, Pittsburgh one. From *diarrhoeal diseases*, New York 11, New Orleans five, Philadelphia four, Chicago and Baltimore three, Brooklyn, St. Louis, and Cincinnati two, Boston, District of Columbia, Cambridge, New Bedford, and Chelsea one. From *measles*, New York nine, Cincinnati four, Boston and Nashville three, Baltimore, New Orleans, and Providence two, Philadelphia, St. Louis, District of Columbia, Milwaukee, Worcester, Chelsea, Taunton, and Attleborough one. From *malarial fevers*, New York nine, St. Louis

seven, Brooklyn three, District of Columbia two, Chicago, Baltimore, Milwaukee, Nashville, and Holyoke one. From *erysipelas*, New York eight, Brooklyn and Chicago two, Boston, Baltimore, Milwaukee, Providence, Charleston, and Newton one. From *whooping-cough*, New York four, Philadelphia three, Brooklyn two, St. Louis, Baltimore, Cincinnati, Pittsburgh, Providence, Worcester, and New Bedford one. From *puerperal fever*, Chicago three, St. Louis two, Philadelphia and Holyoke, one. The mortality from cerebro-spinal meningitis has decreased from 80 for the week ending April 2d to 65.

Twelve cases of small-pox were reported in Brooklyn, 18 in Chicago, four in Pittsburgh, and one in Milwaukee; diphtheria 36, scarlet fever nine in Boston; scarlet fever 20, diphtheria 11, in Milwaukee.

In 45 cities and towns of Massachusetts, with a population of 1,120,087 (population of the State 1,783,086), the total death-rate for the week was 24.16, against 20.71 and 22.20 for the previous two weeks.

For the week ending March 19th, in 149 German cities and towns, with an estimated population of 7,639,529, the death-rate was 27. Deaths reported 3968; 1859 under five: pulmonary consumption 601, acute diseases of the respiratory organs 436, croup and diphtheria 155, diarrhoeal diseases 134, scarlet fever 79, typhoid fever 48, measles and *rötheln* 47, whooping-cough 43, puerperal fever 36, small-pox (Königsberg four, Lü-

beck, Berlin four, Aachen four) 13, typhus fever (Elbing, Stutgard five, Posen two, Dessau) nine. The death-rates ranged from 16.3 in Potsdam to 46.3 in Erfurt; Königsberg 26.5; Breslau 41.3; Munich 30.7; Dresden 26; Berlin 23.1; Leipzig 23.4; Hamburg 28.1; Hanover 21.6; Bremen 23.6; Cologne 36; Frankfurt 19.7.

For the week ending March 26th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 21.7. Deaths reported 3163; acute diseases of the respiratory organs 348, whooping-cough 78, scarlet fever 56, measles 55, small-pox (London 49) 51, fever 37, diarrhoea 27, diphtheria 17. The death-rates ranged from 17.2 in Salford to 28.1 in Liverpool; Birmingham 18; Sheffield 20; Bristol 20.4; London 21.3; Manchester 21.9; Leeds 25. In Edinburgh 24.3; Glasgow 24; Dublin 34.9.

In the 20 chief towns in Switzerland, for the week ending March 26th, population 548,301, there were 39 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 20, typhoid fever 11, diphtheria and croup nine, measles five, puerperal fever two, small-pox one. The death-rate of Geneva was 22.8, Zurich 34.5, Basle 34.5, Berne 37.7.

ERRATUM. In the report of English cities last week, for small-pox (London 13) read (London 43).

The meteorological record for the week in Boston was as follows:—

Date.		Barometer.		Thermometer.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
1881.																				
April	3	29.659	31	38	24	63	31	58	51	W	W	W	19	24	20	F	C	C	—	—
"	4	29.485	31	43	23	62	25	68	52	W	W	W	15	16	14	C	C	C	—	—
"	5	29.416	26	32	20	73	47	75	65	W	W	SW	23	26	14	C	F	O	—	—
"	6	29.562	24	27	20	86	53	61	67	N	W	W	1	13	12	Lt. S	O	C	—	—
"	7	29.786	39	50	22	67	31	64	54	W	NW	W	8	16	7	F	F	C	—	—
"	8	29.856	44	53	32	63	31	51	48	W	W	Calm.	10	8	0	C	F	C	—	—
"	9	29.878	45	55	33	64	34	54	51	W	SE	Calm.	1	9	0	C	C	C	—	—
Week.		29.660	34	55	20				55										2.25	.01

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; T., threatening; Lt. R., light rain; Lt. S., light snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 9, 1881, TO APRIL 15, 1881.

COOPER, GEORGE E., lieutenant-colonel and assistant medical purveyor. Died at San Francisco, Cal., April 13, 1881.

CORRECTION.

MR. EDITOR.—A slight error in the secretary's abstract of the paper read by me before the Suffolk District Medical Society, printed in the issue of your journal, April 14th, injures the sense very materially. The passage in question reads: "Time alone seems to furnish all remedies for disease in the body;" it should read "in this body," "this" referring to the faculty, to which body no reform remedy other than that which time itself has furnished has ever been applied.

Very respectfully yours, DAVID HUNT, M. D.
Boston, April 16, 1881.

GYNÆCOLOGICAL SOCIETY OF BOSTON.—The next regular meeting is appointed for the second Thursday of May, — to accommodate gentlemen who may wish to go to Richmond, — at 10.30 o'clock. Paper by H. O. Marcy, M. D., on Abdominal Surgery. Profession invited.

HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED.—On the Antagonism between Medicines and between Remedies and Diseases, being the Cartwright Lectures for the Year 1880. By Roberts Bartholow, M. D. New York: D. Appleton & Co. 1881.

Anatomical Plates, arranged as a Companion Volume for The Essentials of Anatomy, and for all works upon Descriptive Anatomy, comprising Four Hundred and Thirty-nine Designs on Steel by Professor J. N. Masse, of Paris, and numerous Diagrammatic Cuts selected or designed by the Editor, together with Explanatory Letterpress. Edited by Ambrose L. Ranney, M. D. New York: G. P. Putnam's Sons. 1881.

Twenty-Fifth Annual Announcement of Stirling Medical College, Together with Catalogue and Order of College and Hospital Exercises for the Session of 1880-81. Columbus, Ohio.

Twelfth Annual Report of the Children's Hospital, Boston. Report of the Pennsylvania Hospital for the Insane for the Year 1880. By Thomas S. Kirkbride, M. D.

The Management of the Perineum during Labor and the Immediate Treatment of Laceration, and the Obstetrics and Gynæcology of William Harvey. By Francis H. Stuart, M. D. (Reprint.)

Strangulated Hernia, with Faecal Fistula, treated by a New and Simple Enterotomy and an Anaplastic Operation. By William A. Byrd, M. D. (Reprint.)

What Every Mother should Know. By Edward Ellis, M. D., etc., etc. Philadelphia: Presley Blakiston. 1881. (From A. Williams & Co.)

Transactions of the American Ophthalmological Society. Sixteenth Annual Meeting, Newport, 1880.

Sanitary and Statistical Report of the Surgeon-General of the Navy for the Year 1879.

Report of Horace L. Bowker, Inspector of Vinegar for the City of Boston, for the Year ending May 1, 1881.

How we Fed the Baby to make Her Healthy and Happy, with Health Hints. By C. E. Page, M. D. New York: Fowler and Wells.

Lectures.

CLINICAL LECTURE ON SUBACUTE PELVIC PERITONITIS.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROFESSOR T. GAILLARD THOMAS, M. D.

GENTLEMEN, — The patient now before you presents, I think, a condition of more than ordinary interest. Her name is Esther J—, and she is a native of Poland. She is thirty-nine years of age, is married, and has had ten children and two miscarriages. The last pregnancy resulted in an abortion, and this occurred five months ago. I think you will all be struck with the fact that she looks like a very ill woman, and so much was I impressed with the appearance of her countenance when I first saw her that I at once made a diagnosis of the case in my mind. This was subsequently proved, I may remark, however, to be entirely incorrect. On further questioning, she told me that she had been ill for five months, or, in other words, ever since the miscarriage just mentioned. Up to the time of the latter she says she was perfectly well, and, therefore, it would seem that her present trouble had some connection with this miscarriage. There has never been any period since the miscarriage, she says, when she has felt well. When asked in what way she has been suffering, she states that she feels very weak and has no appetite. She also has some pain, which she says is "almost all over her." This pain is considerably aggravated when she has a passage of the bowels, but at other times does not seem to be at all severe. Her monthly sickness is regular in its occurrence and normal in character, and she has a great deal of leucorrhœal discharge.

You must have noticed, gentlemen, how trivial the symptoms complained of in this case are, with the exception, perhaps, of the leucorrhœa which has just been referred to. When summed up, they consist merely in a loss of appetite and strength, and a little pain when the patient has an evacuation of the bowels. And yet, if we may judge at all from her appearance, there must be something pretty serious the matter with her. If any one of you were called upon to make a diagnosis from what has thus far been elicited in the case, you would very naturally be somewhat puzzled in regard to it. You might, perhaps, suppose that the woman was suffering from fissure of the anus or hæmorrhoids, which frequently give rise to the most intense suffering when the bowels are moved. Or, very likely you would imagine that she was affected by malignant disease, as, indeed, I did when I first looked at her.

Phthisis, Bright's disease, malaria, might all, perhaps, suggest themselves to you; but we find that she has no indication of either one of these. Yet, as I said before, there is evidently something seriously wrong with the patient, and it is therefore highly important that we should find out, if possible, what it is. We are justified in excluding the above affections, and must accordingly look elsewhere for the trouble. Now the patient has told us that she has been suffering from a very profuse leucorrhœa, and since this is the case, we should be culpable if we did not resort to an examination of the pelvic organs, especially as she has also told us that all her trouble dates from a miscarriage which she had a few months ago.

Let me now tell you what was found when the exploration was made. In the first place, the uterus was ascertained to be in its normal position; but instead of being freely movable, as it should have been, I found it perfectly fixed. When the finger was passed behind the cervix it met everywhere with a firm, resisting surface, for Douglas's sac and the whole roof of the pelvis were like a hard board. If you were to open the abdomen of a cadaver and pour down into the pelvis a quantity of plaster of Paris, and then, having allowed it to "set," should make an examination *per vaginam*, you would get precisely the sensation that is met with by the exploring finger in this case. The only movable part here is the bladder; and this, from the nature of circumstances, is always more or less movable, whatever may be the condition of the other organs, even when there has been an inflammatory process going on between the bladder and the anterior vaginal wall. In addition, I found that the vagina was filled with ichorous leucorrhœal material, which had caused marked irritation of all the parts with which it came in contact, including even the thighs of the patient.

There is but one affection that could produce such a state of affairs as has just been described to you, and that is pelvic peritonitis. It is, as you are no doubt aware, very frequently conjoined with pelvic cellulitis; and many would have you believe that we are only "splitting hairs" in trying to make a distinction between them. But I hold that it is just as philosophical to distinguish between the two as it is between pneumonia and pleurisy. Of course, it is possible to have pneumonia without pleurisy; but *post-mortem* records show conclusively that, as a rule, the latter disease is associated with the former. Yet no one thinks of confounding these, and, as a fact, pleurisy very often occurs independently of pneumonia. So here I can find no evidence that there has been any pelvic cellulitis whatever; while, on the other hand, a fortnight ago I saw what was undoubtedly a perfectly uncomplicated case of pelvic cellulitis, without any peritonitis. If we want to understand these two disorders properly it is necessary that we should study them separately. As long as the term *carditis* was used to express all the inflammatory affections of the heart very little was known about the subject; but when *endo-carditis* and *peri-carditis* began to be investigated separately a great deal of light was at once thrown upon it, and a correct and definite idea of it was for the first time obtainable.

I dwell upon this case at some little length because it is a typical one of chronic pelvic peritonitis, of the adynamic or asthenic type, as the old writers would call it. It has crept on very insidiously, and on this account has not presented the typical symptoms of the affection. All the local trouble to which it has given rise, apparently, is this ichorous leucorrhœa and some constriction of the rectum. In the same way Bright's disease often exists for a long time without even being suspected, and pleurisy may go on for months unnoticed; the presence of a little fever and quickened respiration, with the occurrence of night-sweats, perhaps, at last calling attention to the condition of the chest. I have not the slightest doubt of the diagnosis in this case, for the state of affairs that has been ascertained to be present in the pelvis is quite sufficient to account for the failure of the patient's general health, which has been noted. Before speaking of the prognosis and treatment, I wish to throw out a single point

in regard to the differential diagnosis so far as carcinoma is concerned. On feeling the board-like tissues here, an inexperienced examiner would probably think that he had a malignant growth to deal with, on account of their extreme hardness. But it is important to remember that such growths are very rare indeed in this position, and that when they do occur, they are found in distinct masses, and not generally disseminated, like this inflammatory material.

As to the prognosis, I believe that this patient will get entirely well. Mark you, that I do not say that she can be *cured*; for there is no medicine whatever with which I am acquainted that is capable of curing pelvic peritonitis. I wish that I could impress upon each one of you that hears me to-day the idea that drugs should be thought of *last* when we are considering the agencies that may be of service to any patient that is placed in our hands for treatment. It is true that we have specifics for syphilis, malaria, and ulcerative stomatitis, and almost a specific for epilepsy; but these are all the affections for which for we have any, and when we pass beyond them we can employ medicines only as adjuncts to other means of treatment. It may perhaps be thought that counter-irritation may accomplish a good deal here; but I do not believe that it will be of much service. Still, it is, at all events, worth while to try it, and I should recommend that the whole roof of the pelvis should be painted over with iodine about once a week.

The most important element now in the case is the general depreciation of the patient's condition, and this we must endeavor to contend against. She should, therefore, be at once put upon the bitter tonics, not for the purpose of curing the peritonitis, but in order to give her an appetite, so that she may take such food as will tend to build up her constitution. As her blood is no doubt in a very poor condition, she should eat an increased amount of food, and I think it would therefore be advisable for her to take not only the three ordinary meals, but something between these also; such as eggs, milk, farinaceous gruels, or anything that you please which will afford her nourishment. Besides, I would place her on such tonics as iron and the hypophosphites, as articles of diet; and I think that even within ten days there would be an appreciable improvement in her condition. It is very important that such a patient as this should be entirely free from care and should not be required to perform any physical or mental labor. Enough has been said, I think, to show you how little we can depend on medicines in such a case as this; but if the plan which I have suggested is adopted, I do not doubt that the inflammation here present, which is of a very low grade, will entirely disappear in time. At all events, it will prove of some service to this good woman to know just what is the matter with her; for she has already consulted a number of physicians, and each of them, it would seem, has made a different diagnosis.

— Sir William Jenner, M. D., K. C. B., has been elected president of the Royal College of Physicians of London. He is, it is stated, the first president of the College of Physicians who has received a license to practice from all the English medical corporations, namely, the College of Physicians, the College of Surgeons, and the Society of Apothecaries. He is also the first graduate of the University of London who has been elected president of the College of Physicians.

Original Articles.

SO-CALLED CONCUSSION OF THE SPINAL CORD.¹

BY R. M. HODGES, M. D.

What we know in regard to recovery from organic affections of the spinal cord; of the extent to which Pott's disease, and the atrophied cord left behind, admit of restoration; and of the gradual but complete cure of myelitis, by no means justifies the conclusion ordinarily reached as to the inevitable consequences of serious medullary lesions.² Still more true is it that the prognosis in litigation cases where the so-called symptoms of concussion of the spinal cord are set forth, is far better than is generally supposed, or alleged in evidence. An eminent lawyer, than whom no one, in this community, has had larger experience as counsel for the plaintiff in law suits where this condition has been assumed to exist, is said to have remarked that "he should like to see a case of 'concussion of the spine' which did not ultimately get well." Oré and Poinsolet declare that however severe the immediate results, it is rare for concussion to endanger life. "When it appears with the train of symptoms which properly belongs to it, it is, of all the injuries of the spinal cord, the one which offers the least serious prognosis. Their aggravation after a temporary lull is not a wholly unfavorable indication, for this may be due to that subsequent congestion which Lendet³ has described, and which yields without much delay."⁴

Of twelve cases of concussion of the spinal cord, comprising all that are reported in the History of the War of the Rebellion, eight returned to duty; three were discharged from the service; and one died of "chronic peritonitis," an accidental and irrelevant complication.

I have traced the subsequent history of twenty-one litigation cases (already alluded to), of which I have the notes. None of them occurred more recently than 1876. Of these twenty-one cases twelve have recovered, and six claim to have only partially recovered. In three no improvement has taken place.

Two hundred and forty-one persons were injured in the Wollaston accident, October 8, 1878, and their individual claims against the Old Colony Railroad Company were settled by the payment of either a large or a small sum of money. The records of these cases, through the courtesy of the officers of the company and of D. G. Lovejoy, M. D., its medical adviser, have been placed in my hands for examination. Fifty-three were considered as fairly to be accounted subjects of so-called symptoms of concussion of the spinal cord. This conclusion was arrived at either by myself after personal interviews with the claimants themselves; or from a study of the reports rendered by physicians; or it was the definite diagnosis given by the medical attendant or consultant. I have included in this enumeration no case where it did not seem to me that the condition asserted to exist could be maintained with an amount of evidence which might influence a jury of non-professional men in a belief of its reality. Of these fifty-three cases there were but three in which there was

¹ Concluded from page 365.

² Boston Medical and Surgical Journal, February 5, 1880, page 134.

³ Arch. Gen. de Méd., Mars, 1863, page 257.

⁴ Nouv. Dict. de Méd. et de Chir., Tome 22, page 810.

uniformity of opinion as to the actual condition of the claimant on the part of the physicians who examined them. Twelve cases were distinctly and openly fraudulent, and of the whole number there were but two the subjects of which, fifteen months after the accident, had not recovered from the symptoms presented by them at the time the settlement was made. Nineteen of the fifty-three were paid \$1000. and upwards. These latter might consequently be presumed to be the more conclusive and positive instances of the condition claimed to exist; and yet recovery was equally rapid whether a large or small award was made. No one of these fifty-three cases was brought to a jury trial. In twenty the award was made by a board of arbitration. In all but four instances this board was composed of three physicians, and in only one was there no physician.

In the Wollaston accident there were twelve hundred persons on the train at the time of its derailment. Thirteen persons were killed outright, and more than two hundred and fifty injured, of whom six subsequently died. It is impossible to determine how many cases of claims preferred were absolutely fraudulent or grossly exaggerated in their character. It is a notorious fact that this was true of a large number. Persons claimed compensation for injuries who were not even on the train to which the accident occurred. Attempts were made to palm off old fractures, old hernia, hydroceles, varicoceles, and varicose veins of long standing, as immediate results of the catastrophe. And in several instances boards of arbitration met, counsel were present, claimants examined, and no award made, simply because nothing could be found on which to base any just foundation for the damages demanded.

The striking feature of the accident, looked at pathologically, was the number of persons who claimed to have spat blood, or to have passed it by the bowels, in whom no distinct signs of injury, such as external marks of contusion, fractured ribs, etc., could be found. Of the minor injuries a very large number were due to cuts by broken glass.

Forty-seven persons were paid one thousand dollars or over up to eleven thousand dollars, ninety-seven were paid one hundred dollars or over up to one thousand dollars, and eighty-six were paid one hundred dollars and under. It is estimated that more than twenty-five thousand dollars were paid to physicians for professional services rendered.

The question of medical treatment hardly comes within the scope of this paper. It may be said, with emphasis, however, that in all cases where the so-called symptoms of concussion of the spinal cord are presented, and in which a demand for indemnity is made, no remedy equals an adjustment of the claim for damages. Until this result has been reached therapeutic measures are of little or no service. The curative effect of a pecuniary settlement shows itself more and more conspicuously with every case in which the facts are made known. So long as this issue is undetermined recovery must not be looked for. Attended by one or more physicians, who are constantly directing the patient's attention to his symptoms, visited by others who, perhaps, do not hide their disbelief of his statements, awaiting in trepidation the ordeal of a trial where the seriousness of his alleged illness is to be vigorously contested, brooding over his condition, and unable to occupy his mind in any healthy or active manner, the claimant is placed in the very position which medical advice would counsel him to avoid, and delivery from which cannot but stimulate his efforts to secure health, and promote his chances of regaining it, just as by long continuance of the situation they must be indefinitely postponed.¹

The following notable case, reported more fully in the *Boston Medical and Surgical Journal*, February 12, 1880, is not without interest in connection with the above remarks. —

¹ *Lancet*, March 30, 1867, page 389.

C. W. H., October 15, 1877, received a railroad injury, causing instant paralysis below the waist, with loss of control of both bladder and anus. Pain at the point of injury was incessant, and severe beyond description. After ten weeks there was some return of sensation, and at the end of a year the limbs could be drawn up and pushed down in bed, and even be made to move in walking, with the body supported on crutches and by an attendant. This partial recovery of motility was subsequently lost, and the muscles responded to the action of electricity no more than those of a dead man. In the autumn of 1879, in a suit against the railroad, C. W. H. was awarded heavy damages. On November 30, 1879, he was encased in a plaster jacket. Up to that day "he had not been able to walk a single step, or even to stand without powerful support." Three days afterwards he could walk about his room, and two days later he took his first walk in the street for more than two years; sensation was restored, complete control of the bladder was obtained, and the limbs became as warm as other parts of the body. On the ninth day he "walked a distance of half a mile, and ascended a long spiral staircase." There had been great difficulty in applying the jacket on account of the extreme obesity which had developed during the patient's period of inactivity, and on January 13, 1880, it was replaced by another and better fitting one. On account of the great muscular strength of his arms C. W. H. held himself suspended for forty minutes while the plaster of the second jacket was "setting," and he thus greatly aided in its adjustment. On completion of the apparatus he expressed himself as entirely freed from pain, and he walked with the greatest ease. There appeared to be no paralysis of any muscle, and on February 1st he could raise himself on his toes by the voluntary contraction of the muscles of the leg. Soon after this date C. W. H. went to California.

The question is often asked whether some special legislation is not demanded by the great interests at stake in connection with injuries which so often involve the culpability of individuals and corporations held responsible for their occurrence.

In a certain case, where the so-called symptoms of concussion of the spinal cord were wholly recovered from after settlement by the payment of \$10,000, the plaintiff had been injured by the collapse of a country bridge which she was crossing with a party of friends while on her way home from a picnic. The various persons hurt on this occasion recovered from the little town in which the accident took place a sum said to be one fifth of its assessed valuation. This and similar verdicts led the legislature of Massachusetts to enact a law by which no more than \$4000 can be obtained in judgment from towns for injuries occasioned by defective highways.²

The "Revere accident" cost the Eastern Railroad Company \$500,000, and the "Wollaston accident" is said to have cost the Old Colony Railroad Company more than \$395,000. The total sum paid as compensation for personal injuries by the railways of Great Britain, for the five years 1867-71, was £2,200,000.³

There can be no doubt that these great disbursements, unreasonably increased by exactions strongly impregnated with exaggeration, if not actually fraudulent, constitute an investment by which the community is the recipient, at the expense of railroad corporations, of a constantly increasing dividend in the shape of enhanced security of travel. The "Revere accident," in 1871, was in this way a great public service. "During the seven years succeeding it," says Mr. Charles Francis Adams, Jr.,⁴ "more than once, and on more than one road, accidents occurred which, but for the improved appliances introduced in consequence of the experience at Revere, could hardly have failed of fatal results." In Great Britain "the percentage of casualties to passengers shows a decided tendency to decrease. During the years 1877 and 1878 the percentage of killed fell from one in 15,000,000 to one in 33,000,000, and of injured from one in 436,000 to one in 766,000." In 1879, if the "Tay Bridge dis-

² Mass. Acts and Resolves, 1877, chap. 231, sect. 3.

³ *Dublin Quar. Jour. of Med. Sci.*, vol. xlv., p. 387. Holmes's *Syst. of Surg.*, 2d ed., vol. ii., p. 372.

⁴ Notes on Railroad Accidents, page 156.

aster" were excluded from the computation, the proportion of the killed would be less than in any year on record.

The extravagant estimate of the money value of being "shaken," as it is called in England, is largely due in this country at least to a single work, the only one in our language which enters into a detailed discussion of the so-called symptoms of concussion of the spinal cord. It is universally thought to present the subject in stronger colors than it deserves; to show an undue partiality for the public, and to be altogether too severe on the railroad companies. As the literature of the topic is limited, lawyers and physicians naturally refer to this work, and the professional eminence of its distinguished author is legitimately quoted in justification of his statements. Yet the remark has been made that "treatises based, like Mr. Erichsen's, upon the evidence of litigation cases are certainly the last sources of information from which one may learn to make a correct diagnosis and prognosis, and to escape being deceived by the voluntary and involuntary exaggeration and simulation so commonly observed in plaintiffs seeking damages."¹

In Great Britain railroad damages far exceed in individual cases those which are given in the United States. The recent and somewhat famous "Phillips case" is an instance.

The plaintiff, a well-known London physician, claimed that he had a practice worth \$35,000 (£7000)² per annum (an average of three years' receipts), until, in a collision on the Great Northern Railway, he received a severe concussion of the spine, which, the testimony of experts said, would prevent him from ever resuming his professional duties. The jury, largely influenced by the fact that the plaintiff had a private income of £15,000 (£3000) independent of his profession, awarded him \$35,000 (£7000). These damages were thought to be inadequate, and an appeal was made to a higher court. Tried a second time before the Lord Chief Justice and a special jury the sum of \$80,000 (£16,000) was awarded. The defendant railway then claimed that the amount was excessive, and asked for a third trial. The court (Lord Coleridge) stated that "he was not dissatisfied with the verdict," but should refuse the request on technical grounds.

There was reason to think that this case would be carried before Parliament, in order to obtain some rule in regard to the amount of damages to be awarded in similar instances in the future.³

The impartial interests of individuals or corporations, as regards cases in which the so-called symptoms of concussion of the spinal cord are made the subject of a claim for pecuniary damages, can never be reached so long as the present method of enlightening juries and referees in regard to them is maintained.

A joint committee of the Massachusetts Medical Society and of the American Academy of Arts and Sciences, after long deliberation, presented to the legislature of Massachusetts, session 1878-9, the following draft of a law in regard to expert testimony, drawn by the late Hon. Emory Washburn. It was referred to the judiciary committee, but never came to light afterwards.

"When a cause at issue in any court, in which issue is involved any question of art, skill or science, which may in the judgment of the court render it necessary or desirable to examine experts as witnesses in the trial thereof, the court may, in their discretion, appoint and require the attendance of one or more persons to be examined as such experts, and it may allow to such person or persons such sum or sums for fees as witnesses as to said court may seem reasonable and proper, to be charged and allowed as costs to the prevailing party, if he shall have paid the same, unless the court, for good cause, shall otherwise determine. And the court may in their discretion require of the parties, or either of them, to advance and pay to the per-

son or persons thus appointed all or any part of the sum or sums so allowed, before the trial of any such issue be begun or proceeded with."⁴

How is a jury, special though it may be, to determine the value of medical evidence on intricate points of pathology? "The truth is," said Mr. Syme,⁵ "that when juries find the medical evidence so conflicting, not being able to judge for themselves as to the merits of the case, they almost always decide in favor of the claimant, so that there is great encouragement afforded to unfounded or exaggerated demand for redress. Indeed, any man who travels by railway may easily obtain a competency by stumbling on the platform after the door of his carriage has been opened by a servant of the company, but before the train has ceased to move. He has then merely to go to bed, call in a couple of sympathizing doctors, diligently peruse Mr. Erichsen's lately-published work on Railway Injuries, go into court on crutches, and give a doleful account of the distress experienced by his wife and children through his personal sufferings, which have resulted from the culpable negligence that allowed him to leave his seat prematurely. Who can doubt that in such circumstances the jury would give large damages?"

This graphic description shows why attendance in court as an expert is so often an annoying and humiliating experience, and generally avoided by those who are, perhaps, most competent to give evidence. The "side" which summons is constantly spoken of. An expert should not care by whom he is summoned, no matter how strong his convictions, or what his opinions may be in regard to questions in dispute. As a rule, counsel are indifferent whether an honest and skilled witness is called by the plaintiff or defendant. Indeed, a sharp rivalry is often displayed in the attempt to make their opponent's issue a subpoena, and assume the expense of the expert's fee, the non-paying party being quite content with the use of the witness in cross-examination.

The authority of an opinion given by Judge Sprague, December 14, 1854, has never been qualified by any subsequent decision. It is to the effect that "the court will not compel the attendance of an interpreter or expert who has neglected to obey a subpoena, except in case of necessity." This opinion was given on a motion for a writ to compel an interpreter to appear in response to a subpoena which he had refused to obey, and is justified in the following terms: "When a person has knowledge of any fact pertinent to an issue to be tried, he may be compelled to attend as a witness. In this all stand on equal ground. But to compel a person to attend merely because he is accomplished in a particular science, art, or profession, would subject the same individual to be called upon in every case in which any question in his department of knowledge is to be solved. Thus the most eminent physician might be compelled, merely for the ordinary witness fees, to attend from the remotest part of the district, and give his opinion in every trial in which a medical question arose. This is so unreasonable that nothing but necessity can justify it."⁶

With this decision in mind it is the practice of some lawyers never to summon medical experts by subpoena, but simply to request their attendance.

The legislation demanded involves a plan by which the parties interested shall mutually agree to place the settlement of their dispute, so far at least as it is a medical question, in the hands of a board of referees, chosen from accomplished, fair-minded, and disinterested physicians, those of the plaintiff or defendant under no circumstances being of the number, but always appearing as witnesses. Or, if one or perhaps two experts, of known honor and skill, should be designated by the court to visit the plaintiff, without the presence of the counsel on either side, in company with the attending physician, for the purpose of draw-

¹ Boston Medical and Surgical Journal, February 5, 1880.

² In this country evidence as to income, of necessity, an uncertain and fluctuating sum, is not admissible as bearing upon the amount of damages to be awarded, though it may be introduced to show the capacity to earn money possessed by the injured person.

³ Med. Times and Gaz., December 13, 1879.

⁴ Boston Medical and Surgical Journal, February 17, 1870, page 119.

⁵ Lancet, January 5, 1867, page 2.

⁶ Sprague's Decisions, page 276.

ing up a written report, in simple language, giving their view of the causes, nature, and probable consequences of his condition, present and to come, this report to be a full and final statement of the case for the information of the court, the counsel, and the jury, and to be the common property of all, then even-handed justice may be looked for in investigations, which, as now conducted, are often believed to be characterized by imposition; and the professional discredit which has its origin in the wrangles and contradictions, as well as in the ignorance and conceit, of lawyers and self-styled experts, will vanish in the clearer light by which the controversy will be illuminated.¹

In recapitulation of the preceding pages the following conclusions are presented:—

(1.) The designation, "concussion of the spine," is a misnomer, which has led to the error of considering concussion a disease instead of the cause or traumatic agency of a disease. This objection is removed by substituting for the above term the descriptive title, "symptoms following concussion of the spinal cord."

(2.) Although the shaking occasioned by railroad accidents and collisions constitutes the most frequent cause of their manifestation, various other traumatic influences, with or without an accompanying jar, are followed by the so called symptoms of concussion of the spinal cord.

(3.) Although we are ignorant of the precise pathological changes provoked by concussion of the spinal cord, it is recognized as a cause of organic medullary lesion, which displays itself by symptoms varying in severity from those which are rapidly fatal, to those which are hardly perceptible. It is also a cause of symptoms entirely functional or subjective, which are unaccompanied by any features capable of verification by medical skill, and which are often subject to the volitional control of the patient.

(4.) The symptoms of actual organic changes in the spinal cord, when they follow concussion, are by no means vague and obscure manifestations. They are objective, and admit of recognition and appreciation, being identical with those of idiopathic origin. They are incapable of being simulated with an accuracy which will permit of long deception.

(5.) The subjective symptoms following alleged concussion of the spinal cord are ill defined, vary in degree and character, are such as permit of ready simulation, and but rarely find a counterpart in cases which occur independently of accident or injury, or where motives for deception do not exist. If objective and subjective symptoms are both present in any one case, as not infrequently happens, the objective symptoms predominate.

(6.) The cases which present exclusively subjective symptoms, attributed to concussion of the spinal cord, constitute a distinct class, and owe their peculiarities in a large majority of instances, if not always, to influences growing out of the anticipated or actual litigation, involving claims for pecuniary damages, which so constantly attend them.

(7.) The prognosis of cases in which so-called symptoms of concussion of the spinal cord are developed, is better than has been generally supposed; and in those accompanied by subjective symptoms only is invariably a favorable one as regards ultimate recovery.

(8.) Recovery, or improvement of a fixed and per-

manent character, never takes place until after the adjustment of any existing claim for compensation; and, so long as this is final it makes little difference whether the settlement is a favorable or unfavorable one for the claimant.

(9.) The frequency with which exaggerated and fraudulent cases, presenting the so-called symptoms of concussion of the spinal cord, are made the subject of litigation and claims for pecuniary compensation, will be diminished by legislation providing for a wiser and more discriminating use of "expert" testimony than now prevails.

UNNECESSARY SURGICAL OPERATIONS IN THE TREATMENT OF THE DISEASES OF WOMEN.²

BY CLIFTON E. WING, M. D., BOSTON.

THAT there exists, at the present time, among those who practice the treatment of the diseases of women, too great a love for operative procedures, is an opinion frequently heard expressed by members of the medical profession. These statements are usually answered by the specialists with such remarks as "This specialty is a modern development, and physicians who have not given particular study to these troubles know little or nothing about them or their proper treatment." There is an amount of truth in such an answer which gives it weight; but, still, in this way the question is avoided rather than met. I have stated in a previous article³ my belief that the operative part of the specialty is overdone. Having been repeatedly asked what operations were referred to I will call attention, in the present paper, to some of those most in vogue.

The fees which a gynæcologist can collect for the performance of anything which can be called "a surgical operation" are much greater than the amounts ordinarily earned in the honest treatment of cases by other and simpler means. Unscrupulous practitioners can much increase their incomes by doing as many "surgical operations" as possible. But with two practitioners, equally honorable, and each above a suspicion of sacrificing honesty to pocket, given the same number of similar cases, one will perform more surgical operations in their treatment than will the other. Much depends upon the physician's order of mind, and, perhaps, quite as much upon his early instruction on the subject and the character and practices of those who were his teachers and early associates.

While in the first years of the development of the specialty it was important that the profession should learn that there were certain surgical operations which would afford relief,—oftentimes in cases previously considered incurable,—yet, I think, that at the present time the pendulum has swung far to the other side and that eventually we shall look back upon the present "operative era" in gynæcology with somewhat the same feelings with which we now look back upon the time when all vesico-vaginal fistula were considered incurable, and women who were so unlucky as to have backaches from displaced wombs were blistered and canterized along the back for "spinal trouble."

It has occurred to me that there is an analogy between

² Read at the meeting of the Norfolk District Medical Society, March 22, 1881.

³ Modern Abuse of Gynæcology, read before the Suffolk District Medical Society, April 10, 1880.

¹ Medical Times and Gazette, vol. i., 1869, p. 466. Brit. and For. Med. Chir. Rev., January, 1876, p. 18.

the present practice of many who treat female troubles and some of the orthopaedic practice witnessed in my student days. We used to hear much about the proper method of excising the head of the thigh-bone in hip-joint disease; but little or nothing of value was ever told us about the methods of treating such troubles to prevent the advance of the affection to that stage where excision was a necessity, and the interest excited in our minds over the operation of excision was certainly as great as our interest in the welfare of the poor patients. Few of the students, the operations once through with, thought any more about the cases or ever knew much about the final condition of the patients.

I do not intend to consider in this paper the rare and exceptional gynecological procedures. The operations to which I shall ask attention are some of those most frequently performed, namely:—

- (1.) The Operation for Ruptured Perinaum.
- (2.) Division of the Neck of the Womb.
- (3.) The Operation for Restoring the Neck of the Womb where this has been torn. (Emmett's operation.)
- (4.) Curetting of the Uterine Cavity.
- (5.) The Operation upon the Anterior Vaginal Wall for Prolapse of this Portion and Cystocele.

I have purposely avoided the use of the several long and complex names, troublesome to pronounce and difficult to remember, which have been invented for these procedures. They are only confusing.

RUPTURE OF THE PERINEUM: THE CONDITION NOT ALWAYS AN INDICATION FOR OPERATIVE INTERFERENCE.

Extremes meet in medicine as elsewhere. This fact is exemplified by the difference in the views held by physicians regarding the lesion in question. Some (usually practitioners well advanced in years), are disposed to consider the injury of little or no importance unless, perchance, the rupture is very extensive, involving, perhaps, the sphincter muscle and the rectum; while the most enthusiastic of those holding the opposite opinion tell us that "not a line" of the integrity of the part can be destroyed in labor without disastrous consequences to the woman, and advocate the operation for restoration whenever an opportunity for its performance offers. The accurate clinical observer learns from experience that, as is often the case where opposite views come in contact, the truth lies in a mean between the two extremes.

While the better knowledge of uterine affections which has come to prevail in late years has taught us that the perinaum (or, more properly, the "perineal body") is an important aid to the proper support of the pelvic contents, and that where it is destroyed or greatly injured, the woman usually, sooner or later, suffers more or less inconvenience; yet I question if those who take the extreme view of the matter and assert that every rupture, even if it is only a slight one, is followed by serious results, are not really doing much to retard the recognition of the true importance of the lesion. Practitioners of long experience, who know of instances of laceration of the perinaum, suffered years before, that are unaccompanied by troublesome symptoms, hearing such statements, will be apt to have their confidence in modern gynecology somewhat shaken. On the other hand, young practitioners, with less practical experience, having patients with

uterine symptoms, and finding, on examination, more or less rupture of the perinaum, may easily attribute too much importance to this condition, and overlook other troubles which are present. In a paper published some years ago¹ I called attention to the fact that physicians making a uterine examination, and finding what they had been erroneously taught to regard as "ulceration" at the neck of the womb, were apt to attribute all the patient's pains and aches to this condition, when really it was often of little or no importance, and therefore often failed to look further and detect the real cause or causes of discomfort. Some such caution regarding Rupture of the Perinaum, it seems to me, will not be out of place at the present time, when so much attention is being given to the subject.

I cannot but think that the evils attributed to *slight lacerations* have been greatly exaggerated. It is the exception, and not the rule, to find in women who have borne children a perinaum perfectly intact, and it is a mistake to take as a fixed standard of what every perinaum should be that condition found in nullipara and virgins. Not only are the parts more relaxed and patulous as the result of the distension in child-bearing, but, as Matthews Duncan has pointed out, there is invariably more or less rupture of the vaginal outlet during parturition even if the perinaum proper is not torn, and if the condition found in those who have not borne children is to be assumed as the proper condition for all women, then an operation may easily be found "necessary" in practically every woman who has had children.

I am free to state that I have not found that patients with slight perineal laceration (and many have come under my notice) have suffered from this condition the direful symptoms which have been described as accompanying such lesions. It has been truly said that the sole justification of any operation must be the strong probability that compensating good will be the result. Under such a rule of action I believe that the cases of slight perineal lacerations requiring or justifying surgical interference will be few. One writer, after calling attention to the fact that marked lacerations suffered years before sometimes remain absolutely without injurious results, pointedly remarks of women having slight lacerations, "It is significant that they suffer more after their attention has been drawn to the injury." This is a hint enthusiastic operators will do well to consider.

Neither in all cases where the *perinaum is more extensively ruptured* is the operation always advisable. A great American gynecologist has put forth the following as aphorisms: "Given a woman with a perfect perinaum, and the relation of the parts within the pelvis will be perfect: destroy that perinaum and at once the parts will fall out of position; restore the perinaum, and as soon as it is perfect all the pelvic organs will be restored to their normal relations." It is difficult to conceive of teachings better calculated to mislead. The idea that a woman with a perfect perinaum cannot suffer from flexion, version, or prolapsus of the womb, and displacements of the other contents of the pelvis is nonsense, as every physician knows, and that when there is a rupture of the perinaum and at the same time displacement of the parts within the pelvis, the simple repairing of the perinaum is always

¹ On So Called Ulcerations of the Os-Uteri. Boston Medical and Surgical Journal, March 16, 1876.

to insure the restoration to their normal relations of all the pelvic contents is equally absurd.

When the injury to the perineum threatens, if left unrepaired, to impair the supporting powers of, and to produce displacements of, the other parts which are, as yet, in practically normal condition and position, and we can feel that the operation of restoring the perineum is going to remove this danger and relieve and cure the patient, most certainly the operation should be done. But in many cases — nay, *most* cases, this lesion is *only one of a series* of sequences of child-bearing. The woman, with more or less absence of perineum, often, at the same time, has subinvolution of the uterus, the organ being much heavier and much larger than normal, perhaps more or less rupture of the neck of the womb, subinvolution of the vagina, and a relaxed condition of all the tissues of the pelvis, allowing the heavy womb to "sag," or to become displaced in one direction or another.

Since these other results of child-bearing are enough to cause serious displacements and serious symptoms in very many cases where there is no perineal rupture, how, in cases where this lesion coexists, can the simple mending of the torn perineum "restore to their normal relations" all the pelvic organs, "or furnish complete relief to the patient? Now, in just such cases I have known physicians to tell patients that all they needed was to have the perineum restored, and the latter to submit to the operation only to be disappointed in the relief afforded by it. In fact, the patient is often worse off in one respect, after having undergone the operation, than before. It is just this class of patients with heavy wombs and relaxed pelvic tissues who derive the greatest benefit from the support afforded by properly adjusted pessaries. Now, with a more or less patulous vulva the patient can usually learn to manage her own supporter when it is once properly fitted, removing and replacing it herself as is necessary; but the perineum restored by operation, and restored as thoroughly as it usually is by the better operators, *as it must be to afford much support to the parts within*, the patient, as a rule, cannot replace her own supporter; indeed, in many cases can remove it only with difficulty, and therefore for the future is dependent upon the doctor; which is good for the doctor, but bad for the patient.

With this class of patients I believe the perineal operation should be reserved for the cases where supporters alone fail to give the desired relief (and such cases will be common in direct ratio with the physician's want of skill in adjusting pessaries), and those cases where, after the wearing of pessaries for a long time, the patient is so desirous of doing without them as to be willing to undergo an operation, and there is fair prospect, the parts having been kept in position so long, that now, if the perineum is restored, artificial supports can be dispensed with. Few patients are so anxious to throw aside a supporter which has given comfort, and whether they are going to be able to dispense with one permanently is always a question.

The mistaken notion so common among physicians that where a lever pessary is to be worn a firm, solid perineum is necessary for it to rest upon, has doubtless often led to the performance of perineal operations which might have been avoided had the surgeon been an expert in the adjusting of pessaries, and known the fact that well-fitted ones do not rest upon or even touch the perineum or perineal body.

Lacerations involving the sphincter muscle and the rectum of course always demand operative measures.

I have not referred to the *primary treatment of perineal lacerations*, that is, their treatment immediately upon the conclusion of the labor during which they have occurred. This subject concerns the obstetrician as much as it does the gynecologist. On the one hand we have physicians who think the introduction of sutures at this time inadvisable, and, on the other hand, those who declare that the neglect to do this is reprehensible. The following is, I think, a fair general statement of the matter:—

In the great majority of cases sutures introduced with skill immediately after the injury has occurred, keeping the torn surfaces in apposition, will give the woman comfort, and increase the chances of a good union, although, of course, it may not take place. In many cases where the sutures are used they are used with such want of skill and in such bungling manner that they fail to insure apposition of the parts, in fact, act merely as setons to increase inflammatory action, and if a good union is obtained, it is not because of the sutures, but in spite of them. In certain cases, owing to the condition of the puerperal woman, it may be bad practice to attempt the primary treatment of the lesion. Such cases are exceptional, however. The "diminution of the chances of septicaemia" by the closing of ("even slight") perineal wounds, which has been much dwelt upon of late, would seem to have been rather exaggerated.

DIVISION OF THE NECK OF THE WOMB.

It is questionable if any other operation of modern surgery has been quite as thoroughly overdone and abused as this has been. Fortunately, the operation is not now as fashionable as it was some years ago, but the evil effect of the teachings of certain leaders in the specialty has not yet fully passed away.

In the last seven years I have performed the operation but twice. These two operations were done in the earlier years when I was fresh from seeing the practice of those with whom it was a frequent and regular procedure, and whether I should now, with my present ideas, repeat the operation in two similar cases is very doubtful. During this period I have had many patients upon whom I should have operated had I followed the practice of some gynecologists of the day, but I do not think my patients would have been benefited thereby.

The operation is usually done to render the uterine canal patulous and straight in cases where it is supposed to be unnaturally narrow or crooked, the object being the relief of dysmenorrhœa, of sterility, etc., etc.

That cases do occur where the operation is indicated and advisable I believe, but that such cases are very rare I am convinced. It is only a short time ago that the operation was very often resorted to. It seemed as if gynecologists divided the cervix uteri simply because they did not know what else to do. Practical experience soon robbed the operation of much of its repute and glory, but patients still come along, every now and then, who have had the operation done upon themselves or who have been advised to submit to it, when from the nature of their cases such an operation could not prove advantageous. I have had patients who had been told they must be treated for stricture of the uterine canal where the largest sound passed without obstruction to the fundus.

"Stricture of the uterine canal is not infrequently diagnosed when in reality no 'stricture' exists. When there is an inflamed condition of the lining of the womb the calibre of the canal is often much diminished by the coincident swelling, and in cases of displacement leading to hypostatic congestion the consequent oedema and swelling of the uterine tissues often leads to the same narrowing of the uterine canal, which is most readily detected with the sound in the neighborhood of the os internum, that being normally the narrow part. But to treat such cases as though this secondary condition were the prime cause of the troubles present does not seem rational.

"Again, when the examiner finds difficulty in passing a sound, he is very apt to jump to the conclusion that a stricture is present, when perhaps such is not the case, and the fault is his own. Where the old-fashioned cylindrical speculum is used (and no one at the present day would base a diagnosis of stenosis of the uterine canal upon difficulty in passing the sound by the touch alone, and without the use of any speculum) it is, in many cases, an impossibility for any one to be at all sure whether a stricture is present or not; for, owing to the fact that the uterine canal is not in a line with the speculum when the latter is introduced into the vagina, but often nearly at right angles with it, a sound cannot always be readily passed through this speculum into a normal uterus. The valvular specula are rather better in this respect, but may lead to error in another way, as I have several times seen. Unless carefully managed the end of that blade which lies along the anterior vaginal wall may very easily be pressed against and be made to indent the anterior wall of the uterus, so as to obstruct the uterine canal to a degree that the sound will not readily pass. The Sims speculum shows its superiority here as elsewhere, but its proper use necessitates the aid of a trained assistant."

It is suggestive that at a meeting of specialists, not a great many years ago, two practitioners, each of great experience, and with large practices, discussed the subject of uterine stricture. The one thought that it practically never occurred at the os externum, but was more common at the os internum, while the other held exactly the opposite opinion. I believe it is rare at either place to the extent to require surgical interference. In some cases where the physicians have considered the uterine canal too narrow or crooked they have recommended the surgical interference when there was nothing whatever to indicate that the condition caused symptoms. Could anything be more ridiculous than such advice given in the case of an unmarried lady whose menstruation was painless. (The lady afterward came to consult me, and asked if I would recommend the operation.) I even know of an instance where a physician, recommending the operation because he thought he found the uterine canal more crooked than usual, and being met by the patient remark, "But, doctor, I never have pain when unwell," replied, "But you may have pain in the future if the womb is left as it is." This was certainly a marked example of preventive medicine or rather preventive surgery! Some time ago I reported, in conjunction with Dr. A. N. Blodgett, of this city, a case of uterine fibroids where the uterine canal was so crooked and narrowed that a small probe could not be passed. Indeed, it was difficult to trace the canal on section of the uterus post mortem. Menstruation had been al-

ways painless! It is interesting to think of these two cases in the same connection.

Division of the cervix to straighten the uterine canal where its crookedness is due to uterine flexion is an operation the beneficial results of which have been very much overrated. There are better and simpler ways of treating uterine displacements, and when these fail division of the cervix will rarely prove beneficial.

The operation itself is very simple. Any one can do it, but no one can truthfully assure his patient that it is unaccompanied with danger. I have seen more than one very serious result follow. To be sure when they come they are generally attributed to the fact that the patient has "taken cold," or to some cause other than the operation itself, but safe to say in most of these cases the trouble would not have come but for the interference of the doctor.

(To be concluded.)

RECENT PROGRESS IN DERMATOLOGY.

BY EDWARD WIGGLESWORTH, M. D.

INFANTILE ECZEMA.

DR. BULKLEY treats¹ of the management of eczema in children under five years of age in his usual practical and sensible way. The disease is by no means hereditary, and is not contagious. The child having the disease may be apparently the healthiest one of the family, yet there is some condition to be corrected besides the disorder of the skin. The mother of a nursing, from a diet of tea or fermented liquors, or otherwise, is dyspeptic, or constipated, or the urine shows derangement of digestion or of assimilation, oxaluria, etc. She should drink milk only, and that with a little alkali added, for example, fifteen drops of liquor potassæ to the tumbler of milk. Mother and child may each need tonics, cream, and cod-liver oil. Gross errors in the diet of the child may often be detected, even among the better classes, for the nurses come from among the more ignorant part of the community, and practice as they themselves have been taught. Constipation in a child under one year of age calls for six centigrammes of calomel rubbed up in sugar in the morning. Three centigrammes should be added for every additional year of life. These every second day or as occasion demands. So also lactopeptine in orange-flower water, after eating. If more is needed give oatmeal or cracked wheat, as a pulp made by rubbing thoroughly-boiled meal through a fine sieve. Young children bear also alkalies well. In old cases, after the first year of life, one drop of Fowler's solution of arsenic in cinnamon water or wine of iron, or six centigrammes each of rhubarb and soda in five grammes of peppermint water. The anæmic child calls for tonics, the full-blooded child for purgatives and alkalies, and only later for tonics, for eczema is a disease of debility. Local eczemas from external irritants call for no internal treatment. Zinc ointment, if used, should not be benzoated. In early stages subnitrate of bismuth, one part to ten or fifteen of rose ointment. Tar only in the latter stages, and then only three parts of tar ointment to one of oxide of zinc powder in eleven of rose ointment makes one of the most valuable anti-pruritics in eczema. All ointments should be applied

¹ Reprint from Trans. Med. Soc. State of New York for 1880.

on cloths, rubbing them in does often more harm than good. Soap and even water does harm in the early stages. If water is employed it should be distilled or boiled, rendered slightly alkaline, and used only for gentle wiping. If oozing exists a drying powder is called for, and washing is only needed at long intervals to remove any very thick crust, impenetrable by ointments, and even here cod-liver oil locally is often preferable. It is not once in one hundred cases that one poultice is called for, and continuous poulticing is very bad practice. Actions for malpractice will soon begin to be brought against general practitioners who refuse to profit by the experience and teachings of specialists. Where an old eczema is dry and scaly, equal parts of oil of cade, green soap, alcohol, and water may be gently rubbed on with a damp cloth, then the parts dried, and the appropriate ointment immediately applied upon a rag. One part of oil of cade or tincture of camphor in nine of ointment is a valuable antipruritic. Stronger ointments usually do more harm than good. In very old cases, obstinate and with localized patches of chronic infiltrated thickening, it is at times allowable to use one part of citrine ointment diluted five or more times. Avoid a routine treatment by arsenic and zinc ointment, and, above all, *never* talk of "driving in," or be led by ignorance and carelessness to assert that it is "dangerous" or "useless" to treat this disorder.

MULTIPLE NEUROMA.

Dr. Carl Rump furnishes¹ the results of macroscopic and microscopic dissections in the case of a man aged thirty-nine, dying of tetanus rheumaticus, clinically, and of fibro-neuromatosis, anatomically. A brother, aged twenty-two, shoemaker, had died previously, and upon the body of this patient Genersich had found,² in various places, numerous nodules following the course of the nerves. Dr. Rump's case was also examined by Rindfleisch and Schottelius.³ The patient had noticed the little tumors five years before death. They never caused pain; confirming the dictum of Gerhardt, "multiple tumors are rather to be regarded as neuromata, the less painful they are spontaneously or upon pressure." The case was one of fibroids of the nerves, the "false neuromata" of Virchow. Many nodules existed upon the same nerve, like beads upon a rosary. When a nerve thus affected branched, its branches were similarly affected. Nodules were found upon all nerves, spinal, cerebral, and sympathetic. The cause may have been a sympathetic paralysis of the vessels of the nerves, for the vessels around and within the nerves were filled with many cells. The mother died of cancer, and heredity may have played a part, both brothers being sufferers. Elephantiasitic processes were also suggested, the cutis being implicated, as was shown by the presence upon the trunk of numerous atheromata and very marked pigmentations.

SYPHILITIC MUSCULAR CONTRACTION.

Dr. Van Harlingen gives⁴ three cases of this rare form of disease, for, though no structure of the body is exempt from the influence of the syphilitic poison, yet the muscular tissues are among those most rarely attacked. When invaded the lesion may occur at any

period of the evolution of the disease. The contraction occurs by preference in the biceps brachialis. Next in frequency the triceps brachialis is attacked. The left side suffers more than the right, and is usually the only side invaded. The diseased muscle is unchanged in form and consistency, but the forearm is flexed upon the arm at a variable angle. Within this angle the limb can be moved, but extension beyond a certain point is impossible, and the attempt at forcible extension is accompanied by pain referred to the insertion of the tendon in the radius. If the triceps also is affected, neither flexion nor extension is possible. The muscle is indolent, no pain on pressure, rarely exaggerated sensibility. Pressure on the tendon develops tenderness. General pain, with stiffness, soreness, and occasional cramps, are usual throughout the muscular system, especially stiff neck coming on towards night. The contraction develops insidiously, and, if untreated, runs on with remissions and exacerbations for a year or more. It occurs from the sixth to the fifteenth month, in light cases, where the skin lesions have been dry rather than ulcerative. The nervous element is often prominent. Neither age, sex, nor occupation seems to exert a causative influence. Pathology, negative; "we see an effect of which we cannot explain the cause." Treatment, "mixed."

ROSEOLA UTERINA.

Dr. Kidd brought⁵ to the notice of the Dublin Obstetrical Society a disease differing from the scarlatinous-erythematous dermatitis, occurring in puerperal women, of Ziemssen's Cyclopaedia of Medicine (Thomas). It not only occurs with patients in childbed, but may follow even trivial operations upon the uterus in women who have never been pregnant, and has been noticed in at least three per cent. of the writer's midwifery cases. From the third to the fifth day after delivery the skin of the abdomen becomes itchy; broad erythematous patches are found, which, in a few hours, spread over this whole region, resembling a mild scarlatina. Next day the axillae are affected, whence it spreads over the chest and neck, but not over the face, then down the arms, thighs, legs, and over the back, always in broad patches. No fever. Pulse and temperature normal, lochia and milk unaffected, appetite good. No headache nor inflammation of tonsils. In two or three days it fades as it came, except that upon the abdomen the patches may remain five or six days. No desquamation, affection of kidneys, nor œdema of extremities, and convalescence is in no way retarded. Neuropathology affords the most feasible explanation of this pathological process, which view, as far as the causation by vaso-motor paresis of affections of the skin, is supported by Hebra, Handfield, Jones, Bulkley, Woaks, and many others.

SULPHIDE OF CALCIUM FOR SUPPURATING RUBOES.

Professor Otis, following the suggestions of Ringer, employs⁶ sulphide of calcium, with the best results, in cases of threatened suppuration in phlegmonous swellings, 0.005 gramme every two hours, or 0.003 gramme every hour, during the day. Furuncles and abscesses are arrested; suppurative processes of the mucous membranes, on the contrary, not. Absorption of pus already formed, and resolution of the tumor, occurred in fifteen out of eighteen consecutive cases of inguinal

¹ Arch. f. Pathol. Anat., B1. lxxx., Heft 1.

² Ibid., B1. xlix.

³ Würzburg, Inaugural dissertation, Münster, 1879.

⁴ Reprint from American Journal of the Medical Sciences, April, 1880.

⁵ Dublin Journal of Medical Science, April, 1880.

⁶ New York Medical Journal, May, 1880.

buboes associated with chaneroid, this resolution tending to prove (in accordance with the popular teaching) that the buboes were of sympathetic and not of chaneroid origin. Applying to these cases of inflammatory buboes, the concomitants or immediate sequela of well-pronounced chaneroids, the old rule that chaneroid buboes always eventuate in chaneroid abscesses, always suppurate, and require evacuation, then we must hold that only three out of eighteen cases of inflammatory buboes, associated with chaneroids, were the result of transference of the suppurative process from the chaneroid to the adjacent lymphatic gland. Or the influence of the drug may extend to the true chaneroid bubo. At all events its successful use invites a trial of its efficacy in *all* instances of threatened glandular suppuration.

PURPURA HEMORRHAGICA.

Dr. Finny reports¹ three cases of purpura, all forms of which (excepting only the purpura of fever) he would classify under the common head of P. hemorrhagica, as exemplifying various degrees of cutaneous hemorrhage rather than different species, the varieties depending, not upon any differences in crasis or in the condition of the blood and its relation to the cutaneous capillaries, but upon non-essential concomitants. Thus, P. simplex has neither the painful affections of the joints characterizing P. rheumatica, nor the hemorrhages from the mucous tracts, giving the distinctive feature to P. hemorrhagica (morbus maculosus Werlhofii). His view as to the pathology of purpura is that the nervous system is primarily at fault, and that through the influence of the vaso-motor system, the blood and the capillaries are secondarily affected. During the attack he advises the use of ergot to induce vaso-motor spasm of the capillaries, and check the tendency to transudation of the blood corpuscles through their walls. When the acute symptoms abate, mineral acids and bark. An antiscorbutic diet is of no value.

TRUE MEASLES; MORBILLI (GERMAN, MASERN). "GERMAN MEASLES," "HYBRID MEASLES," "DUTCH MEASLES," "SCARLET RASH," "FRENCH MEASLES," RUBIOLA (GERMAN, RÖTHELN).

Missouri, like Massachusetts, has experienced an epidemic of measles, and Drs. Cartman and Henderson have availed themselves of the opportunity to emphasize "the fact of the duality of the disease." In "rubeola" the eruption (where not confluent) consists of *single papulae*, each one surrounded by a *separate, small, red areola*. Not infrequently the papulae are large, a few of them passing at times into vesicles or even pustules. The catarrhal symptoms are not very strongly developed, there being less coryza, less ophthalmia, and less photophobia than in true "morbilli." On the other hand, there may be, from the first, severe pharyngeal inflammation, often involving the tonsils and Eustachian tubes; glandular disturbances are more frequent; bronchitis rarely assumes a threatening character. Among the *sequela*, pneumonia of the right lung, abscesses in various localities, and sometimes nephritic troubles occur. In "morbilli," or true measles, the *papulae* are *very small, mostly multiple*, from four to six upon a single areola, which is larger than that of rubeola. This appearance does not seem to be

occasioned by confluence, but is repeated in many spots distinct from each other. A crescentic arrangement occurs at times. The papulae are less prominent; vesicles are rare on the areola, though miliary vesicles without any areola are sometimes found.

The *catarrhal symptoms* are well-pronounced, ophthalmia and coryza often prominent, photophobia at times extreme, severe bronchitis, with little participation of the throat. If pneumonia supervenes, it is usually *left-sided broncho-pneumonia*. Kidneys rarely, if ever, affected. The periods of incubation, deflorescence, and desquamation in the two diseases do not differ much. Secondary fever more frequent in rubeola. Röheln (rubeola) attacks persons from infancy to twenty-seven or more years of age, infancy and childhood being the most susceptible periods. Premonitory symptoms usually mild, in some cases absent. The rash may be the sole cause of alarm. The more severe the attack the more nearly does the rash, as well as the other symptoms, resemble scarlet fever. Desquamation may occur. Röheln does not protect against scarlet fever or measles, nor do either of these protect from röheln, and where a patient is said to have had measles twice there is generally good ground for believing one of the attacks to have been rubeola. This disease is very slightly, at most, contagious, and calls for merely anti-febrile treatment. Roseola is, of course, never to be confounded with either of these exanthemata.

INTRA-UTERINE VARIOLA.

M. Depaul reported² to the Paris Academy of Medicine that a woman, aged thirty-three years, presented herself at the hospital March 12th; she was pregnant, and had had variola a few weeks previously, of which, however, she bore no trace. April 30th she aborted; male child, weighing 820 grammes, and apparently dead one month. It exhibited all the cutaneous signs of a non-confluent variola. Upon the placenta were a large number of fattily degenerated villositities, so that it was uncertain whether the placental disease or the variola destroyed the fetus.

M. Blot. A woman, five months pregnant, had visited a friend ill with variola; a few days later, at about the fifth month, she aborted. The fetus was covered with variolous pustules, while the mother had none.

M. de Villiers had seen a similar case in an infant born at the seventh month.

SULPHUR IN SKIN DISEASES.

During the crass ignorance of former days, sulphur was a popular remedy as being "good for skin diseases," undoubtedly because of the remarkable results which followed its use in scabies, and because "good externally therefore also internally." It is of value, internally given, according to Bulkley,³ for eczema of the anus due to piles, by relieving constipation. "Sulphur and cream of tartar," equal parts, *without* "molasses," is the best form, two teaspoonfuls at night in a little water. Sulphide of calcium for suppurating aene, hordeum, furunculosis, and anthrax, and even suppurating buboes, is of great benefit, given in pills of fifteen milligrammes each, four times a day on an empty stomach. Sulphite and hyposulphite of soda and sulphuric acid have also been given with advantage in furunculosis. For reducing cutaneous congestion, as

¹ British Medical Journal, May 29, 1880.

² St. Louis Courier of Medicine, etc., June, 1880.

³ Gaz. heb., May 7, 1880. Ibid.

⁴ Reprint from Arch. of Dermatology, July, 1880.

in the erythemata, urticaria, etc., Startin's mixture is of great service. This is composed of one part sulphate of iron, eight parts each of sulphate of magnesia and tincture of gentian, two parts of dilute sulphuric acid, and twenty-four of water. A teaspoonfull after eating. The chief value of all "sulphur springs" lies in the bathing, fresh air, exercise, rest, variety, sleep, etc., obtainable, and the supervision of the diet by an ever-present physician. Externally, sulphur is an irritant to the skin, and only of value when a stimulant is called for, as in cases of animal or vegetable parasites, or of acne rosacea. Vapor baths of sulphur are useful for tinea versicolor (parasitic), most erroneously styled by old writers chloasma (pigmentation), for rheumatism, and for some cases of syphilis. Sulphur is entirely inappropriate in acute inflammatory skin affections, and useless in hypertrophies, atrophies, and new formations.

ORAL PAPILLOMATA.

Dr. C. J. March reports¹ the case of a girl aged nine, in whom the mucous membrane of the lips from gums to skin, that lining both cheeks as far back as the second molar tooth, and that covering the anterior half of the dorsum of the tongue, were studded with tumors varying in size from that of a millet seed to that of a large pea, sessile, and in contact on the buccal and labial mucous membrane, while upon the tongue the hypertrophy of the papillae ranged from slight enlargement to pedunculate and even lobulate tumors. Epithelium normal. No tendency to hemorrhage nor to ulceration. Tonsils hypertrophied. The affection was symmetrical; the little tumors numbered about one hundred, and began a year before as a few small growths upon the inner surface of the lower lip. No history of any constitutional malady. Under the influence of the local application of a saturated solution of sulphate of iron several times daily the tumors speedily vanished. Iodide of potassium was given internally.

MEDICINAL ERUPTIONS.

Never minding the why or wherefore, and leaving all theories aside, Van Harlingen furnishes² us with an admirable, and the most extensive as yet made, compendium of all cases recently reported of eruptions resulting from the ingestion of drugs, a monograph most desirable at the present time, when experimental therapeutics is rife, in order to draw attention to, and explain the occurrence of, such eruptions as may follow the administration of new remedies. Arsenic, atropia, belladonna, bromine, chloral, copaiba or eubeds, iodine, mercury, morphia and opium, quinine and cinchona, salicylic acid, santonine, and the wood-tar and petroleum derivatives, have all given proof that doses of them, too large or too long continued, or given to patients specially susceptible, may give rise to localized or general exanthematous or other eruptions upon the surface of the body. The article is valuable, and worthy of study in the original.

SYPHILIS OF THE NERVOUS SYSTEM.

Lang calls attention³ to the general error of attributing lesions of the nerve system due to syphilis solely to localized hyperplasie, gummata, and exostoses, and

regarding them as always signs of advanced disease. Exostoses in particular have almost never been found where such cases have been examined post mortem. The fact is that the nerve system is more frequently invaded by *lues* than any one of the internal organs, though the relative frequency of nerve syphilis has only recently been recognized, and this invasion may occur at almost any period, concurrently with the exanthem, or within a few months, or, in a large number of cases, within a year from the infection. Cases are given by twenty-two different writers in support of these statements, and to these are appended six occurring in Lang's own practice in Innsbruck. Nor is it merely the central nerve system which may be early invaded, for with recently-beginning syphilis meningeal irritation may also be present.

ANTHRAX.

Dr. J. T. Woods considers,⁴ in view of the relatively small size of the anthrax mass when first observed, its increase in extent and thickness, its flat character and intense painfulness, that the death of the connective tissue does not immediately occur; that the morbid process is at first acute; that the extension is by cell proliferation, fibres stretching out into adjacent, still vital parts, preventing yielding, explaining the flatness, increasing the pain. The primary sthenic action is shown by the fact that the slough is thicker than the normal connective tissue. The whole mass necroses and degenerates around its borders; the skin yields reluctantly to ulceration in spots, owing to the pressure from beneath, and multiple openings give exit to fluid. Normally, if the patient survives, the whole mass of dead tissue is thrown off, the skin at last yielding sufficiently, and the cavity is filled up by new cell growth. To imitate nature and relieve pain, Dr. Woods passes the point of a hypodermic syringe through the openings and injects into the sloughing mass, in every direction, pure carbolic acid to saturation. Where there are no openings he pierces the intact skin. In a few moments all pain is gone, the skin becomes hard, white, and dead, and is detached in a few days; the interior mass soon loosens, and is easily removed by cutting its few threads of attachment; the cavity rapidly fills up; the cicatrice is small. The patient can go about his business a few minutes after the operation. Pure acid alone must be used, and to complete saturation. If diluted there is danger from absorption.

HERPES PROGENITALIS.

Dr. Greenough calls attention⁵ to the frequency with which herpes appears upon the genitals, and its importance from a diagnostic point of view, and adds his testimony to that of every sensible observer as to the culpable ignorance of practitioners who apply the solid stick of nitrate of silver to lesions upon these parts, thus merely aggravating the trouble and obscuring the diagnosis. Its use is malpraxis almost invariably. The writer gives a very full bibliographic catalogue, notes the tendency of the disease to relapse, and is inclined to think that every patient suffering from relapsing herpes progenitalis has at some previous time been affected with one or more of the venereal maladies, — urethritis, simple ulceration, or syphilis. He distinguishes the disease from zoster, doubts any

¹ St. Louis Courier of Med. and Collat. Sciences, September, 1880.

² Archives of Dermatology, October, 1880.

³ Separatabdruck aus Wittelböfer's Wien. Med. Wochenschrift No. 48, 1880.

⁴ Toledo Med. and Surg. T., December, 1880.

⁵ Reprint from the Archives of Dermatology, vol. iii., No. 1, January, 1881.

constitutional origin or diathesis, and emphasizes the possibility of the abrasion serving as an avenue for contagion, and the difficulty of distinguishing an inflammatory hardness from specific induration. The treatment is simple, — astringent lotions, drying powders, and, above all, cleanliness.

COLUMNÆ ADIPOSEÆ.¹

To the little pamphlet with the above title, by Dr. J. C. Warren, of Boston, we must allude, though so terse and clean cut are its contents that they cannot be condensed into an abstract. The simple fact is that we have here a real addition to our previous stock of knowledge. We have a discovery by one of the best among our very few original investigators. The science of dermatology has been enriched by a true contribution to its histology. Dr. Warren has discovered the existence of slender columns of adipose tissue perforating the thick cutis vera, hardly microscopical in their dimensions, but overlooked unless sections are made through the skin in the proper direction; a well-defined anatomical structure, with constant characteristics, and the existence of which, now amply verified by observations extending over several years, is of great importance in the pathology of carbuncle, sarcoma, naevus, etc. The columns connect the bases of the hairs with the panniculus adiposus; slender, vertical, columnar-shaped clefts extending from the last-named structure, in a somewhat oblique direction, through the deeper and middle layers of the cutis, and terminating at the base of the follicles which rest upon it. These spaces are occupied by adipose tissue in their entire length, and furnish paths by means of which a virus or diseased cells may advance.

"KERION CELSI," A VARIETY OF TINEA TONSURANS.

Atkinson contributes² an excellent monograph embodying his original investigations upon suppurating ringworm of the scalp, a rare disease. Here we find deep-seated follicular inflammation, with lumpy, livid, boggy, semi-fluctuating elevations of the affected surface, tender on pressure, and dotted with pustules around the hair shafts. Incisions give blood or bloody serum. More advanced forms show gaping hair follicles, with viscid, transparent, or semi-purulent glutinous exudation, like honeycomb. When obstructive inflammation of the follicles exists, the fluid collects in pockets, and may call for the lancet or be ultimately absorbed. The hairs reveal abundant fungus. Finally, there is added to the honeycomb condition an acute perifollicular inflammation and free production of pus. The fungus has been destroyed, the hairs swept away, or lie bathed in pus and often matted in texture. Here, of course, we have no longer the parasite, but merely the inflammatory process to deal with. In the earlier pathological conditions the mucoid secretion, favoring the development of the trichophyton, "is a result of a purely catarrhal inflammation of the hair and sebaceous follicles, caused by the irritation of the fungus; the deep-lying situation of the parts involved giving the affection its peculiar features."

—"Ignorance is not so damnable as humbug, but when it prescribes pills it may happen to do more harm." — *George Elliot*.

¹ *Reverend Press, Cambridge, 1881.*

² *Reprint from Arch. of Dermatology, vol. viii., No. 1, January, 1881.*

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

SPONTANEOUS AMPUTATION IN UTERO.

NOVEMBER 13, 1880. DR. LYMAN exhibited the patient, and gave an account of this, the second, case recently brought by him to the notice of the society.

The first case, which was exhibited at the previous meeting, was that of a young woman in whom the left arm is wanting two inches below the elbow. There are two puckered cicatrices over the ends of the bones; otherwise the surface is perfectly smooth. She is of a healthy family. The elbow-joint is perfect, and with the short stump she says she can do anything but knit. During the past month Dr. Call has kindly called his attention to another case, a little boy of five years, whom he now exhibits to the society. In this case the same arm is lost at the same point, and the appearances are singularly like those presented in the previous case, with the exception that from the surface of the stump there is a small rudimentary nipple-like projection such as is figured by Simpson.³

Dr. Lyman said that the weight of evidence now seemed to be in favor of the injury being generally caused by the constriction of ligamentous amniotic bands, where the child comes to full term. If caused by the cord, sufficient constriction to separate the bones could hardly fail to arrest the circulation in the cord itself, and thus cause the death of the fetus. It is quite unusual to find a case in which the amputated member is reported to have been found; but a small fetal arm would almost necessarily be lost among the blood clots, placenta, and membranes, directly after delivery, unless carefully sought for, and even then, if the injury had occurred in early fetal life. Dr. Pepper records a case in the Transactions of the Philadelphia Obstetrical Society of a well-developed child with this deformity, where there were neither fibrous bands or shreds attached to the amnion, and where no trace of hand or arm could be found, though thoroughly searched for.

Dr. Lyman referred to a case of partial intra-uterine amputation of left leg above the ankle and complete loss of three fingers, which he reported in Transactions of Boston Society for Medical Improvement in January, 1862, with a diagram.

TWO CASES OF FIBROID TUMOR OF THE UTERUS.

Paper read by Dr. DOE, and reserved for publication.

DR. HOSMER remarked that in the cases of fibroid tumor of the uterus which had come under his observation two facts were apparent: first, the possibility of retrogressive change; second, of spontaneous expulsion. He recalled a case of twenty years ago, in which two pediculated tumors, of the size of small oranges, were attached to the fundus. Four or five years later these were found to have much diminished in size. Another case was that of the wife of a laborer, a multipara thirty-five or forty years old, who had a fibroid within the posterior wall of the uterus. There was some discomfort, but no serious disability, and no hemorrhage. The menstruation was regular.

³ *Obstetric Memoranda and Contributions, volume ii.*

There were no indications for particular treatment, and she was let alone. Four or five years later she had been advised, by a third person, to submit to an operation for the extirpation of the uterus. Dr. Hosmer then found, instead of a pelvic, an abdominal tumor, rising above the brim of the pelvis, still nothing apparently serious nor calling for active interference; moreover, there was a family of children needing care, and the patient was advised not to undergo the risks of the operation. Four or five years after this question of operation had been considered, Dr. Hosmer again saw her, and found the mass very greatly diminished and wholly within the pelvis. With regard to spontaneous expulsion, Dr. Hosmer referred to a case reported by him at former meetings, and on record in the files of the society.¹

Dr. Hosmer stated that he practically knew nothing of the effect of ergot on uterine fibroids.

DR. SINCLAIR observed that in the matter of interference in these cases we were governed very much by circumstances. If the tumor were giving no trouble it should be let very severely alone; if at the climax of life, it was likely to diminish in size. His only criticism on Dr. Doe's first case was that he should have operated earlier. Atlee's method, he said, was published twenty years ago. As to ergot, he had had little experience with it.

DR. BLAKE stated that he had seen Dr. Doe's second case in the hospital. A point of interest was the differential diagnosis. Dr. Blake referred to a case which had been under the care of Dr. Davidson, of South Boston. In Dr. Doe's case there were apparently the projection of knees and a well-defined placental souffle. There was nothing in the uterus. Dr. Blake felt quite convinced that this was a case of interstitial pregnancy. The points against this diagnosis were the absence of milk in the breasts, and the rarity of the disease. Dr. Blake referred to a book by Dr. Parry, who reports most extraordinary conditions associated with extra-uterine fetation. In the case in question, later, there was less reason to adhere to the diagnosis of pregnancy; the growth had ceased, there was no quickening. General debility interfered with a surgical examination. Dr. Blake had thought at one time of making an abdominal incision for the purposes of diagnosis and possibly treatment. The case was very interesting on the ground of the uncertainty of making a positive diagnosis in the abdominal cavity. A patient seen fifteen years ago presented an interesting fibroid in the anterior wall of the uterus; she had been subject to attacks of retention of urine. These have passed away, the tumor has diminished in size, and the woman is now strong and hearty, and free from all urinary obstruction. As to the treatment, Dr. Blake believed in getting rid of these tumors when they become troublesome, but not before. In Dr. Doe's case he would have removed some portions of the mass at an earlier stage. He had been unable to perceive any benefit from iodide of potassium or from ergot.

DR. RICHARDSON stated that at the Massachusetts General Hospital he had seen several cases in which treatment had failed completely; he had also seen cases in which, under long-continued treatment, the tumors have diminished or disappeared. In two cases recently under observation, the tumors have ceased to

grow, although increasing when the ergot was begun. Dr. Richardson remarked that, as Dr. Hosmer had already stated, these tumors do sometimes disappear during pregnancy as well as at the climacteric.

DR. LYMAN reiterated Dr. Sinclair's statement that incisions into uterine fibroids for arrest of hæmorrhage and as an aid to enucleation by gradual disintegration of the growth were practiced by Atlee thirty years ago. The trouble in Atlee's cases was that he was not active enough in his treatment to forestall septicæmia. The more modern method, to proceed at once to enucleation, is better; incisions alone, leaving the expulsion of the mass to the contractile efforts of the uterus after disintegration and sphacelus, is dangerous in the septic point of view. Dr. Lyman stated that he had in mind fibroids,—one of them was seen fifteen years ago,—very large, painful, and dangerous from the hæmorrhagic exhaustion, which had diminished under the use of ergot unaided by incisions or other interference, and especially is this true after the menopause. He expressed surprise at Dr. Richardson's remark that fibroids disappear during pregnancy. On the contrary, they increased in size *pari passu* with the uterus, and *after* the pregnancy undergo involution even more rapidly than the body of the uterus itself; and he also stated that the growth of uterine fibroids was more readily arrested, and that the ergot acted better if the cervix, that is, the circular fibres of the inner os uteri, were dilated by tents. The same process will also greatly modify and often wholly arrest the hæmorrhage. In reference to a point of diagnosis, Dr. Lyman reported a case, recently under his care, in which he had made a false deduction from the indications afforded by the uterine sound, so much relied on in the differential diagnosis which, when the tumors are interstitial or submucous, will generally pass from three to five or six inches or more into the uterine cavity. The patient, forty-four years of age, entered the hospital October 18th. The case was apparently a typical example of uterine fibroids. The tumor exhibited the hard nodular feeling without fluctuation, and extended as high as the umbilicus. The sound, curved sharply, was introduced two or three times to the depth of four inches. There were severe hæmorrhages and pain in the groins. Per vaginam, the uterus moved freely with the tumor. The vagina and cervix healthy. A large laminaria tent was introduced in the morning and removed in the evening. The next day the patient reported the most comfortable night for a long time. She was free from hæmorrhage and pain, and continued so for about three days. At this time the cervix was much more movable, but the sound could not be entered deeper than before. Two weeks later a second tent was inserted. Four days after this pain recurred without hæmorrhage, and the patient soon died. At the autopsy the uterus was found to be of *normal length*; posteriorly and above it was firmly connected with a large mass of colloid. There was general peritonitis.

Dr. Lyman said that he felt bound to report this case from its value in a diagnostic point of view. The density of the tumor, its uniform development in the central line, its lobulated character, the hæmorrhagic antecedents, the depth of the uterus as measured by the sound, and its mobility when the tumor was moved, all in his opinion justified a diagnosis which the autopsy proved to be an erroneous one. The point which in his opinion was the most interesting one in

¹ For the first report in this case see Boston Medical and Surgical Journal, vol. ciii. p. 546.

connection with the diagnosis was the depth to which the sound penetrated. The measurement, which was made on two separate occasions, he has no doubt was a correct one, notwithstanding that at the *post mortem* the uterus was found to be of normal length. This is only to be accounted for by the stretching of the supravaginal portion of the cervix over the front of the tumor while *in situ* during life, but which when separated from its vaginal and other attachments was restored to its normal length. There were evidences, as will be seen, not only of previous peritonitis, but of a more recent exudation, which may have been excited by the use of the tent, or may have been merely the result of the ordinary extension of the disease. The fact that the patient was more than usually comfortable for some days after the tent was used renders it quite as likely that the manipulation had no influence upon the result.

DR. BLAKE observed that tents sometimes gave rise to violent peritoneal inflammation, or pelvic abscess, resulting occasionally in death. He would not himself use a sponge tent under any consideration, and objected to laminaria as liable, in consequence of uneven expansion, to cause laceration during withdrawal. Unless the benefit and necessity were perfectly plain he would hesitate to employ a tent.

DR. RICHARDSON said that he would agree that although tents may arrest hemorrhage they do not more than incisions avoid the risks of septicemia.

DR. LYMAN said he was perfectly aware of these objections, but that he was satisfied that the danger from tents, if properly used, was very much like the danger formerly attributed to the use of the forceps, the dread of which, like that of some religious prejudices, it seems to take a lifetime to live down. He could recall an instance where the use of two tents was followed by death, but in that case nothing at the autopsy demonstrated cause and effect.

DR. SINCLAIR inquired whether in the case reported by Dr. Lyman the sound had been introduced before or after the dilatation.

DR. LYMAN replied that the measurements had been taken before and afterwards.

DR. SINCLAIR stated that as a rule the uterine cavity would be found diminished in depth a few days after dilatation of the cervix.

DR. FIFIELD remarked that he had been interested in reading an account of the removal of a fibroid by Dr. T. G. Thomas, where very free hemorrhage followed the first incisions, yet the operator had not feared to go on, believing that the loss of blood would not be increased, but rather lessened as the deeper structures should be reached. An account of the removal of a uterine fibroid by Dr. Mary P. Jacobi, by means of Thomas's serrated spoon, had quickly followed the case of Dr. Thomas. Here, also, the amount of bleeding lessened as the operation proceeded from circumference to centre. The explanation of this lessened hemorrhage seems well given by Dr. Putnam Jacobi in the paper, and the truth of the explanation shown by various sections practiced at different parts of the tumor, namely, that some uterine fibroids taking their initial growth from the tissues just beneath the mucous membrane, are increased towards the cavity of the uterus, the older portions being pushed to the uterine wall, becoming more and more dense and bloodless as the growth increases, whilst the outer, younger layers are extremely vascular.

DR. HOSMER mentioned the case of a patient whom he first saw when very near her end, and who was said to have an abdominal tumor. He found by vaginal examination what appeared to be a large fibroid of the anterior wall, but this opinion was not confirmed by abdominal palpation. The patient died of tubercular peritonitis. There was found a small fibroid in the right groin, and the whole floor of the pelvis was thickened, firm and unyielding.

DR. LYMAN said that he had never seen a fibroid in layers, or more vascular in one part than in another.

DR. BOLLES, questioned as to the structure of fibroids, said that his examinations, mostly of the gross appearances in the autopsy-room, showed that the growth was apparently from a centre in all directions, and not from the mucous membrane into the parenchyma of the uterus, that they were often in the midst of the muscular tissue, and not connected with either the mucous or serous surface.

DIFFICULT LABOR; RUPTURED PERINEUM; FEVER; RECOVERY.

DR. FIFIELD reported the case. The patient had been delivered two years ago by Dr. Fifield; the delivery was accomplished by forceps, requiring all the strength that the operator possessed to terminate the labor. The getting up was not satisfactory. A little daily fever, temperature not exceeding 100° F. A little occasional difficulty in urinating, requiring the use of the catheter two or three times during the month succeeding the labor. Then a sudden flashing out of alarming symptoms, high fever, incessant vomiting, only controlled at last by subcutaneous injections of morphia, absolute impossibility of urinating, formation of a huge tumor in the right hypogastrium, which slowly disappeared after repeated blistering.

At the second labor the anterior fontanelle was opposed to the symphysis pubis. Dr. Fifield early applied forceps, and exerted his full measure of strength, but failed to move the head in the least. No unreasonable prolongation of the effort to deliver was made after it was found that no effect followed the application of the full force of the operator. Dr. C. E. Stedman was then called in consultation, and made repeated efforts in vain, the woman lying on the left side. She was then changed to the dorsal posture, the feet in chairs. By most powerful efforts Dr. Stedman finally delivered a male child, whose face and neck were black, and, what seemed very unusual, the very soles of the feet were black. After an hour's labor resuscitation was accomplished. The perineum had been ruptured well into the rectum. It was operated upon after the method of Goodell, Gunrig's perineal needle being used. Silver sutures. At the conclusion of the whole operation the pulse was found to be rapid, 120 per minute. Next day the temperature and pulse were both increased, and on the day succeeding this she showed a temperature of 106° and a pulse (as well as could be counted) of 140 per minute. The patient was now rolled in sheets thoroughly wet with cold water, blankets dry and warm above the sheets, pulse and temperature being considerably reduced thereby. The next day pulse and temperature again advanced to the former point and frequency, and was again reduced by the same means. Friday, temperature being at 105°, a carbolic acid vaginal injection was administered. Patient exceedingly loth to take stimulants or even to take any nourishment. On Sunday, a week from the

delivery, Dr. Chadwick was seen in consultation, the diagnosis considered doubtful, between septicaemia, latent peritonitis, or pelvic cellulitis. Dr. Fitch subsequently gave the patient fifteen grains of calomel on the tongue. Several rattling dejections occurred on the following day, causing some alarm, but the first marked decline of the fever was then perceived. The diarrhoea being controlled by opiates pulse and temperature rose; it being then allowed to proceed to three, four, or even five discharges, pulse and heat fell. Thus, for several days, diarrhoea, fall of temperature and pulse; constipation, rise of pulse and temperature. At length the bowels became regular, and the patient quite rapidly entered into full convalescence. But most surely she never gave hope of emergence from her alarming condition until the coming on of diarrhoea after the administration of calomel.

Schroeder, in his *Manual of Midwifery*, chapter on the Pathology of Child-Bed, Art. Puerperal Fever, says, "In the last century purgatives were used in the treatment of puerperal disease, and recently they have been praised by Dr. Latour Seyfert, Breslau. *A priori*, there is a good deal in their favor. If we may expect to remove the septic material from the blood there can be no doubt that the best way is through the intestinal canal. Observation has also taught us that dogs poisoned by septic matter recover after profuse and fetid diarrhoea."

It is undeniably true that peritonitis, when seen early, can be treated as successfully by calomel, establishing a gentle diarrhoea, as it has ever been by the heroic doses of opium, now so fashionable a remedy in anything which may be suspected to either be peritoneal inflammation, or even be tending thereto.

It is somewhat remarkable that the torn perinaeum and rectum united, in spite of the violent fever and the poisoning diarrhoeas which occasionally took place, as soundly and well as could be hoped for under the most favorable conditions and circumstances.

DR. BLAKE said that the percentage of slight lacerations that did not do well was very small. In the more extensive lacerations, although a spontaneous cure was possible in the great majority of cases, except the worst, yet an operation secured a better union, with less cicatricial tissue, less being left to be accomplished by granulation.

DR. RICHARDSON, in answer to a question as to the propriety of immediate operation in cases of extensive laceration into the rectum, stated that he would operate at once.

Recent Literature.

A Practical Treatise on the Medical and Surgical Uses of Electricity. Including Localized and General Faradization, Localized and Central Galvanization, Electrolysis, and Galvano-Cautery. By GEORGE M. BEARD, A. M., M. D., and A. D. ROCKWELL, A. M., M. D. Third Edition. Revised by A. D. ROCKWELL, M. D. New York: William Wood & Co. 1881. Pp. xxx.-758.

Books grow. Not only do they increase in numbers, but successive editions of text-books are larger in size and thicker. This is seen in many of the medical text-books, and the above treatise is no exception. In this third edition the pages are larger and are increased in number as compared with the first edition. This is

one of the very few systematic works on the medical use of electricity originating in this country. The principal criticism to be made is that the book is too large. Too much space is given to the department of electro-physics. Those who are most likely to use the book probably have some knowledge of electricity in general, and much that is given is not here necessary, and it is possible to still more condense what it would be desirable to insert. The section on electro-physiology is more necessary, but that also could be very much shortened by a more condensed style of writing. In nearly all works on electro-therapeutics the chapter on instruments is too long; an attempt is made to minutely describe a large number of batteries. The truth is that almost any style of battery made by a reputable firm will answer the purpose for which it is designed; and if a physician has a moderate amount of electrical common sense he can easily learn enough in regard to the instrument to keep it in order, and that is all he needs.

The chapter on exophthalmic goitre is newly written; it is interesting reading, but is not quite what it ought to be. Too much space is filled with the report of the authors' cases, and no reference is made to the experience of others. Chvostek has published more than any one else on this subject, and there is no reference to his cases nor the results he has obtained; his name is not even mentioned.

The next chapter, on Sequelæ of Acute Diseases, is not altogether satisfactory. The author says he has "treated twenty-four cases of diphtheritic paralysis, and with the exception of two, which discontinued treatment almost as soon as it was begun, the results in each were too striking to permit of any doubt as to the efficacy of the remedy." What advantage is it to mention how many cases one has treated of any disease, except as a sort of an advertisement? The reader cares more to know that electricity may be of benefit in such cases, and how to apply the remedy; this is not given with sufficient distinctness in this instance, being mentioned only incidentally in the history of one case, where general faradization was used. Was general faradization used in all other cases? As a fact, however, which lessens the value of the statistics, most cases of paralysis after diphtheria do as well without electricity as when it is used; it is necessary only in the unusually severe or prolonged cases.

Referring to a case by Dahlerup, quoted in the *British Medical Journal* for September 27, 1879, in which the patient died apparently from cardiac weakness after diphtheria, the remark is made: "It is not difficult to believe that the prompt and proper use of electricity might possibly have saved life." This kind of criticism is cheap and easy, but is rarely justifiable, and in the present instance is entirely out of place. Reference to the *British Medical Journal* will show that merely an abstract of a case published in a foreign journal is given, occupying sixteen lines, and even of this the most important symptoms are overlooked or carelessly dropped; there was oedema of legs and lungs, and the urine contained a large amount of albumen.

Considering that this work has appeared in a third edition it is not necessary to say that it supplies a want felt by the profession. It is a comprehensive guide, and has many good features. Some of the imperfections have been mentioned, especially those in two chapters added since the second edition. As a whole the work is commendable, but if another edition is is-

sued its value might be increased by condensing, by omitting some of the two hundred or more cases reported, and by reporting the others more briefly.

S. G. W.

A Treatise on the Materia Medica and Therapeutics of the Skin. By HENRY G. PIFFARD, A. M., M. D., etc. New York: William Wood & Co., 27 Great Jones Street. 1881.

A chronic and cosmical *cacoëthes scribendi* has distended the primæval chaos of medical lore with a protoplasmic literature which the genius of this age of indexes is concretizing into practical knowledge. Summaries and even titles furnish us to-day our tools for work; how these tools were made concerns us less. Every one knows that the thesis of modern times represents merely, as the rule, a dilated summary, and this again only a needlessly expanded title, instead of being rather the detailed proof of the truth of these. Given ten books upon any subject the eleventh is already created, and, for that matter, is often the most valuable one of all.

In the handsome octavo of three hundred and fifty pages, before us, belonging to Wood's Library of Standard Medical Authors, Dr. Piffard has condensed the experience of the past as a guide to the future, having, with his wonted energy, endeavored, as far as cutaneous therapeutics are concerned, to keep pace, through personal experimentation and a study of the results of the work of others, with the rapid progress at present being made through the efforts of Parke, Davis & Co., and other manufacturing chemists, in the development of the materia medica as far as our American flora is concerned. Part I., devoted to materia medica, contains, therefore, matter of special interest. Here are considered, under headings alphabetically arranged, the results of the ingestion and of the local application of drugs upon either healthy or diseased skins. The result is a sort of dermatological dispensatory, and heralds the day of special volumes of this nature for each branch of medicine, not the least value of which will be the proving how the present *rudis indigestaque moles*, as a whole, exceeds the sum of all its real parts. Part I. includes exactly one third of the whole volume, and is essentially the more original part of the work.

Part II. is devoted to therapeutics, and considers cutaneous diseases under three heads: the acute and self-limited, the chronic irremediable, and the chronic without definite limit, but yet curable. The remedies, broadly considered, are hygiene, drugs, electricity, and the actual cautery. The importance of general hygiene should invariably be inculcated upon the patient. A knowledge of its laws on the part of the invalid is too often taken by the physician for granted, while the fact is that ignorance or culpable neglect of these laws is the chief cause of all the ills to which flesh is *not* heir. The purity of the drugs employed is as essential an element of success in treatment as a thorough acquaintance with their effects upon the general system or localized tissues. Electricity is capable of four distinct applications in connection with diseases of the skin. These are to produce *catalysis*, *electrolysis*, *coagulation*, or an *intense heat*. Galvanic electricity is the one usually employed, faradic rarely, and static or franklinic hardly at all. For actual cautery the iron is less valuable than the galvanic cautery, and this is in many respects inferior to the "thermocautery" of Paquelin. The dermal cauterizer is often more valuable

than any of these. "Diatheses" are next considered, of which Dr. Piffard is the *unum-sed-leonem* American champion.

The rest of the volume is devoted to a consideration of the individual pathological conditions which may exist in the skin, and the *questio vexata* of classification and nomenclature, in which the writer differs from the majority of his colleagues in this country, is avoided, as far as possible by arranging the various dermatological lesions alphabetically. This part of the book keeps pace with modern research, and is filled with information and suggestion. A full bibliography comes next, followed by an extended formulary for the internal and external administration of remedies, and an alphabetical index completes what we must regard as a practical and valuable addition to the literature of dermatology.

E. W.

A New School Physiology. By RICHARD J. DUNGLISON, A. M., M. D. Philadelphia: Porter and Coates. *The Human Body.* By H. NEWELL MARTIN, D. Sc., M. A., M. B. New York: Henry Holt & Co. 1881.

Taking thought of the functional integrity of one's organs may not add one cubit to a man's stature, but it will often add many cubits to his span of life. We are always pleased, therefore, to welcome good school text-books in physiology. Two such books have recently been submitted to our inspection. One of them was written by Dr. Dunglison, author of the well-known medical dictionary, and is intended for young pupils in the lower schools. It is elementary in character, and reads easily. Most of the subjects treated are familiar physiological experiences of a child's everyday life, and are therefore well adapted to attract his interest and attention. The language is concise and plain. Where technical terms are unavoidable they are accompanied by brief explanations of their meaning and derivation. The illustrations are numerous, and well executed. Indeed, we find nothing to criticize in the book except the statement that 100° F. under the tongue is a normal temperature. We should dislike to have our temperature stand at 100° F. for any length of time.

Dr. Martin's book is altogether different in its scope and character. It forms one of the "American science series for high schools and colleges," but it can hardly be called elementary in design. Although small in bulk it contains a very fair statement of nearly all the leading physiological topics of the day. It is, indeed, a sort of concentrated extract of the science, and will require considerable outside study on the part of a teacher who wishes to prepare it for ready digestion by his pupils. We think considerable space is wasted on a dry category of bones and other anatomical parts. This space might more profitably be occupied by other matters. In an ideal physiology the description of the anatomy of an organ should be so woven into the account of its functional activity that the student will imbibe his anatomy unawares, as it were.

About thirty pages of the book, in the form of an appendix, are devoted to reproduction. Although this is an important topic, and one in regard to which "young people should be properly informed, yet it is hardly appropriate for study by a mixed class of boys and girls. This appendix, however, is entirely distinct from the rest of the book, and has an index of its own, so that it can be removed bodily, and an expurgated edition thereby prepared.

GARLAND

Medical and Surgical Journal

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BEHOLD HOW A LITTLE LEAVEN LEAVENETH THE WHOLE LUMP.

WITHIN the last two weeks seven or eight cases of a rather mild and ill-defined form of typhus fever have been brought to the City Hospital in Boston. These patients were all members of the same family, and the advent of the disease is clearly traceable to the return of the father from a visit to New York. Now, although the exaggerations of the alarmist are undesirable in connection with the present state of the public health in New York, and the mention of such diseases as plague and cholera is only pertinent as a sort of cold comfort to show that there are severer penalties for the violation of hygienic laws than any as yet incurred, or at all likely to be incurred at this time or in this part of the world, we do feel it eminently right that the actual condition of things should not be disguised, and that the dangers to which the city and State of New York see fit to expose, not only their own populations, but those of other cities unfortunate enough, from a sanitary standpoint, to be in close relations thereto, should be plainly set forth and kept in view. With four or five lines of railway and steamboat connecting the city of New York and Boston, over which a vast amount of travel is daily passing, it is impossible to have such a disease as typhus fever, which has been largely banished from its former haunts in Germany, in Ireland, and Scotland, and which we had begun to think ourselves justified in relegating to the limbo of demons of less enlightened days, it is impossible, we say, to have such a disease threatening to assume an epidemic form in New York without other cities being disturbed thereby and feeling themselves justified in remonstrating vigorously at the continuance of any conditions which favor the propagation of such diseases. It is no answer to such remonstrances to say that the disease did not originate in the offending city, but was brought from without. Our quarrel is not with the seed, but with the soil, and with the owner, whoever he may be, who neglects it; and though prepared to give due and proper attention to the care of our own patch, we feel that our neighbor, although a sovereign State, has no right to force upon us undue labor and anxiety.

Crowded tenement houses and insufficient fresh air are even more favorable to the spread of typhus fever than filthy streets. Dr. Russell, of Glasgow, than whom Great Britain has no better health officer, believes that a dwelling containing the proper number of cubic feet of good air to each occupant is almost proof

against typhus fever, and his sanitary administration of Glasgow goes far to show him right.

Again, the season is not far distant when typhoid fever will begin to demand its yearly tale of victims, and we may be sure that from July onward the number in New York and in cities in connection with it — and what cities are not — will be no less than usual, unless the one reptile, as Hirsch thinks is its habit, shall succeed in swallowing the other.

If the public authorities had coöperated, in even a lukewarm manner, with private enterprise and benevolence in New York the death-rate of the city for the first three months of this year would not be 29.36, a death-rate which, accompanied by a constantly increasing weekly mortality, does offer a serious menace to the welfare of that and other cities during the coming summer months.

THE RESIGNATION OF MR. WEBSTER FROM THE MASSACHUSETTS BOARD OF HEALTH, LUNACY, AND CHARITY.

THE resignation of Mr. David L. Webster from the State Board of Health, Lunacy, and Charity deprives the State of the services of a most valuable officer and the board itself of a member it can ill afford to lose at the present time. Mr. Webster, before his becoming a member of the State Board of Health, in 1873, had done Boston important service as a member of the council, especially in the establishment of the city Board of Health, in the management of our public institutions, and in insisting upon a competitive examination for the selection of the city engineer. For a long time known as one of our most intelligent and public-spirited citizens, he entered into the work of public hygiene with such zeal and fidelity, that to his mature judgment and judicial fairness the success of state medicine in Massachusetts has been largely due. His untiring labor, even at the sacrifice of his own comfort and health, his most conscientious fulfillment of every duty, his thorough courtesy and genial manner will long be remembered by his associates in office.

Mr. G. P. Carter has been appointed as Mr. Webster's successor. Mr. Carter is a very respectable gentleman, and was one of Governor Talbot's council; his other qualifications for a position in the health department of the board have not as yet been brought to our notice, and we are inclined to think that he must be a *persona grata* from a political point of view. We, moreover, doubt very much whether in the present condition of the board a thoroughly efficient successor to Mr. Webster or a perfectly independent person could be induced to join it.

Perhaps after politics has had its will of the supervision of the health of this State the public welfare may have an opportunity to be considered. We are evidently, in this State of Massachusetts, on the same road in matters sanitary which has led New York to the slough in which she now sticks, only we have not traveled quite so far. Whether we shall know enough to turn round and retrace our steps before that stage of the journey is reached remains to be seen.

We do not believe that the medical profession of Massachusetts, or at least the more intelligent and disinterested part of it, will ever rest satisfied until the health department of this misshapen board is divorced from the most unnatural union into which it was unwillingly and foolishly forced.

THE HISTORY OF ABDOMINAL SURGERY.

This branch of surgical practice, considered as a legitimate and now indispensable *specialty*, was made the subject of a rapid sketch in one of our recent editorial articles. We therein rehearsed, necessarily in a rather summary manner, a few of the most striking achievements of modern and contemporaneous surgery in this particular branch, not at all with the pretension of minutely or accurately expounding the *history* of its rise and progress, much less with the futile object of attempting to discuss and settle the many claims to the priority of execution of the various abdominal operations which were incidentally touched upon, but simply for the purpose of showing how greatly the field of legitimate surgical intervention in abdominal diseases had been enlarged.

In connection with this subject, and as a consequence of our attempt to deal with it in the manner and with the object just defined, our attention is now called to the entire record of Dr. Gimman Kimball, of Lowell, whom, indeed, we had expressly named among the few surgeons mentioned in our article as having, since McDowell, helped to establish the operation of ovariectomy, and, with it, the present practice of abdominal surgery.

Touching, in the course of our summary review, upon the subject of the removal of the uterus, in cases of myoma, we mentioned only the names of Péan, Koeberlé, and Spencer Wells among the most successful operators. We see no reason, however, why we should not take this opportunity to add the information, now brought to our notice, that this operation has been successfully performed in several cases by Dr. Kimball. In a paper published in Paris in 1865 by Koeberlé on the Suprapubic Extirpation of Uterine Fibroids, the author states (page 59) that the first operation of this kind was performed by Mr. Heath, of Manchester, in 1843, and that the first successful cases were those of two American surgeons, of Burnham in 1853, and of Kimball in 1851. The last-mentioned date, however, is incorrectly given. Dr. Kimball himself, writing in the *Transactions of the American Medical Association*,¹ states that his first successful case of removal of the uterus and of both ovaries was performed in 1853, and was recorded in the *JOURNAL* in May of the same year. Upon seeking to verify the precise dates of these operations, we found that Dr. Kimball's first successful hysterectomy was performed on September 1, 1853, the patient having apparently never been seen by him before the very day on which she underwent this most grave operation; and that the case was reported in

this journal May 3, 1855 (page 249). Burnham's operation, of the same character, also successful, is said by Courty to have been performed on the 25th of June, 1853, and to have been reported in 1854, in the *Worcester Medical Journal*.

In concluding our remarks on this subject, we would say to our contributors and readers that if any one wishes to undertake the difficult task of setting forth, completely and accurately, exhaustively and exhaustingly, the history of the development of abdominal surgery, including the priority of conception, of execution, and of success of each of the operations therein included, we shall be happy to lend our columns for the publication of the valuable historical review, which would doubtless be the result of such investigations, if carried out with the needful patience and labor. Our own editorial duties render it quite impossible for us to undertake at present a task involving such extensive and arduous research.

MEDICAL NOTES.

—The eulogies which reach us from various quarters, of the late Dr. R. O. Cowling, of Louisville, are very glowing, and evidently very sincere. Medical journalism has lost in him an admirable representative, and the profession in Kentucky a member whom the younger men will do well to hold in remembrance for his many fine qualities.

—The Boston Dispensary, which has for over thirty years occupied a building originally intended for two dwelling-houses, is discussing plans for new quarters. The old building is poorly ventilated and two hours' work in some of the rooms exhausts a man's vitality for the whole day.

—Dr. Samuel H. Durgin has been confirmed by the board of aldermen as member of the Board of Health of the city of Boston for three years.

—Ground is soon to be broken on Huntington Avenue for the new Children's Hospital.

—Dr. Hamilton Osgood was a passenger, by the steamer *Atlas*, for Liverpool, on Saturday, the 21st inst.

—The influence of vaccination on the number of deaths is well shown by the statistics of Sweden, where vaccination has long been compulsory. In the prevaccination period (from 1774 to 1801) the average of deaths was 1973 per million inhabitants; in the non-obligatory vaccination period (1802 to 1816), 479 deaths per million; and in the period of compulsory vaccination (1817 to 1877), 189 deaths per million. Thus, the average of deaths in each million inhabitants has diminished from 1973 to 189.

—Baltimore, as well as Boston, is annoyed by a disagreeable and, hitherto, unknown taste in its water. Professor Remsen, of the Johns Hopkins, was detailed by the authorities to investigate the cause, but was not able to arrive at any result. He characterizes the flavor as a "putty taste."

—The *British Medical Journal* has issued an interesting announcement in regard to the

¹ Volume xxv, li. 1877, page 326.

national Medical and Sanitary Exhibition in London:—

"The arrangements for this exhibition are progressing so satisfactorily that it promises to be the most important sanitary exhibition hitherto organized in this country. Applications for space are now being rapidly sent in, as the 31st inst. is the last day fixed by the committee for receiving them. Up to March 15th applications for 984 feet had been received by the committee. The Certificates of Merit which are to be given will be valuable awards to the public and to the successful exhibitors, on account of the high character of the list of jurors, which already includes, among many others, the following: *Medical Section*: Christopher Heath, F. R. C. S., William S. Playfair, M. D., C. Higgins, F. R. C. S., C. S. Tomes, F. R. S., John Marshall, F. R. S., Dr. Robert Farquharson, M. P., the president of the Pharmaceutical Society, C. H. Golding-Bird, F. R. C. S., Lionel Beale, F. R. S., W. B. Carpenter, C. B., F. R. S., J. S. Bristowe, M. D., Major Duncan, R. A., Surgeon-General Longmore, C. B., E. H. Sieveking, M. D., etc. *Sanitary Section*: Sir Joseph Fayrer, K. S. S. I., M. D., F. R. S., George Aitchison, F. R. I. B. A., E. C. Robins, F. S. A., T. Roger Smith, F. R. I. B. A., F. J. Monat, M. D., Alfred Waterhouse, A. R. A., Captain Douglas Galton, C. B., F. R. S., Ernest Hart, M. R. C. S., W. H. Corfield, M. D., William Eassie, C. E., Rogers Field, M. Inst. C. E., R. Thorne Thorne, M. B., Professor Prestwich, F. R. S., etc. In addition to the interest taken in the exhibition by medical men, architects, and manufacturers, the general public have recognized the importance of the work thus initiated by the executive committee of the Parkes Museum of Hygiene, by subscribing to the Guarantee Fund, which, at the meeting of the committee last Tuesday, was reported to amount to £1,026 7s. At this meeting the secretary read a letter from Mr. MacCormac, the honorary secretary-general of the International Medical Congress, forwarding the following resolution, which had been unanimously passed by the executive council of the International Medical Congress at their last meeting: "That the sum of fifty pounds be guaranteed to the committee of the International Medical and Sanitary Exhibition to be held at South Kensington in connection with the Parkes Museum of Hygiene on the occasion of the International Medical Congress."

NEW YORK.

—Notwithstanding the increase of typhus and other infectious diseases, causing a corresponding increase in the already high death-rate of the city, and notwithstanding the most emphatic and earnest public protest of the entire medical profession, as well as the rest of the respectable portion of the community, the lower house of the legislature, greedy of the political patronage of which its members would thus be deprived, still refuses to pass the excellent senate street-cleaning bill, which makes the mayor directly responsible for the proper carrying out of the work required, and the filthy and disease-breeding streets still remain *in statu quo*. The mayor has given the most solemn

assurances that if the matter is entrusted to him he will remove the whole street-cleaning business from the domain of politics, and the best proof that this would actually be the case is found in the fact that he has announced his determination to appoint a man like Lieutenant-Commander Gorringe (who has already secured the necessary leave from the secretary of the navy) superintendent of the department, in case the senate bill should become a law. At the large and enthusiastic meeting of physicians held at Chickering Hall on the 13th of April, special feeling was expressed against the course of Dr. Isaac Hayes (the Arctic explorer), a member of the assembly, who had at first expressed himself strongly in favor of the bill, and promised to exert all his influence in securing its passage, but afterwards not only voted against it, but refused to present a petition of the most influential physicians of New York in support of it, which had been sent him with the confident expectation that he would urge it upon the attention of the house.

—At the meeting of the Board of Health on Tuesday, April 19th, it was announced that there were 103 typhus fever patients in the hospital on Blackwell's Island (being an increase of 47 during the week), and 68 new cases in the city were reported against 55 the previous week. There were 121 patients in the small-pox hospital, and 31 new cases were reported against 51 the week before.

—During the three months ending March 31st, 3616 persons were vaccinated for the first time, and 19,653 were revaccinated by the officers of the board of health, 10,498 of these individuals being in schools and other institutions. This is an increase of 6,663 over the corresponding quarter last year. In his report, Dr. J. B. Taylor, chief of the vaccinating bureau, states that the number of unvaccinated adults in the city is much greater than generally supposed. "Upon reference to the reports of small-pox cases attended by us during the period," he continues, "I find a total of 239 cases, 73 of which occurred among the unvaccinated. In the month of March alone there were 118 cases, 45 unvaccinated. Very few of those who were reported as having been vaccinated have ever had it successfully performed since infancy, and we have never before had so large a number of cases occurring among the unvaccinated in proportion to the total number. There is every reason to believe that there are hundreds, and it may be thousands, of others likewise unprotected among the adults." During the same quarter the sanitary police made 40,295 inspections and attended to 3156 complaints, and the disinfecting corps fumigated and disinfected 321 houses infected with small-pox, 715 with scarlet fever, 613 with diphtheria, 15 with typhus fever, 35 with measles, 35 with typhoid fever, and 17 with cerebro-spinal meningitis.

—About a year ago a monkey escaped from a Bowery Museum and bit off a part of the nose of a little girl. The morsel of the lost member, which was valued by the friends at \$50,000, has been decided in the courts to be worth \$3,500; a verdict for that amount having just been awarded by the jury in the case.

—The Governor has just sent to the Legislature a message relative to the stench nuisances at Hunter's Point and the vicinity opposite New York, which is accompanied by a report from the committee of investigation of the State Board of Health, to the effect that they find that these nuisances seriously affect the comfort and health of the residents of New York and Brooklyn. The message says, "It is a notorious fact that particular kinds of business, including the refining of petroleum, the utilization of animal oil, the manufacture of fertilizers and cream of tartar, and the storage of manure, all conducted on a large scale near the metropolis, have been very offensive from the emanation of noxious vapors. This subject, involving, as it does, the health of nearly 2,000,000 of people, is worthy of your serious attention, to the end that all necessary legislation may be secured to avert the danger now imminent."

—At the last meeting of the Academy of Medicine Dr. Louis Elsberg gave an exhibition of the mode of using the galvanic accumulator (Trouvé's polyscope) for storing dynamical electricity for cauterizing and illuminating purposes, and Dr. M. H. Henry read a paper entitled Remarks on Amputation of Redundant Scrotum for the Relief of Varicocele, Illustrated with new Instruments to Facilitate the Operation. A memorial of the late Dr. Oliver White was also read by Dr. D. Bryson Delavan.

PHILADELPHIA.

—At the last meeting of the Academy of Surgery Dr. J. C. Hutchinson, of Brooklyn, N. Y., read a paper on the Treatment of Hip-Joint Disease, insisting particularly upon the importance of rest and fixation of the joint, and recommending the high shoe on the sound foot, so as to have the weight of the affected limb as an extending force, while the patient was allowed to go about on crutches during the day, while at night extension by weight and pulley is required to prevent painful muscular spasms.¹ The paper was freely discussed, and while general agreement as to the principles of treatment was evident, the greatest diversity in the methods for attaining the desired end was exhibited. Nearly every speaker had a preferred plan for the treatment of hip-joint disease which differed in detail from that of every other. Dr. Hutchinson expressed great satisfaction with the freedom of the debate, in which his method did not escape criticism, but reaffirmed from experience the value of the plan proposed in the paper he had read. His remarks were warmly applauded, and the publication of his essay asked for in the proceedings of the Academy.

—A new gastronomic departure, having for its object the teaching of domestic economy, has been started by the New Century Cooking School of this city. A few weeks ago, a party of invited guests sat down to a dinner which cost eighteen cents per head; last week the same institution excelled itself by inviting a company to what was intended to be a nine-cent dinner, but which in truth only amounted to seven cents per head. Several physicians were among

the guests. The matter is so closely connected with hygiene that we append the following brief account of the entertainment:—

The affair was even more of a success than the eighteen-cent banquet, partly because it was an exploit of still cheaper marketing. "How to market" is as necessary as to know "how to cook," and both are taught in the Girard Street school. The table was spread, as before, with pretty china, and even more profusely decorated with flowers than on the previous occasion. At each plate lay violets with the menu card, and large epergnes alternated with low baskets of choice hot-house flowers, sent in by friends of the school. The bill of fare, as before, was a bill of costs also, and had it not been that the lady managers were put upon the witness stand, and affirmed that it was all true, as there set down, some of the party would have gone away skeptical as to the cost of the substantial meal.

BILL OF FARE.

Dinner, Thursday, March 3, 1881.

Pea soup.

Parker House rolls.

Irish stew. Curly potatoes.

Pork and beans.

Veal croquettes. Cold slaw.

Maccaroni.

Rice pudding. Apple dumplings.

Coffee.

The cost of these dishes was set down as follows: Pea soup: beef, nine cents; peas, five cents; seasoning, one cent. This was a really delicate soup, and it was explained, when the cut of meat was called for, that it was a piece from the shoulder, with very little bone, and that it took a pound and a half, costing six cents a pound. The veal croquettes were made from the neck of the veal, two pounds at five cents a pound, making the cost: veal ten cents; milk, four cents; butter, five cents; eggs, two cents; crumbs, one half cent; seasoning, one half cent; lard, three cents. The pressed soup meat, cost set down above, was also used in making up these excellent croquettes. The Irish stew: mutton, fifteen cents; potatoes, three cents; onions, two cents. Pork and beans, the pork costing twenty-two cents, beans, ten cents. Curly potatoes, which had been put through the colander, and then browned, six cents; maccaroni, ten cents; cheese eight cents. Rice pudding: rice, two cents; milk, sixteen cents; raisins, five cents; sugar, three cents. Apple dumplings: apples, twelve cents; potatoes, six cents; flour, three cents; sauce, nine cents. Coffee and milk: coffee, fifteen cents; milk, eight cents. Bread in soup, the little *croutons*, was sent down at two cents, and the Parker House rolls cost ten cents. All together the bill of fare summed up two dollars and twenty-two cents. As before, the additions to the invited guests put the number actually dining there yesterday at thirty-two, making the actual cost per guest seven cents.

The moral of all this is to show how, given the fire and given the cook, which are both, of course, in every house where a dinner is cooked daily, these *prices, per dish*, are all that it need cost the house-keeper, and she can have the variety for the figures named.

¹ This form of treatment is in use both at the Carney and at the Good Samaritan Hospitals in Boston. —Ed.

Miscellany.

LONDON LETTER: FROM AN OCCASIONAL CORRESPONDENT.

THE following letter from an occasional correspondent in London, gives some additional and curious details of the feelings and comments to which Dr. Quain's attendance upon Lord Beaconsfield gave rise. These details show rather more of the inner history of the question than could be gathered from the somewhat general mention of the subject contained in the letter from our regular correspondent in last week's issue. — ED.

PROFESSIONAL ETIQUETTE.

MR. EDITOR. — The point has been raised, by no means for the first time, in reference to certain facts and individuals, in connection with Lord Beaconsfield's very serious illness, as to the propriety of regular physicians meeting in consultation a reputedly homœopathic practitioner. Your regular correspondent or exchanges may have enabled you to already shock your readers with an account of what some might sensationally style "low life above stairs."

I send you the following, cut from an excellent article in to-day's *Lancet*, from which much may be learned and more inferred: "Dr. Quain has violated a fundamental principle of professional conduct in acting with Dr. Kidd, an eminent homœopath, in treating the Earl of Beaconsfield 'according to the regular practice of allopathy.' This is the conclusion which is forced upon us, and it is one in which we believe the profession will feel compelled to acquiesce."

I will presently give you an extract from last week's *British Medical Journal*, an apparently strangely inspired organ, which has deemed it prudent to remain silent this week on this warm question. From last week's *British Medical Journal*, interpreted by its own silence this week, and to-day's *Lancet*, a very complete view of the points of the case may be gathered.

It is well known that Sir William Jenner had repeatedly resisted overtures made to the end that he should consult with Dr. Kidd, and if it be true that Sir William Jenner and at least one other distinguished physician had declined to meet Lord Beaconsfield's habitual medical attendant in consultation upon the case, before Dr. Quain consented to do so, it is not surprising that that senior practitioner's position appeared to require some explanation. However, 's'excuse, s'accuse,' your readers like all others, who are necessarily unaware that Dr. Quain holds any court appointment, might have a difficulty in properly construing the following paragraph from the *British Medical Journal* of the 2d inst.:—

"Her Majesty, on Tuesday morning, participating in the anxiety felt by his lordship's many friends, desired that further advice should be obtained, and Dr. Quain was requested to attend in consultation with Dr. Kidd. It should be mentioned that Dr. Kidd had for the last three years attended his lordship in like attacks. When this request was made to Dr. Quain he declined, with great regret, to accede to it, under the impression that Dr. Kidd was a homœopathic practitioner. Being, however, assured in the most positive manner that Lord Beaconsfield had on no previous occasion been treated homœopathically, and was not being so treated on this occasion, he sought the advice of

the College of Physicians, who were decidedly of opinion that Dr. Quain would not, under the circumstances, be justified in persisting in his refusal. Those who have known Dr. Quain, and his strict integrity in all that relates to professional honor and feeling, during his long and distinguished career, will at once accord their approval of the course which he pursued under the difficult circumstances in which he was placed."

Additional light having been thrown on the subject, it appears probable that the children of Eve exist on this side of the Atlantic, even in the charmed circle of medical journalism; and also that prudent and experienced Fellows of the College of Physicians number amongst themselves the goose and gander for whom a consultation with a homœopathic practitioner is not common sauce.

On Thursday morning Sir William Jenner consulted over Lord Beaconsfield's illness with Dr. Quain, as a published and distinct favor to the latter, in the absence of Dr. Kidd, who was for the purposes of the consultation to be treated as a non-existent.

Sir William Jenner's unflinching integrity, fearless character, and wide-mindedness have thus been conspicuously displayed, under the most trying circumstances, as an example to all who may be tempted to stray from the jealously-watched course of strict medical etiquette. Let us hope, as I believe, that the medical profession now contains more than one who would decline public honor rather than countenance a practitioner hoisting double colors, would despise ungenerous criticism upon his giving the *congé* to a fashionable, clever, but irregular practitioner of medicine, and would be ready to lend a hand to assist a colleague in a difficult and more or less invidious position, accepted, let us hope and fear, under the inestimable pressure of fashionable and social connections.

LONDON, April 9, 1881.

MASSACHUSETTS MEDICAL SOCIETY, 1781-1881.

MR. EDITOR. — It is proposed to have at the coming centennial meeting of the Massachusetts Medical Society on June 8, 1881, a comparative and historical exhibition of instruments, surgical apparatus, medicines, books, etc., illustrative of the advances which have been made in these various departments. The undersigned, a subcommittee of the committee of arrangements, appeal to the members of the society for the loan of such things as they may possess or be able to command which would be of interest in such an exhibition, and would be glad to be informed *by mail as soon as possible* what articles can be placed at their disposal.

The active coöperation of the members of the Society is earnestly solicited in order that the exhibit may be made as full and interesting as possible.

J. ORNE GREEN,
15 MT. VERNON STREET, BOSTON.
EDW. H. BRADFORD,
150 BOYLSTON STREET, BOSTON.

AN OUTBREAK OF TRICHIINOSIS FROM EATING THE FLESH OF A WILD BOAR.

THE following account, by John Wortabet, M. D., physician to St. John's Hospital, Beyrout, is condensed from the *Lancet*:—

The village of Khiam, where this disease has recently broken out, lies not far from the principal sources of

the Jordan. From the thick jungles of papyrus a large wild boar was shot and brought to Khiam on the 25th of November. This was a great treat to the poor villagers, who can rarely afford butcher's meat, and many of them ate the flesh, raw or half-cooked. The meat was observed at that time to be perfectly fresh and good, but during the second week the persons who had eaten became ill, and if any escaped at that date they suffered later. Of those who had abstained not one fell ill. The symptoms of the disease were the same in all the victims; but those who ate the flesh raw suffered most severely, and the children generally suffered less than adults. The head of the boar was sent as a present to a family some miles north of Khiam, who boiled it very thoroughly before eating it, and though a good number joined in the repast no one of them suffered in the least.

These facts I verified by visiting the place of the disaster, which is a two days' journey from Beyrout, and where I spent January 1st and 2d in studying on the spot the circumstances of the case. I found 257 persons more or less ill,—namely, men 121, women 101, children 35. Five others—three men and two women—had died before my arrival.

As I entered the village I was at once surrounded by some twenty men, women, and children; their faces were still puffy and pale, and they looked very weak, but convalescent. All had one story to tell: "We ate of the flesh, but did not feel unwell till some days after, when we had much pain all over the body, swelling, and fever. We are now much better, but very weak, and not free from pain yet." In examining the cases I found nothing more than they had stated. The tongue was clean, the appetite good, and the functions of the alimentary canal normal. In almost every case, however, there was a peculiar appearance of the floor of the mouth, the inferior surface of the tongue, and the gums. Situated on the mucous membrane there were small white conical projections, a few of which I clipped and subsequently examined with the microscope, but with negative results. The gum often presented congested patches, while at its border it was sometimes red, and bled easily on pressure.

The period of incubation does not seem to have ever been under ten days, though it was prolonged in some cases to twenty. In one individual, who had eaten the meat fairly cooked, the disease did not appear before the end of the fourth week, and then it was so slight that he was not laid up by it. They were unanimous in saying that up to the date of the actual invasion of the disease they felt as well as usual. I heard, however, of one man who had vomiting and diarrhoea soon after eating, probably the effect of an overloaded stomach, and that he was one of those who had suffered the least. The instances in which the disease appeared later than the second week were very few.

The order of the symptoms, after the disease was fully declared, appears to have been, as far as I could find out, a swelling of the face and extremities, accompanied or soon followed by severe pain in all the muscles of the body, and more or less fever, with headache, thirst, perspiration, and much itching of the skin. These symptoms continued about two weeks, and it was during this period that five persons died, apparently from the effects of the fever. The majority of the sick became then slowly convalescent, and left their beds. The number of the sick who were

still confined to their beds could not have been far from one hundred, but most of them were evidently beginning to recover, and with the exception of an œdematous state of the face and extremities, and lingering pains in the muscles, with, perhaps, a slight febrile reaction towards evening, there was nothing particular to observe. The severer cases, which were not more than five or six, presented still the typical features of the disease. The fever was of an asthenic form, in one case with a dry, typhoid-looking tongue, and appeared to be of a secondary character in the chain of morbid phenomena, and probably produced by a general irritation of the whole system. The pain, which invaded all the voluntary muscles, was very severe, but appeared most in the muscles of the extremities at the points of their attachments to the bones. Both flexion and extension were very painful, and the patient lay generally on his back, with his limbs in a state of semiflexion. In one instance I found the calf of the leg hard and very tender on pressure. Every movement gave pain, and the muscles of mastication, swallowing, and breathing seemed to be all equally implicated. The voice was somewhat husky, and there was pain in the region of the larynx. At one time during the march of the disease they complained of a swelling in the tongue, and some had suffered from conjunctivitis, of which I saw two instances. The bowels seemed to have been regular throughout. Some of those who were still sick in bed had been better, but had relapses, attributed to imprudence on leaving their room too soon.

Some ten years ago there was a similar outbreak from the same cause in a village a few miles to the east, when about twenty persons lost their lives. I was told, also, that the wild boar lives chiefly on the roots of the canes which are abundant in the marshes, and as he burrows the ground with his snout he snaps up small animals, such as worms, snakes, and wild rats—the latter of which are said to be sometimes infested with *trichina spiralis*.

Was this outbreak, then, one of trichinosis? No case of death took place while I was there, and to open a grave would have been perhaps impossible. All traces of the boar had disappeared. One brave man offered his arm for examination, but I did not like to inflict pain and injury on the poor fellow, who was still suffering severely from the disease. I heard of a cat which had eaten of the meat and died, but it could not be found. I heard of another in regard to which the statements were very contradictory as to whether it had eaten or not. It appeared well and quite lively. On killing it and examining different pieces of muscle with the microscope, I found them quite healthy and free from the parasite. I still hope to obtain a piece of muscle for examination, and to communicate the result. In the meantime it is quite rational to believe, from the history of the outbreak and from the symptoms of the disease, that we had here an instance of a trichinatos infection on a larger scale than has hitherto been recorded. If it were not that, what else could it have been?

In a postscript the doctor adds: A somewhat aged woman, whom I had seen quite ill when I was there, has since died, and I have succeeded in obtaining a piece of muscle (biceps brachialis), which reveals under the microscope a good number of trichinae, and sets at rest any question as to the nature of the disease. The parasite lies coiled across the primitive fibres, and

apparently within the sarcolemma of the fasciculi, and appears to be free—not enclosed in a cyst. The trichinae may be obtained free of the muscular tissue by a moderate pressure of the covering glass, but they are apt to get thus uncoiled, and to lose their characteristic spiral form. To the naked eye the tissue has a perfectly healthy appearance. A letter from the village states that they were having a good number of relapses, and mentions particularly a return of the swelling, of muscular pain, chiefly at the bend of the elbows and knees, and of much itching over the whole body. The patients complain of a sense of sudden failing if they cannot get food as soon as there is a craving for it. Many are still in bed, and those who are

able to be out feel very weak, and continue to feel pain. I fear there will be more fatal cases.

In a note the editor of the *Lancet* adds: We received from Dr. W. a specimen of the muscle referred to in the postscript, and on microscopical examination found it to contain a large number of non-encysted embryo nematoids. The isolated worms possessed the general shape, with terminal anus, met with in the embryos of trichinae spiralis. They were too immature to admit of any details of organization being made out. They were found to be $\frac{1}{30}$ " long by $\frac{1}{500}$ " broad. The fact that they were non-encysted is in accordance with the other fact that they had not yet attained the usual size of encysted trichinae.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 16, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	789	297	24.72	19.52	7.60	6.21	2.80
Philadelphia.....	846,984	412	135	18.45	9.95	3.16	1.21	.73
Brooklyn.....	566,689	236	90	22.03	14.41	11.02	4.24	.42
Chicago.....	503,304	198	87	30.30	16.67	8.08	3.54	6.57
Boston.....	362,535	183	66	19.13	17.49	9.84	1.64	—
St. Louis.....	350,522	149	48	25.50	11.41	.67	.67	14.77
Baltimore.....	332,190	135	49	20.00	11.11	8.89	2.22	1.11
Cincinnati.....	255,708	121	51	9.09	17.36	.83	.83	1.70
New Orleans.....	216,140	113	27	19.47	9.73	.88	7.96	.88
District of Columbia.....	177,638	95	36	8.42	13.68	2.11	1.05	—
Pittsburgh.....	156,381	70	36	34.29	10.00	4.29	15.71	10.00
Buffalo.....	155,137	54	20	3.70	20.37	3.70	—	—
Milwaukee.....	115,578	42	20	23.81	9.52	7.14	2.38	7.14
Providence.....	104,855	47	16	17.02	21.28	2.13	6.38	—
New Haven.....	62,882	22	5	4.55	13.64	—	—	—
Charleston.....	49,999	43	11	18.60	16.28	—	16.28	—
Nashville.....	43,461	26	8	19.23	19.23	—	—	3.84
Lowell.....	59,485	23	6	13.04	13.04	4.35	—	—
Worcester.....	58,295	25	6	12.00	12.00	4.00	4.00	—
Cambridge.....	52,740	14	3	7.14	—	7.14	—	—
Fall River.....	49,006	20	8	20.00	—	5.00	—	5.00
Lawrence.....	39,178	12	4	33.33	—	8.33	—	16.67
Lynn.....	38,284	19	1	5.26	26.32	—	—	—
Springfield.....	33,340	8	1	—	25.00	—	—	—
Salem.....	27,598	6	1	—	16.67	—	—	—
New Bedford.....	26,875	14	2	21.43	—	—	7.14	—
Somerville.....	24,985	4	2	—	75.00	—	—	—
Holyoke.....	21,851	10	1	10.00	10.00	—	—	—
Chelsea.....	21,785	8	2	—	—	—	—	—
Taunton.....	21,213	6	1	—	16.67	—	—	—
Gloucester.....	19,329	9	2	22.22	—	—	—	—
Haverhill.....	18,475	5	—	—	20.00	—	—	—
Newton.....	16,995	6	—	16.67	16.67	—	—	—
Newburyport.....	13,537	8	2	12.50	—	—	—	—
Fitchburg.....	12,405	3	0	—	33.33	—	—	—
Twenty-six Massachusetts towns..	213,336	82	14	18.29	15.85	7.32	1.22	1.22

Deaths reported 3017; 1058 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 621, consumption 460, lung diseases 453, diphtheria and croup 170, scarlet fever 113, cerebro-spinal meningitis 80, small-pox 58, malarial fevers 44, typhoid fever 40, diarrheal diseases 39, erysipelas 25, measles 24, puerperal fever 15, whooping-cough 12, typhus fever one. From *small-pox*, Philadelphia 37, New York 11, Chicago nine, Brooklyn one. From *malarial fevers*, New York 15, St. Louis eight, New Orleans five, Brooklyn four, Boston three, Chicago and Fall River two, Philadelphia, Baltimore, Cincinnati, District of Columbia and Nashville one. From *typhoid fever*, New York and Philadelphia seven, Brooklyn three, Chicago, Boston, St. Louis, Baltimore, Cincinnati, Milwaukee, and Westborough two, District of Columbia, Pittsburgh, Charleston, Lowell, Worcester, Lynn, Holyoke, Gloucester, and Attleborough one. From *diarrheal diseases*, New York

11, Philadelphia six, New Orleans four, St. Louis three, Brooklyn, Boston, Baltimore, and District of Columbia two, Chicago, Cincinnati, Pittsburgh, Providence, Lowell, Lawrence, and Newton one. From *erysipelas*, New York seven, Chicago three, Philadelphia, Brooklyn, Baltimore, Cincinnati, New Bedford, and Attleborough two, Boston, Gloucester, and Milford one. From *measles*, New York seven, Boston five, Nashville three, Baltimore and Providence two, Brooklyn, Chicago, Cincinnati, New Orleans, and Pittsburgh one. From *puerperal fever*, Chicago three, New York and Brooklyn two, Philadelphia, St. Louis, New Orleans, Milwaukee, Providence, New Haven, Newburyport, and Westborough one. From *whooping-cough*, New York four, Chicago three, Baltimore two, Philadelphia, Boston, and District of Columbia one. From *typhus fever*, Baltimore one.

Twelve cases of small-pox were reported in Brooklyn, 34 in Chicago, one in Boston, seven in Pittsburgh, two in Milwaukee, one in Lowell (also one of varioloid); diphtheria 28, scarlet fe-

ver 11 in Boston; diphtheria 12, scarlet fever 10 in Milwaukee. The mortality from cerebro-spinal meningitis has increased from 65 for the week ending April 9th to 80.

In 45 cities and towns of Massachusetts, with a population of 1,131,247 (population of the State 1,783,086), the total death-rate for the week was 21.43, against 24.16 and 20.71 for the previous two weeks.

For the week ending March 26th, in 149 German cities and towns, with an estimated population of 7,854,993, the death-rate was 27.1. Deaths reported 4098; under five 1885: pulmonary consumption 621, acute diseases of the respiratory organs 441, diarrhoeal diseases 113, diphtheria and croup 129, typhoid fever 77, scarlet fever 70, whooping-cough 45, measles and röteln 42, puerperal fever 27, small-pox (Königsberg two, Lübeck, Tilsit, Munich two, Berlin two, Aachen three, Essen) 12, typhus fever (Königsberg two, Thorn five, Tilsit) eight. The death-rates ranged from 16.5 in Mannheim to 39.9 in Chemnitz; Königsberg 39.5; Breslau 36; Munich 39.6; Dresden 30.9;

Berlin 24.6; Leipzig 21.6; Hamburg 21.8; Hanover 18.3; Bremen 18.5; Cologne 25.2; Frankfurt 20.5; Strasburg 31.8.

For the week ending April 2d, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 21.9. Deaths reported 3196: acute diseases of the respiratory organs 358, whooping-cough 67, small-pox (London 56) 57, measles 50, diarrhoea 36, fever 27, diphtheria 20. The death-rates ranged from 13.6 in Leicester to 28.9 in Manchester; Sheffield 17.2; Birmingham 20.1; Leeds 20.2; London 21.8; Liverpool 24.7; Bristol 26.2. In Edinburgh 18.8; Glasgow 22.4; Dublin 30.8.

In the 20 chief towns in Switzerland, for the week ending April 2d, population 548,301, there were 37 deaths from acute diseases of the respiratory organs, diphtheria and croup 15, diarrhoeal diseases 14, typhoid fever 13, measles eight, small-pox three, scarlet fever two. The death-rate of Geneva was 17.5, Zurich 35.9, Basle 31, Berne 35.1.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
April, 1881.																			
Sun., 10	29.877	41	53	34	63	66	57	62	N	NE	O	4	12	0	F	F	F	—	—
Mon., 11	29.914	47	65	34	53	21	37	37	W	W	W	7	11	16	C	F	C	—	—
Tues., 12	29.943	35	41	32	51	100	90	81	W	E	NE	6	3	6	O	Hy S	O	—	—
Wed., 13	29.744	37	38	35	81	100	100	94	NE	NE	NE	4	15	16	O	Lt R	O	—	—
Thurs., 14	29.696	38	43	34	90	82	90	87	N	NE	NE	7	6	12	O	O	O	—	—
Fri., 15	29.310	37	40	31	100	81	63	81	NW	NW	W	28	20	16	Hy S	O	F	—	—
Sat., 16	29.365	48	59	35	63	25	43	44	SW	W	W	13	15	7	F	F	C	—	—
Week.	29.721	40	59	31				70										34.56	1.40

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; Hy. S., heavy snow; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 16, 1881, TO APRIL 22, 1881.

MCCLELLAN, ELY, major and surgeon. When relieved by Assistant Surgeon Ebert, to repair to these headquarters for assignment to duty. S. O. 44, Department of the Columbia, April 5, 1881.

BARTHOLOMEW, JOHN H., captain and assistant surgeon. When relieved by Assistant Surgeon Spencer, to proceed to Fort Lapwai, Idaho, and report for assignment as medical officer of that post, relieving Assistant Surgeon Ebert. S. O. 44, C. S., Department of the Columbia.

HELMANN, CHARLES L., captain and assistant surgeon. Relieved from duty at Vancouver Barracks, and assigned to duty as post surgeon at Fort Townsend, W. T. S. O. 44, C. S., Department of the Columbia.

ATSWORTH, E. C., captain and assistant surgeon. Having reported at these headquarters, will report to the commanding officer, post of San Antonio, Texas, for temporary duty. S. O. 56, Department of Texas, April 14, 1881.

SPENCER, WILLIAM G., captain and assistant surgeon. When relieved by Assistant Surgeon Helmann, to proceed to Fort Coeur d'Alene, Idaho, and report for assignment as medical officer of that post. S. O. 44, C. S., Department of the Columbia.

EBERT, R. G., first lieutenant and assistant surgeon. Instructions by telegraph of this date to proceed to Fort Lapwai, Idaho, and relieve Surgeon McClellan as medical officer of that post, temporarily, confirmed. When relieved by Assistant Surgeon Bartholomew, to rejoin proper station, at Fort Walla Walla, W. T. S. O. 44, C. S., Department of the Columbia.

ARTHUR, WILLIAM H., first lieutenant and assistant surgeon. To report in person to the commanding officer, Fort Sanders, W. T., for duty. S. O. 31, Department of the Platte, April 16, 1881.

BUSHNETT, G. E., first lieutenant and assistant surgeon. Assigned to duty at Fort Yates, D. T. S. O. 61, Department of Dakota, April 11, 1881.

BIRMINGHAM, H. P., first lieutenant and assistant surgeon. So much of paragraph 1, S. O. 62, March 17, 1881, from A. G. O., as relates to him, is suspended until May 1, 1881. S. O. 85, A. G. O., April 14, 1881.

WYETH, M. C., first lieutenant and assistant surgeon. Assigned to duty at Fort Meade, Dakota. S. O. 61, Department of Dakota, April 11, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held Monday evening, May 2d, at eight o'clock, in the hall of the Medical Library, 19 Boylston Place. Reader, Dr. D. H. Hayden. Subject, Movable Kidney. Election of members.

M. H. RICHARDSON, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Hydrophobia. By Horatio R. Bigelow, M. D. Philadelphia: D. G. Brinton. 1881.

Quarterly Report of Medical Officers, United States Army, with Stations and Duties, April 1, 1881.

Fiftieth Annual Catalogue of the Massachusetts College of Pharmacy. 1881.

A New Cortical Centre. By Graeme M. Hammond, M. D. (Reprint.)

Lectures on Diseases of the Nervous System, especially in Women. By S. Weir Mitchell, M. D. With five Plates. Philadelphia: Henry C. Lea's Son & Co. 1881.

The Education of the Rich. (Pamphlet.)

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D. Fourth American from the fifth revised and enlarged English edition. Philadelphia: Henry C. Lea's Son & Co. 1881.

Experimental Researches on some Points relating to the Normal Temperature of the Head. By J. S. Lombard, M. D. London: A. K. Lewis. 1880.

Annual Report of the Health Officer to the City Council of Oakland, California, for 1880. E. H. Wooley, M. D., Health Officer.

Original Articles.

UNNECESSARY SURGICAL OPERATIONS IN THE TREATMENT OF THE DISEASES OF WOMEN.¹

BY CLIFTON E. WING, M. D., BOSTON.

THE OPERATION FOR RESTORING THE CERVIX UTERI WHERE THIS HAS BEEN RUPTURED. EMMET'S OPERATION.

Curiously enough, while a short time ago "*division of the neck of the womb*" was the gynecological fashion, now its exact opposite, "*the closure of the neck of the womb*," when this has been divided by nature or art, is the popular operation of the day.

When Dr. Emmet clearly described the condition which had been (and, even now, still is) so often mistaken for "ulceration of the womb" and devised an operation which might be employed for its cure, in cases where such a course was called for, he did a good thing for gynecology. In former days "ulceration" was the "*bête noire*" of those who treated women's diseases, and cauterization with nitrate of silver or more active agents was the "proper treatment." Dr. Emmet's exposition of the real condition of the parts has done away with much of this malpractice which had its origin in ignorance. But if every woman with a laceration at the neck of the womb is to be considered a fit subject for a surgical operation, without regard to whether this condition is really a cause of troublesome symptoms or not, then the discovery of Dr. Emmet is to prove anything but a boon to womankind.

Most women who have borne children present more or less of this lesion. Many have rupture and eversion of the neck of the womb without symptoms. Certain ones suffer from this condition. Measures of treatment directed to this lesion, it is needless to say, should be reserved for these last cases, but there is at present, in America, at least, a marked tendency to resort to the operation devised by Dr. Emmet, whenever the condition of eversion is found, whether it be a cause of suffering or not. It is true that by this means the typical conical form of the neck of the womb can be restored, but it is also a fact that very many of these women are not going to be benefited thereby.

A western physician has recently written so clearly upon this operation that I cannot do better than quote freely from his article.² After stating that the operation "has reflected unstinted credit upon its author, Dr. Emmet," he proceeds: "But I am afraid the disposition is just now to a too frequent resort to this serious operation. It is my conviction, and I know that there are many others who think as I do, that this procedure, so useful in its place, is being done far more often than there is any need for, and that there are many who are beginning to look upon it as a panacea for nearly all the forms of cervical disease. All new discoveries have to pass through what might be called an exaggeration period before they at length settle down to their proper level. So with the operation in question. There is something so simple and direct about it as to make it almost captivating to the surgeon's eye. Here is nature at fault, as usual, and art coming triumphantly to her relief with a neat plastic operation. Could anything be plainer? One writer in his enthusiasm advises the

measure even after the ordinary slight laceration of labor; which is simply throwing overboard all faith in the restorative powers of nature. Proceeding on such a rule, nine tenths of parous women would have to be made the subjects of surgical operations. Let it be remembered that a certain amount of laceration accompanies every labor, whether normal or abnormal. Let it be remembered, too, that the cervix of all women who have borne children present evidences of puerperal tearing, all the way from slight irregularities of the os to clefts extending deep into its structure. Is there any one of us who has not again and again found such a condition coexisting with perfect uterine health? . . . As far as my own practice goes, I must admit that at first I was much taken with the operation and performed it more often in former years than of late. There are many others who reckon their trachelorrhaphies in a similar declining ratio, although never ceasing to regard it as one of the most valuable contributions ever made to gynecology. . . . We live and think in cycles. Even fashion is subject to this law, and fashions in medicine have always characterized our science. The fashion of sewing up the uterus as an ordinary therapeutic measure may be expected to have its day, and then its true worth will be recognized — that of a most reliable, but serious and not often demanded, operation."

When gynecologists recognize the truth of this last sentence then . . . real benefits of Emmet's discovery be realized. Its effect so far has been in great measure the supplanting of the old treatment (by caustics, etc.) for "ulcerations" (which never existed), which, although it was misdirected and, in the light of our present knowledge, absurd, — yet was seldom followed by serious or fatal results, — by the performance of surgical operations, alarming to the patients and their friends, and which in a large proportion of cases are uncalled for and can be avoided. The fact is that very many cases of "rupture and eversion" (cases formerly considered "ulceration") require no treatment whatever, *i. e.*, the lesion is innocuous. Physicians have been rather led away by an exaggerated idea of its bad effects. For example, women with this condition have been solemnly assured by their doctors that unless they underwent operation for its cure they would never again become mothers, when perhaps the lapse of a few months has disproved such assertions and left the medical gentlemen in an awkward position.

The cases which are accompanied by troublesome symptoms and demand attention are the exception rather than the rule. If surgical interference is confined to such, Emmet's operation will be productive of much good. As at present often done, not because it is really needed but because a chance for its performance offers, it probably in the aggregate does more harm than good.

The operation is by no means devoid of danger. Phlebitis, cellulitis, pelvic abscesses, septicæmia, peritonitis, etc., have followed its performance by the best operators, and left results from which the patients would recover only after months of suffering, if at all. It is only a short time ago that a discussion in one of our local societies brought out accounts of several deaths after this operation. I myself have known of more than one such result.

The two operations last considered have been referred to, in a letter from London, in the following amusing lines: —

"When Dr. Sims was first here, he demonstrated, to

¹ Concluded from page 392.² Paper read before the California State Medical Society, by W. H. Mays, M. D.

the satisfaction of a great many people, and indeed seemed almost to have established it as a canon in practice, that a great number of women are suffering from complaints which require that the cervix uteri shall be lacerated to the extent of complete division; and we were under the impression that according to the well established experience of Marion Sims and his school, about twenty to twenty-five per cent. of the gynecological patients are required to have the cervix uteri divided in order to be restored to health. But it now we find that at least as many are suffering from complaints which require that cracks, cuts, and fissures of the cervix shall be shut up, it seems as if the greater part of the energies of that most fearfully numerous, highly intelligent, and active class of practitioners, who, either as specialists or as family doctors, have a claim to the title of gynecologists, will in future be divided between splitting up the cervixes of those women who yet possess them entire, or uniting with horsehair or silver wire those which are by nature cracked or fissured. The general moral would then be open to deduction, that in respect to the uterus, whatever is wrong, and whatever is not, ought to be brought about."

This is rather an exaggerated view of the matter, yet there is a good deal of truth in these lines. To my own knowledge, at one time a distinguished practitioner was doing many operations for dividing the neck of the womb, while an equally distinguished brother physician of the same city was industriously closing these cuts by operation and sutures, when the former's patients happened to fall into his hands.

CURETTING OF THE UTERINE CAVITY.

This is an operation which is being frequently performed at present. It consists in the scraping, with instruments devised for the purpose, of the inside of the womb (much as gardeners at certain seasons scrape trees), the object being the removal of morbid growths and excrescences, and the consequent checking of uterine hemorrhage, etc. Formerly by the term "curetting" was meant a pretty serious operation, one which was comparatively rarely done, it being, as a rule, resorted to only when simpler means of controlling uterine flowing had failed, and when, in the absence of other apparent cause of hemorrhage, there was a strong probability that "intra uterine fungosities of intractable nature" were present. To insure the removal of such growths the "curette" or instrument employed had a comparatively sharp (although not necessarily a "cutting") edge. With the increasing interest in the subject of diseases of women, such as has developed of late years, and the accompanying enthusiasm for "operations," naturally there has come an increased number of cases of curetting, until nowadays, if a patient presents herself with a simple uterine catarrh, and a history of increased uterine flow (which is but natural in such cases), and particularly if she have borne children, and has in consequence an "invitingly-open" uterine canal, perhaps the first thing the physician thinks about is the curette. But under this kind of practice the results with the old instruments were unsatisfactory. Too many patients were seriously injured, and some were killed, by the procedure, for even in the best hands, "curetting" if thoroughly done is a dangerous process for the patient to go through, and an operation which should always be kept as a last resort. The result was the introduction of a most formidable instrument in the shape of the "dull curette."

Now in most cases of common uterine catarrh the lining of the womb is more or less inflamed and swollen, and, from the presence of increased secretion, soaked and softened. The use of even a dull curette, under such circumstances, will, almost always, result in the removal of more or less of the softened lining, with, perhaps, a few distended and swollen glands; but in such cases the proceeding is not at all necessary, for, the catarrh checked by proper means, the parts will soon return to a normal condition. I have several times seen the dull curette used under such circumstances, and what were termed "characteristic granulations" removed and exhibited with satisfaction by the operator to those present, when I have afterwards taken some of these "granulations" and "teased them out" under water and seen them resolve themselves into strips of apparently normal uterine membrane, which had evidently been rolled up into little balls before the edge of the curette, as snow is rolled into balls by children, thus deceiving the operator.

The great difference in the views held by physicians as to the dangers of "curetting" is explained by the fact that one set of physicians mean by this term the thorough operation done with the sharper instrument; an operation reserved for cases where other means of treatment have proved of no avail, therefore a comparatively rare operation, and, from the nature of the case, a pretty serious one; while with others of the profession "curetting" is a common method of treatment resorted to whenever any excuse offers, the *dull instrument* being employed. The procedure, as performed under such circumstances, is often hardly worthy of the name "operation," although the opportunity of using this term is seldom missed by those who practice it, and in many cases has very little effect for either good or evil. But this is not true in all cases. In some conditions of the endometrium, where it is in an unhealthy relaxed condition, and it is desirable to "set up a healthy action" as our forefathers in medicine would say, the stimulating effect of the use of the dull curette may prove advantageous, and the dull curette will, in some cases, if used with skill, remove *soft growths* successfully, but it will prove inefficient in the case of many of the harder growths and granulations so difficult to manage with ordinary means, for which the operation of curetting was formerly reserved. Many a gynecologist has learned this fact from experience, and, after several "operations" with the dull instrument, has finally overcome the difficulty by using the sharper instrument. As one writer has said of the dull curette, "It is an excellent instrument where nothing is to be removed;" but in such cases other measures less alarming to the patient will usually suffice.

Although in careful hands rarely productive of bad consequences (even when *used*, and not merely played with, as is often the case), yet there is a tendency in certain quarters to regard the dull curette as an instrument safe for any one to experiment with, and one which the merest tyro in practice need not fear to make use of. A caution may not be amiss. No one

¹ I have been surprised at the way the term "operation" is used, even by some physicians of good standing. I have repeatedly been told by persons who have come to see me about patients coming under treatment that the cases were probably serious ones, because the patients had already gone through so many operations, when later I have found the "operations" referred to, consisted, perhaps, in the application of some mild remedy to the cervix, perhaps, in the use of a uterine sound, or, it may be, in the attempt to place a speculum! Doubtless, such a use of the word has the advantage of making a due impression (?) upon the patient and her friends.

should attempt the use of a curette, sharp or dull, who is not sufficiently experienced in uterine examinations to assure himself of the absence of all pelvic inflammation, even slight. The presence of such inflammation, which, when slight and localized, is not always readily detected by the inexperienced, often leads to uterine flowing; but under such circumstances curetting would probably make bad work. Even the use of a sound is not advisable in such cases. Again, the physician's office, from which the patient must return home, is not the proper place for the procedure. Physicians often ignore this fact with impunity; but I cannot but think it is making the patient run an unnecessary risk. She should be where she can lie quiet for a day or two, and longer if advisable. Occasionally there is severe hæmorrhage with the operation, even with the dull curette, and no one can tell beforehand with which patient it will come.

Dr. Emmet has devised forceps for removing granulations, etc., from the uterine cavity, which are very efficient, and render the resort to curetting but seldom necessary; but I do not think they quite take the place of the sharp curette in all cases. I have used both to advantage in the same case. Once, I recollect, the hæmorrhage was so rapid after removing some growths with the forceps, that I was forced to give them up, and finished the operation successfully by very rapid curetting, which brought away the rest. In certain quarters the "sharp curette" has been decried as a barbarous instrument, one which should never have been invented, etc. It is its unnecessary and heedless use which has brought it into such ill-repute. It need never be so keen-edged as to merit the name of a "cutting instrument," and used with proper skill in proper cases it supplies a place the dull curette cannot fill. Emmet's forceps are excellent for the removal of placental tissue and other products of miscarriage; and here another word in regard to the use of the curette. It should be avoided if possible after miscarriage or labor, while the walls of the uterus are undergoing involution and the accompanying fatty degeneration. (Here Emmet's or other forceps can be used with much greater safety.) I have known neglect of such caution, and the rash curetting of a patient a few weeks after the confinement, followed by fatal consequences.

THE OPERATION UPON THE ANTERIOR VAGINAL WALL FOR PROLAPSE OF THIS PORTION AND CYSTOCELE.

When there is a tendency of the anterior vaginal wall, with the adjacent bladder (cystocele), or without it, to sag and protrude through the vulva, an operation, consisting in either the "folding in" or the removal of the slack of the vagina at this point, has been devised to correct the condition and afford relief to the patient from the "bearing down" bladder distress and other symptoms referable to it.

This "sagging" of the anterior vaginal wall rarely takes place to a troublesome degree unless there are other abnormal conditions present, notably, rupture of the perinæum, or some one of the uterine displacements, bringing the cervix, and with it the upper part of the vagina, nearer the vulva. Oftentimes a "sagging uterus" is present. With an absence of more or less of the perinæum the vagina fails to get its usual support, and with a lowering of the womb the anterior vaginal wall, no longer extended to its normal

length, naturally tends to sag. In this way a low position of the uterus often has much to do with the production of this condition. Unfortunately, in a large proportion of these cases, the conditions named are not the only abnormal ones present. Such patients are apt to have the womb left large after confinement; a heavy weight upon its weakened supports. If such a patient goes through the operation on the anterior wall to reduce the vagina (preceded very likely by the operation for rupture of the cervix, if the physician is enthusiastic over modern operative gynecology) and later the operation for ruptured perinæum, *since the weight of the heavy womb still remains she does not always get as much relief as can be given in many of these cases by the proper adjustment of a pessary without operative measures*, and perhaps after going through all the operations the patient will still have to wear a supporter to be comfortable. Indeed, where there is this heavy womb, with a relaxed condition of the pelvic tissues, a combination often found in practice, it is a very difficult matter and sometimes an impossibility to so constrict the vagina by any operation as to afford complete and lasting relief to the woman. In such cases it is often perfectly feasible, without any operation, to adjust a lever or other pessary, which the patient can herself remove and replace, which will raise the womb into place, and extend the vagina its normal length, so that practically no falling of the anterior vaginal wall is left. If the extending of the vagina is not alone sufficient then the lower end of a lever pessary may generally be so bent as to be of some additional service in keeping the falling anterior vaginal wall in place.

It has repeatedly happened to me to see such patients who, having tried various supporters without relief, had been led to think operative measures necessary, who, much to their surprise and delight, have been relieved completely by the aid of a proper pessary. Some, who had been so thoroughly imbued with the idea that an operation was necessary, if they ever wanted to be comfortable, as to seem almost disappointed when I did not urge such measures at once, have experienced such relief from a pessary as to express indignation that they were ever told an operation was necessary for them.

While I believe of this operation, as I believe of each of the other operations considered, that in its proper place it is capable of much good, yet I believe of it, as I believe of the others, that at present it is done much oftener than is necessary or best.

Patients suffering from these troubles are not infrequently told that they must undergo surgical operations before they will be able to wear a supporter. Occasionally such conditions exist that this is the fact, but with proper knowledge of the adjusting of supporters these cases will prove rare, much less frequent than they are at present considered. Comparatively few practitioners are in any sense experts in the fitting of pessaries, yet a thorough knowledge of their uses is as necessary to the gynecologist as is the knowledge of splints and other apparatus to the orthopaedic surgeon. This knowledge on his part frequently saves his patients from operative interference, and the same is true of a thorough knowledge of the pessary and its uses on the part of the uterine specialist. At present any new invention in the shape of a supporter needs but one thing to make it attain popularity in the profession at once, however it may fail otherwise. If it be only easy of

introduction without paining the patient it is sure of a run for a while at least. The so-called "soft cotton pessary," highly recommended because it can "be worn where the womb is too tender to bear the pressure of a common supporter" (the fact being overlooked that a properly fitted lever pessary does not come in contact with that organ), highly efficient in creating a stench if worn even a short time, and good for little else, but easily introduced by anybody into the patient's vagina without causing pain, is a good example of this fact.

Dr. Engelmann, of St. Louis, has recently published an article entitled *The Dangers Incident to the Simplest Uterine Manipulations and Operations*, in which he has collected many bad results following the common gynecological procedures and operations. Naturally, in recording the bad results, he was confined in great measure to the reported cases. Could he have known of the cases not reported his examples would have been multiplied manifold. I regard the paper as a most valuable one at the present time, and as possible evidence of a coming reaction from the "operation fever" which has afflicted gynecology of late years. It certainly is a warning to the profession not to regard gynecological operations too lightly. If we can go a step further, and lead physicians to realize that the operations now so much in vogue can often be avoided, it will be another step in the right direction.

A former Harvard professor often quoted the saying, "Meddlesome midwifery is bad." He might have truthfully added, "Meddlesome gynecology is even worse."

THE USE OF ELECTROLYSIS IN THE TREATMENT OF HIRSUTIES.¹

BY JAMES C. WHITE, M. D.

THE natural growth of the hair upon different parts of the body varies in amount according to age, sex, and race. Overgrowth in point of extent may be extremely circumscribed, as upon a hairy naevus or wart, or universal; as regards age, it may be congenital or develop any time after birth. The hypertrophy may consist in an excessive development of the usual large and long hairs of the scalp, beard, axillæ, and genitals; of the short hairs which cover the general surface, or of the downy (lanugo) hairs upon the face and other parts of the female, into the strong, visible growth characteristic of the male. It is this latter variety only which demands the frequent aid of the surgeon. For universal hairiness, it may be stated in the beginning, nothing can be done; for the circumscribed forms in either sex connected with pigmented naevi and warty growths, the best treatment, when of moderate size, is the excision of the whole growth. When too extensive for such an operation the hirsuties may alone be treated by the method now to be considered. There is no more distressing affliction to a woman than an excessive growth of hair upon the face, none for which she will more persistently seek relief. It may be confined wholly to the upper lip or to a few sparse tufts or scattered hairs upon or beneath the chin, or to the sides of the cheeks. The mustache may often be long and heavy, and the side whiskers largely developed, while a full, strong beard is very rare, and generally associated with universal hirsuties. Such growths

are by no means infrequent upon the faces of girls after the age of twenty, and the great majority of cases which present themselves to the surgeon and dermatologist for treatment are between the ages of twenty and thirty. These young women are generally in good health, and the hypertrichosis seems to be in no way connected with any apparent disturbance of the sexual apparatus. Later in life, about the climacteric period, the lanugo hairs are apt to increase in size and depth of pigment over similar parts of the face, but such forms more rarely seek professional advice. With the growth upon the face there is often a similar development over the sternum and about the nipples at all ages. In addition to the deformity it gives rise to, the presence of a noticeable beard or mustache is apt to develop a morbidly sensitive condition, which prompts the bearer to shun society, and at times develops into a true monomania. The writer has known a lady who had visited surgeons in all the principal cities of the country in the vain search for one who would flay the whole lower half of the face for the extirpation of the hair growth.

Treatment.—It is only within a short time that a radical method of cure for hirsuties has been known. Previously the three well-known means for the removal of hair could alone be advised by the surgeon, and these had already been resorted to in the majority of cases by the patient. They are not only temporary in their action, but often are of positive injury in the case. These are, first, the method resorted to by the male sex for the temporary removal of the beard, namely, the razor; second, the application of depilatories, which destroy the hair a little way within, in the mouth of the follicles, and which therefore retard the reappearance of the growth a little longer than the razor, which cuts it off at the level of the surface. These depilatories have, moreover, decided disadvantages. They always, in virtue of their caustic properties, produce more or less irritation or inflammation of the skin to which they are applied, which must tend to the stronger development of the overgrown hairs by feeding their vitality, hirsuties, as is well known, not infrequently following the rubefacient action of a mustard poultice to any part of the body. They most commonly consist of mixtures of quick lime and arsenic, of sulphide of calcium, barium, etc. An objection common to them and the razor is that by their use there is substituted for the more delicate and tapering pointed primary growth a coarser one of the same dimensions throughout and much more conspicuous, and that both must be used frequently when once resorted to. The third method is epilation. The latter objection is not applicable to this process, for if the hairs are pulled out "by the roots," which may be easily done, the new growth, which is delayed much longer than after the use of the first two methods, is still tapering, and comparatively delicate. Even this process, by the constant repetition which is necessary to keep the hirsuties under, tends to stimulate to some extent the growth of the neighboring follicles. Yet it is the only one which should be recommended by the surgeon, as within the power of the patient to use or as affording any satisfactory measure of relief, although temporary, without aggravating the deformity against which it is used. For the circumscribed hirsuties connected with papillary and pigment hypertrophy it is, when this is of small extent, a sufficient means of relief. But none of these measures can possibly effect

¹ Read before the Boston Society for Medical Improvement, April 25, 1881.

the desired result, the radical and permanent destruction of the growth, as this can be done only by the obliteration of the hair papilla at the very bottom of the follicle. To accomplish this various methods have been practiced and devised by American dermatologists within the last few years, such as the galvano-cautery applied within the hair follicle; the attempted introduction of powerful caustics or irritants to the interior of the same; the mechanical destruction of the papilla by rimming out the cavity of the follicle with a triangular glover's needle, etc. It may be said of all of them that they are unreliable and therefore unsatisfactory.

It is to Dr. Michel, professor of ophthalmology in the Missouri Medical College, that we are principally indebted for the introduction of a method which is both practical and efficient, namely, electrolysis. Its success was first demonstrated¹ in the treatment of trichiasis, and subsequently its applicability to general hirsuties has been most successfully established, especially by Drs. Hardaway, of St. Louis, and Fox, of New York. The necessary apparatus is a galvanic battery of ten or fifteen cells, supplying a current strong enough to decompose water. An excellent form for the purpose is the chloride of silver battery of sixteen cells, made by the Western Electric Manufacturing Company of New York. It is very compact, free from danger of spilling, and needs refilling only once a year. In addition there is required a small sponge electrode, a supply of the slender steel needles used by dentists for extracting nerves, with a proper electrode needle holder, and two cord conductors of a yard in length. The needle is connected with the negative pole of the battery, the sponge electrode with the positive pole. The needle, secured in its holder, is then to be carefully introduced within the hair follicle to be operated on as far as the papilla, and held there, while with the other hand the moistened sponge electrode is applied to the skin in the immediate vicinity of the part. Immediately a frothy material is seen to ooze from the mouth of the follicle around the needle, the products of decomposition of the tissues in contact with its point. This should be allowed to continue for a few seconds, according to the size of the hair to be destroyed, when the sponge electrode is to be removed, and the needle then withdrawn. The hair should then be removed by forceps, the ease with which it comes away indicating the completeness of the success of the operation. Should this require any force the needle should be again introduced within the empty follicle, and the process of electrolysis repeated. A considerable amount of pain is experienced during the passage of the current through the tissue, which ceases almost entirely on the removal of the sponge. Sometimes, in addition to the frothing, the skin surrounding the needle is thrown up into an urticarial elevation, and is greatly reddened. Later the follicle may become inflamed, and form a crust, which adheres to the skin above it for a week or more. Sometimes a hard infiltration may be felt beneath the surface for a considerable time. Ordinarily the after-effects are very trivial, unless a small area be acted on repeatedly at short intervals. Finally, the parts return to their natural condition, leaving in some instances a minute pit or depression to indicate the seat of the operation. If successful the hair does not reappear. The degree of success depends largely upon the skill of the operator. Dr. Michel claims that ninety per cent. of the larger hairs are at

once and permanently destroyed. Others are satisfied if fifty per cent. are successfully dealt with on the first attempt. The operation needs only to be repeated upon those which reappear until all are finally destroyed. It is a question whether the hair should be extracted before inserting the needle. Where the hair is very coarse, so that the mouth of the follicle is well defined after its extraction, it may be well to remove it before inserting the needle, but when the hairs are fine and blonde their presence is necessary to guide the needle within the follicle to be destroyed. It is easy to make the fine, pointed needle enter the follicle even when the hair remains, and the skilled touch recognizes at once when it has been successfully inserted. Even when the needle cannot be introduced directly within the canal, its point may be made to penetrate the tissues in the immediate vicinity of the papilla, so that the electrolytic action may extend to and destroy this essential point. The subsequent non-resistance to the forceps during extraction shows whether this result has been attained. The patient should be placed in the strongest light, and even under the most favorable conditions the eyes of the operator will tire after a session of an hour or less. Perhaps forty or fifty hairs are all that can be attempted by him at one time with advantage to himself or the patient, although the latter generally bears the pain of the process without flinching after the first few sittings. When an extensive hirsuties is to be treated a long time is required for the successful primary removal of the hairs, and some of the follicles will, without fail, require a repetition of the operation. For the fine, downy hairs occurring alone or interspersed with a stronger growth nothing had better be done until they attain a more conspicuous development.

RECENT PROGRESS IN ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M. D.

RESECTION OF THE KNEE IN ITS APPLICATION TO THE TREATMENT OF ANGULAR ANCHYLOSIS.²

POINSAT states that in France this operation has not been in favor chiefly on account of the successful results of *redressement forcé* and the influence of the authority of Bonnet.

Although forcible straightening is effectual in a large number of cases, it is useless in bony ankylosis, and injurious (in the opinion of the writer) after purulent inflammation of the knee. A fracture of the fatty degenerated bone frequently occurs, and, though the result is often a useful limb (Nussbaum, Billroth, Rizzoli), in a few cases rupture of the vessels, injury of the nerve, and unfortunate results have followed.

Poinsat regards *redressement forcé* as contraindicated also in ankylosis in young persons, where hypertrophy of the condyles usually follows the subluxation of the femur backwards, which frees the femur from pressure.

In these cases two operative procedures are to be considered, osteotomy of the femur and resection. Of these the writer believes resection to be preferable, for the reason that in this operation the joint is opened and all diseased tissue is removed, and the possibility of subsequent inflammation is removed. The writer

¹ St. Louis Clinical Record, October, 1875.

² Bull. et. Mem. de la Société de Mèd., vol. v., p. 461.

has collected seventy-seven cases, and found a mortality from the operation of eight per cent. The results where antiseptic precautions were employed were more favorable (thirty-six operations and no death).

The writer regards the operation as entirely free from danger in patients under fifteen years of age, but success has been obtained in adults. Six cures are reported between forty and fifty years, and one fifty-seven years old.

CONGENITAL DEFORMITY OF THE LOWER EXTREMITIES, CURED BY RESECTION OF THE KNEES.¹

In a child twenty months old, besides congenital deformity of the fingers, a distortion of the lower limbs existed, so that the toes touched the scrotum. The femora were of normal length. In the right limb the patella and the tibia were wanting, the head of the fibula was driven forward and upward, straightening of the limb was impossible on account of adhesions in the abnormal position. The tibia was slightly curved. The muscles were normal. In the left limb the patella was present, but the upper third of the tibia was wanting. Resection of one knee was performed (under antiseptic precautions). Healing by first intention followed, and in twenty days the second knee was operated on, and the wound healed in twenty days. In a few months the patient became able to walk using apparatus. Ankylosis at the knees did not result, flexion and extension being possible, lateral motion was prevented by supports. Partial development of the rudimentary tibiae followed.

ARTHRITE PLASTIQUE ANKYLOSANTE DE GENOU.²

Nicaise describes an affection which he claims has been overlooked by the majority of surgeons and surgical writers. The name of plastic arthritis was given by Gosselin, and owing to the usual termination the term "ankylosante" is added. In the case reported the affection began with a chill after confinement, the first local symptom was pain in the shoulder and knee, the former soon became well, but the latter entered into a painful chronic condition, which after five months terminated in a stiffness.

This affection resembles, in its result, gonorrhoeal rheumatism, but pathologically it is distinct, as it is present in patients who are not suffering from gonorrhoea. Seven of these cases have been observed: four by Nicaise, two by Gosselin, and one by Duret. The joints affected were the knee four times, the elbow twice, and the hip once. The course is rapid subacute, and the termination is always ankylosis. The treatment should consist in placing the limb in a good position, and in counter irritants, leeches and blisters, to relieve the local tenderness. Whether fixation should be employed or not is at present undetermined, and the writer inclines to recommend gentle passive motion when no pain is caused in that way. *Trisement forcé* is not useful in this affection, but massage may be of some benefit.

ACUTE ARTHRITIS IN INFANTS.³

Mr. Thomas Smith called attention to an affection, frequently fatal, which he termed "acute arthritis of infants," consisting essentially of a pathological change

in the articular extremities of the bones. In all cases examined a considerable loss of substance in the end of one of the bones forming the joint occurred. In some of the cases the absorption proceeded from the joint surface toward the deeper parts; in others the destruction had begun in an abscess at the articular end of the bone, which burst into the joint by an opening near the margin of the articular cartilage. The disease has neither a traumatic nor a syphilitic origin. Mr. W. Marrant Baker reports two additional cases occurring in children six months and nine weeks old. In both effusion within the capsule of the knee took place (in one with suppuration), which was evacuated by incision. The result was great relief from pain, and in one case recovery, with the reestablishment of motion; in the other with marked improvement in position and strength of the limb.

ANTISEPTIC RESECTION OF JOINTS.

König, at the last Congress of German Surgeons, stated that 21.5 per cent. of the cases of resection done by him (117 in all) had become in the course of four years tuberculous, and he concluded that resection had little influence on the tuberculous diathesis, since, according to Billroth's statistics, twenty-seven per cent. of the cases with tuberculosis of the joints not operated on died. In this opinion of König Es-march concurs. But Hueter, Volkmann, and others, dispute this, and claim that there is a fallacy in these figures, as the comparison is between the lightest variety of this class of cases with the severest. Rydygier⁴ claims that the tuberculous affections of the joint occur in three classes of patients:—

- (1.) Those with general tuberculosis, with several local manifestations.
- (2.) Those with primary tuberculous foci in other organs and a secondary manifestation in the joint.
- (3.) Primary articular tuberculosis, from which there is a danger of secondary general infection.

Hence, theoretically, the sooner this focus is removed the less is the danger of generalization of the affection, but operative interference in the first two of these classes cannot be looked upon as a prophylactic measure. In affections of the third class, however, resection should be looked upon as a means of prophylaxis.

SCROFULOUS DISEASES OF JOINTS COMPLICATING PHTHISIS.

In the Transactions of the Medical Association of Georgia, Atlanta, 1880, Dr. Robert Battey reports the following case: A young man, twenty years old, presented signs of consolidation of the left lung, and in the upper part a large cavity. For nearly a year he had been suffering from a suppurating inflammation of the left knee. Amputation of the thigh was performed to relieve him of his pain. His appetite immediately returned, and in a month he became able to go out with crutches. A year later his cough had disappeared, he had grown fat, and became well enough to engage in his occupation. He remained in this condition for three years, when he suddenly died of hæmorrhage from the lungs.

The marked improvement in the patient's condition following amputation illustrates the relation between the original focus and the secondary condition as well.⁵

¹ *Pratice Chirurg. Acad. Med. a Torino*, 1879, Contradd. f. Chir., No. 19, 1880, p. 167.

² *Gaz. des Hop.*, Jan. 25, 1881.

³ *St. Bartholomew's Hospital Reports*, vol. xv., 1880.

⁴ *Deutsche Zeitschr., f. Chir.*, 1880, page 309.

⁵ *American Journal of the Medical Sciences*, April, 1881.

ACUTE PRIMARY SYNOVITIS OF THE HIP.

Three cases of this affection, hitherto regarded as rare, are reported by Dr. V. P. Gibney.¹ The course run was comparatively brief.

The writer claims that the history of synovitis differs from that of osteitis in that the invasion of the former is acute and well defined. In the early stages of osteitis there is no joint-tenderness, and the pain does not prevent the patient from walking. The reverse is, however, true in synovitis, which is also an acute affection, usually running a course of from four to ten weeks. A diagnosis will often necessarily be based on the exclusion of other affections.

If the joint is tender in synovitis the pain is referred to the obturator whenever the joint surfaces are approximated. There is no infiltration of the periarticular tissues. Sometimes an elastic fullness about the trochanter or below the groin can be perceived if there is much distention of the capsular ligament.

The patients make a good recovery, with reëstablishment of motion. The treatment consists of rest and counter irritation.

HYGIENIC TREATMENT OF RICKETS.

The Pathological Society of London devoted much time to a discussion of the etiology and pathology of rickets, and a variety of theories as to causation were brought up. The most rational of these is that of Broca, who defined rickets as the "ultimate effects of everything which interferes with the nutritive processes during the rapid growth of infancy."

The connection between syphilis and rickets, claimed by some writers, is based on the improvement in certain cases from the treatment by small doses of biiodide of mercury, but this simply illustrates that syphilis may be a cause of the perversion of nutrition, but not necessarily the only cause. English and American authorities lay more stress upon improper feeding as a principle of causation than the Germans, who consider the defect one of assimilation rather than alimentation, and who regard defective ventilation and overcrowding more injurious than faulty diet.

The prevalence of rickets on the Continent, among the poorer classes, is well known. In Milan thirteen per cent. of the children from the poorer quarters suffer from rickets. In Turin four schools have been opened, accommodating thirteen hundred children. The object is to cure the rickety condition by physical development. The children live at home, but are brought to the institutions in the morning, and are taken away at night. The time during the day is spent in instruction according to the kindergarten method. "Every available resource of gymnastics, hydropathy, and orthopædies is employed." The children are fed, and arrangements are made for them to rest during the day. Spirometric and dynamometric observations are made monthly, and the improvement in the deformity is recorded by photographs. Of one hundred and ninety-seven children admitted in one year, thirty-eight were discharged cured, and seventy-eight were greatly improved. Dr. Gamba, the physician in charge, reports that repeated exercise of the muscles aids the absorption of enlarged portions of the bones to which they are attached, and that exostoses disappear. The children admitted are between the ages of four and twelve. A somewhat similar institution exists at Milan, where a few hospital beds are furnished for cases requiring osteotomy.²

¹ New York Medical Journal, April, 1881.

² Medical Times and Gazette, March 19, 1881, p. 323.

FLAT FOOT IN INFANTS.

Volkman³ classifies flat foot occurring in young children under three heads: (1.) Congenital, dependent upon uterine pressure. (2.) A form due to too rapid change into the position of the adult foot. (3.) Rachitic flat foot, appearing sometimes before child begins to stand. (4.) Paralytic flat foot.

C. Hueter is of the opinion that the alteration of the shape of the foot from the slight supination seen in a new-born child into that seen in the adult is the result of the pressure due to the weight of the body. The axis of the astragalo-calcaneal joint is so placed that the weight of the body in walking tends to evert the foot. Volkman rejects the idea that this fact is the cause of the flat foot of children, for the reason that this eversion takes place before children learn to stand, and in the first months of life the foot may be in a position more pronated than is normally seen in adults, and he concludes that under ordinary circumstances the weight of the body in walking and standing has nothing to do with this change of shape of the foot.

In newly-born infants the bones have a different shape from that of adults, and the changes which occur during growth are independent of static laws. As an example of changes in the growth of the limb which take place in opposition to the effect from the weight of the body, the increase in the angle of the neck of the femur with the shaft may be quoted, and also the hollowing out of the arch of the foot. There is, however, a form of flat foot which has been termed "static flat foot," where, in addition to the eversion, a sinking of the arch is to be seen. This change is distinct from that which causes eversion, and which is dependent upon similar influences to those which, working in another direction, prevent in talipes varus and equino varus the partially corrected deformity from remaining without relapse if the acts of standing and walking alone be relied upon.⁴

Holl⁵ states that the deformities of the foot can be classified as follows:—

(1.) Undue development of normal prolongations of the bone. (2.) Abnormal tuberosities not of pathological origin. (3.) The same, but of pathological origin. (4.) An abnormal number of the bones of the feet. (5.) Absence or the coalition of certain bones of the feet, either as a result of a pathological change or congenital deformity. The writer reports two cases of congenital tarsal union: first, of the scaphoid with the os calcis; second, of the scaphoid with the cuneiform bone, resulting from an inflammatory process. In the former the foot was held in the position of a severe flat foot, and in the latter that of a light grade of that deformity. Later investigations⁶ lead him to believe that congenital union and malformations of the tarsal bones are more important in causing flat foot than has been supposed. Four specimens in the Vienna Anatomical Institute with congenital union of the os calcis with the scaphoid show marked deformity of the valgus variety, and others are recorded showing union of the scaphoid and the astragalus. From the specimens he has examined he concludes that a new variety of valgus must be considered, valgus e coalitione, a variety

³ Centralblatt für Chirurgie, February 12, 1881.

⁴ Vide Medical Times and Gazette, March 26, 1881, p. 349.

⁵ Beiträge zur chirurgischen Osteologie des Fusses, Archiv für klin. Chir., 1880, 25th Bd., 1st Heft, p. 211.

⁶ Zur Ätiologie des Angeborenen Plattfusses, Archiv für klin. Chir., 1880, Bd. 25, Heft 4, p. 124.

which it may be perhaps possible to recognize during life, and which is, of course, incurable.

The Report of the Orthopædic Department of St. George's Hospital by Mr. Haward publishes some interesting statistics. Sixty-five per cent. of the cases of flat foot occurred between the ages of fifteen and twenty years. Sixty-four per cent. of spontaneous lateral curvature were between the ages of fifteen and twenty years. Seventy-four per cent. of patients with genu valgum were in children between three and five, and the majority showed other signs of rickets. In a case of antero-posterior curvature of both tibia a satisfactory result was obtained by a wedge-shaped section of bone.¹

CONGENITAL MALFORMATION OF THE SPINAL COLUMN.

Mr. Willett, in the *Medico-Chirurgical Transactions*, describes this rare deformity. The dorsal spine was altered by a slight anterior with a left lateral curve; four and a half of the dorsal vertebrae were missing, five ribs on the right side and four on the left were absent, the left clavicle was out of shape, and the scapula was connected by a bridge of bone with the sixth cervical vertebra. The deformity is, in the opinion of the writer, due to an early defect in the elements forming the vertebral and lateral plates in the embryo.

This malformation was found in an adult woman who had given birth to a living child, and who died of pericardial effusion in her thirty-first year. The specimen is almost unique occurring in a person of this age, a list of specimens in the English museums giving only one other similar case in an adult, sixty-four years old.

WEAK SPINES IN YOUNG GIRLS.

Keating² calls attention to that class of spinal troubles due to strain of position, which is insidious in its onset, and therefore apt to escape attention. The series of cases he divides under two heads:—

(1.) Those young enough to go to school, where the routine is injurious to them, and where cure is to be effected by a proper division of study and recreation, including muscular exercise, good food, and fresh air.

(2.) Those who have drawn from their stock of muscular or nerve force in the development of their intellect. After freedom from the restraint of school, their time is devoted to a sedentary life or to one of undue nervous excitement. In such cases the great muscles of the back are those most called upon, and give out either from want of nutrition or excessive tension. The equilibrium which is maintained by concerted action of the muscles of each side is lost, and neuralgic pains and backache follow. In several cases the writer has noticed a slight impairment of the faradic contractility of the muscles on the convex or weaker side.

He advises as a system of treatment the daily use of the faradic current, applied to those muscles that it is proposed to strengthen, that is, on the convexity of the curve. Cold sponging, friction, massage, light gymnastic exercises, and, if the patient's strength permits, light exercise, and the application of a light support made of card board, wet and moulded to the back, and secured by a bandage, and worn at times, are to be included in the treatment.

LATERAL CURVATURE.

Dr. N. M. Shaffer,³ in discussing the vexed problem of the ætiology of lateral curvature, admitting that the primary causes are not definitely known, claims that certain facts are sufficiently established for consideration, namely: Lateral curvature develops most frequently between twelve and eighteen years, is more frequent in females than males, and occurs more commonly on the right side than the left. A "nervous," emotional, or hysterical condition frequently accompanies the affection. None of these factors are, however, always present, and simple difference in the length of the lower limbs cannot be said to be influential in causing true rotary lateral curvature. The osseous malformation which is found is probably secondary to the original lesion, and the muscular contraction seen is in no way similar to the reflex muscular spasm seen in joint affections. The distortion is probably due to disturbed muscular conditions involving impaired muscular power on one side. The muscles primarily affected are probably not the external muscles moving the spinal column, but the internal group which pass from vertebra to vertebra, and act on the column in segments. An analogue of lateral curvature is to be seen in true torticollis.

The writer makes a distinction between true rotary lateral curvature and that due to simple muscular weakness, in the latter no rotation being present. A loss of lateral flexibility, due to "intrinsic" muscular resistance, is present in true scoliosis, and also frequently a unilateral atrophy of the mamma and unusual position of the scapula. Atrophy of the mamma, however, does not occur in scoliosis below the eighth or ninth dorsal.

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¹ Vide, also, *American Journal Medical Science*, April, 1881.

² *Philadelphia Medical Times*, February 26, 1881.

³ *Medical Times and Gazette*, April 20, 1881.

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Hospital Practice and Clinical Memoranda.

GASTRORRHAGIA AND HÆMATEMESIS, WITH A CASE.

BY E. L. WARREN, M. D., MEDFORD.

HÆMORRHAGE into and vomiting blood from the stomach is a complaint or a symptom which presents many points of interest and importance.

The term hæmatemesis does not necessarily imply hæmorrhage from the stomach, nor does it always accompany such hæmorrhages, as we may have hæmatemesis from other causes without the stomach being primarily affected.

On the other hand, gastrorrhagia may occur without hæmatemesis, and the blood, instead of being vomited, be carried into the intestinal canal, and be defected in the stools. The cause of gastrorrhagia may be: (1.) Direct injury to the gastric vessels by means of wounds, such as punctures by sharp bodies which have been swallowed, or by means of corrosive substances. (2.) By disease of the walls of vessels, as in varices, aneurisms of large arteries, which are in the neighborhood and which become adherent to the walls of the stomach and perforate them. (3.) Venous stasis, leading to a passing through of the red corpuscles or to rupture of the capillaries, with extravasation of blood upon the surface of the organ, causing obstruction of portal circulation; hence we get hæmorrhage from the stomach from cirrhosis of the liver. Gastric hæmorrhage

may occur in cases of hæmorrhagic diathesis, in connection with an excess of blood, and a diminished proportion of its fibrin. (4.) Gastrorrhagia may occur in scorbutus, yellow fever, etc., due, according to Professor Leube, Ziemssen's *Cyclopadia*, Volume VII., "to the qualitative alterations of the blood itself, without any secondary mal-nutrition of the wall of the vessel."

Idiopathic hæmatemesis, independent of any change of texture, is considered rare, and not in any way analogous to epistaxis so common in children.

Vicarious hæmatemesis, occurring with other constitutional hæmorrhages or as vicarious menstruation, is quite common. The female sex seems to suffer from hæmatemesis more frequently than the male. The proportion, according to Handfield Jones, is seventy-four per cent. females to twenty-six per cent. males. It may occur at any age. It sometimes seems to take place spontaneously, but really is due to some exciting cause, which in itself is insufficient to produce hæmorrhage in a sound gastric membrane, but able to elicit a rupture when any tendency to hæmorrhage already exists.

Under this head can be mentioned mental excitement, strains, concussions of the body, and over distensions of the stomach.

When a large enough quantity of blood is poured into the stomach, from whatever cause, it gives rise to a nauseating effect sufficient to produce vomiting, and is thrown up almost always in considerable quantity, and of a dark color, while that which is coughed up is most frequently bright. The color is changed by the action of the gastric juice. The hæmoglobin is changed to hæmatin. After the loss of blood has been considerable the patient presents the usual symptoms of anæmia, pallor, coolness of extremities, giddiness, and fainting.

Although a correct diagnosis can readily be made out when the amount of vomitus is quite profuse, especially when one has an opportunity of witnessing the attack, yet in some cases it will be quite difficult to ascertain whether the blood was vomited or coughed up, whether it came direct from the stomach or the adjacent parts.

When called, therefore, to the bedside of a patient, it is of importance to decide whether the reddish-black fluid vomited is really blood. A microscopic examination is sufficient usually to remove all doubts by the discovery of blood globules. In a great majority of cases it is merely symptomatic, and the nature and seat of the disease, of which the bleeding is a symptom, may be most commonly determined.

Of the prognosis, Professor Leube says, "a comparatively large number of patients with hæmatemesis recover from the most hopeless anæmic states, and we should not therefore despair of saving the patient until death has actually taken place. Still the loss of blood is, under all circumstances, a depressing factor, and it should never be forgotten that one of the chief dangers of hæmatemesis arises from the tendency of the fundamental disease to induce a recurrence of the attack."

"Hæmorrhage produced by the erosion of large vessels is of course especially dangerous, while the vicarious hæmorrhages, dependent upon capillary congestion, are usually of a harmless character."

The treatment to be adopted, after considering the many different morbid conditions upon which it may depend, is to be directed against the disease of which

the hamatemesis is a symptom, and not against the symptom itself. If it is occasioned by poisoning, the proper antidotes against further injury to the blood-vessels should be used. If from cirrhosis of the liver, local depletion and cathartics may be of service. If from chlorosis, give preparations of iron and the hygienic treatment of an anti-scorbutic nature. Anything that has a tendency to increase the force of the heart's action, and heighten the blood pressure in the vessels of the stomach, should be strictly avoided, and therefore the most perfect rest in the recumbent position required.

The intense alarm of the patient caused by the occurrence of vomiting blood should be allayed by assuring words, and care should be taken to avoid any local irritation of the mucous membrane of the stomach by hot drinks, highly seasoned articles of food, or coarse diet. The safest plan is to give only bland liquid nourishment.

The question may naturally arise whether we have any remedies which will, with certainty, control dangerous hemorrhages. If so which one is to be chosen as giving the most promise of rendering effectual aid in case of emergency.

The best hamostatic, and one of the most efficacious, is cold, administered in the form of the ice pill, in connection with the external application of ice to the epigastrium. The ice pill allays extreme thirst, and helps to stop the tendency to vomit.

In the hemorrhagic diathesis, when we may suspect a diminished proportion of fibrin, any known remedy which will help to restore the contractile action of the capillaries already weakened, will be of great service.

The following case will serve to illustrate some points of interest in connection with this brief review of the aetiology, symptomatology, diagnosis, and treatment of gastrorrhagia and hamatemesis:—

Miss C. B., aged twenty-five, single, weight one hundred and twenty-five, living with her parents, who are both healthy. She has been a public school teacher for four or five years, and is now a teacher; is accustomed to sufficient amount of out-door exercise, as she walks from her home to school, three quarters of a mile away, daily; has no hereditary predisposition to any disease; always considered herself healthy in every respect.

She never complained of any illness of any kind worth mentioning, till some time in October last, when she was troubled with what she thought dyspepsia, and took the usual remedies, but without any benefit. Previous to, and whilst complaining of dyspepsia she had been taking lessons in singing by the Abdominal Method or Elocution Breathing. She took her lessons weekly, and of one hour's duration. Soon after taking a few lessons she felt a severe distress at her stomach, "a deathly feeling" as she termed it, and said, that the singing made her dyspepsia worse, and, in fact, made her feel so badly as to incapacitate her at times from finishing her lesson.

After a month or so, she discontinued taking lessons for about the same length of time.

She again commenced them, and after each lesson the return of the same distressed feeling was experienced. The last lesson was taken February 12, 1881. Sunday evening, February 13th, just before retiring, she felt a very great distress, and soon vomited a pint or more of dark bloody fluid. Early Monday morning, February 14th, vomited again, about the same quantity

and of the same character. She went to school at the usual time, and while there again vomited. There was no recurrence of hæmorrhage until the afternoon of Wednesday, February 16th, when she again vomited perhaps a quart of a similar bloody fluid, at which time I was called and saw her just after she had ceased; from the loss of blood, and the extreme fright consequent upon the same, found her almost pulseless, with cold extremities, blanched lips and cheeks, and almost in a state of collapse.

The treatment consisted in quieting her fears as far as possible. Mustard was applied to epigastrium, hot water to feet, and fl. ext. ergot and pyro-gallic acid in muc. g. acacia were to be given, and repeated directly after vomiting. The recumbent position was strictly enjoined. I saw her again in the evening of the same day, and then learned the history of the case as above described. I then carefully examined the case in detail; and in answer to strict inquiries in regard to her previous health she informed me that she never had been sick enough to call a physician since childhood, had no trouble with the functions of menstruation (was having her menses at the time), was not subject to epistaxis, never had any trouble with the liver or spleen, heart or lungs, never was subject to a cough except for a slight cold. She never had had any malarial trouble, and in fact had always considered herself well; and as far as an examination of all the organs, above referred to went, they seemed to be in a perfectly normal condition. The diagnosis of the case was not clear, and I felt in doubt as to the cause of the hæmorrhage till she informed me, rather inadvertently, that she had been taking lessons in the new mode of singing. The true cause of the trouble at once seemed more apparent, and in the absence of all other known reasons or recognized causes I was disposed to adopt the opinion that the hæmorrhage resulted from the injurious effect of the singing.

This case is most certainly not devoid of interest to the profession and to the community, occurring, as it does, so soon after the cases in the practice of Dr. Clifton E. Wing, reported in the Boston Medical and Surgical Journal, November 25, 1881. The cause seems the same, although the results differ. Dr. S. W. Langmaid, in answer to inquiries made by Dr. Wing, said, "I have no doubt that injuries such as you describe have been produced by attempts at abdominal (diaphragmatic) respiration. I have known the digestive functions disturbed, pain and soreness in various parts of the abdomen produced," etc.

I will not quote further; suffice it to say, that in the opinion of the above named physicians injurious pressure may come upon the internal organs, causing various forms of trouble, especially in females, as the result of this new method of singing. Now in carefully investigated cases other effects of like character may be found, and this should render the subject worthy the attention of the family physician.

February 17th. Patient rested during the night. Pulse 103. Tongue slightly coated. Some thirst. No appetite. To continue treatment of ergot and pyro-gallic acid.

February 19th. Had a comparatively comfortable night. To be kept perfectly still and free from excitement.

February 20th. Recurrence of hæmorrhage again this morning. Pulse 100, feeble. Tongue coated in centre, very thirsty, pale, and anæmic, extremities

warm. Vomited about a pint of bloody fluid, dark colored, not coagulated.

Dr. Hodgdon, of Arlington, saw patient with me in consultation at twelve o'clock. After a very careful examination he, in the absence of all negative symptoms, fully acceded with me in my diagnosis of the case, although at first rather in doubt as to the cause, which in my opinion was the direct factor in bringing on the hæmorrhage. Dr. Hodgdon took a specimen of the bloody fluid for examination by the microscope.

February 21st. General appearance favorable. More color in face. Pulse 106. Temperature 99° F. Tongue slightly coated, but moist. Thirst gone. Slept quietly all night. Dejection from the bowels.

February 22d. Passed a comfortable night. Temperature normal. Tongue moist, and no distress or pain.

February 23d. Is feeling better this morning. More color in face and lips. Pulse 100. Tongue nearly clean.

February 24th. Had a good night. Says she feels better than for some time. Pulse 90. Tongue clean. Decidedly more color in face.

In the evening at about seven o'clock, while being assisted to an upright position upon the stool felt "a death-like" sickness, lost consciousness and fell backwards. In about twenty minutes after getting again in bed she had a return of the vomiting, in quantity perhaps a half pint, and as nearly as I could judge half blood, of a bright red color, and of fresh appearance. I saw her about eight o'clock, and during visit she vomited the second time, less in quantity, character of vomitus the same. At about nine o'clock she vomited again, in quantity about the same but of a dark color.

No return of hæmorrhage during the night, and at the morning visit, February 25th, I found her quite comfortable, she rested somewhat, but the thought of again bleeding had prevented her from enjoying quiet sleep. Pulse 100. Temperature 99° F.

Treatment, ice to epigastrium.

Ice pills to be taken quite often, pulv. opii and ipecac at bed-time, and to continue ergot and acid, especially after vomiting.

February 26th. No return of vomiting. Slept during night. Pulse 106. Temperature 100° F. No pain or distress.

February 27th. Pulse 100. Temperature 99° F. Tongue slightly coated. "Says she has a very disagreeable sweetish taste in mouth." To have tr. chl. ferri gtts. xv. in sat. sol. cld. potass, 5ss three times per day, and to continue opii and ipecac, omit ergot and acid.

Microscopical examination by Dr. Hodgdon of the fluid vomited gave conclusive evidence of blood globules, the relative proportion of red and white was maintained.

February 28th. Pulse 92. Temperature 99° F. Had a quiet night and is feeling quite well. Some appetite for such things as are forbidden.

March 1st. She has now passed a week, and no return of hæmorrhage; is much better. Pulse 92. Tongue clean.

March 3d. Slept well all night and is anxious to get up.

After-treatment to consist in guarding against the recurrence of hæmorrhage. To spare the stomach, by using only easily digested articles of food, and a gradual and cautious return to her usual diet.

March 5th. Doing well, and feeling a great desire

to get up. Pulse 88. Natural appetite returning. Bowels moved by injection.

March 9th. Sat up to day about twenty minutes without any bad effects, except feeling a little dizzy. Taking some food, and digests it without pain or distress.

March 11th. Sat up yesterday and to-day, about twenty minutes each time, but feeling rather weak. To have quinae sulph., grs. ii., two or three times per day.

March 13th. Sat up to-day three hours, and is feeling quite well and will soon be convalescent.

A GALLSTONE.

BY WILLIAM HERBERT ROLLINS.

PATIENT a previously healthy woman of sixty years. From August 12th to August 19th "sick headache" at intervals.

August 19th. Took two Schenk's pills. There was a slight operation, the last till August 27th.

August 20th. Took one Schenk's pill.

August 21st. Remained in bed, which she did not leave for fifteen days. Complained of severe paroxysmal pain above the navel; the pain continuing during the day and night.

August 23d. Took ten grammes of castor oil and an injection of soap and water. Vomiting began during the morning following each paroxysm of pain and continued at intervals of ten to fifteen minutes until August 24th, at nine p. m.

August 24th. The patient was seen about five p. m. Condition at this time: Face haggard, she was lying on her back, thighs flexed, and legs drawn up, but no position was long maintained, though the thighs were pretty constantly flexed. Abdomen slightly sensitive and a little distended. Tongue, dark and dry. Pulse 115, irregularly intermittent. Temperature 104° F. Paroxysms of pain, lasting from three to five minutes, came on at intervals of from seven to ten minutes, followed by vomiting of yellowish fetid fluid. Chloroform was given at the approach of each pain till nine p. m., then twenty-five milligrammes of sulphate of morphia were injected into the arm, the injection being repeated four times during the night. Vomiting and pain, which had grown less since the first administration of chloroform, ceased at ten p. m. to return no more.

August 26th. As the patient could not sleep an opiate was given at intervals till September 1st. To avoid the constipating action of morphia on the bowels narcia was used in twenty milligramme doses. It was rubbed dry upon the tongue to prevent deranging the stomach.

August 27th. An involuntary discharge of black liquid and putrid feces. The first operation in eight days. Nothing was recognized but some pieces of peach skin. Similar discharges continued at intervals during the following day.

August 29th. On this night a discharge of greater consistency occurred. In it was found a hard lobulated egg-shaped body measuring 4.40 by 3.40 centimetres, and weighing one hour after it was passed 11.950 grammes.

The body was easily divided by a saw. There was a nucleus one centimetre in diameter, of a gray-brown color. A light yellow band surrounded this, sending

radiating prolongations to the surface of the mass, through the enveloping dark brown material. Ether dissolved most of the sawdust. The solution was without color. It yielded colorless tabular crystals with angles of $100^{\circ} 30''$ and $79^{\circ} 30''$.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

APRIL 25, 1881. DR. T. B. CURTIS presided.

CHRONIC ENDARTERITIS OF THE AORTA, WITH UNUSUAL COURSE AND CONSEQUENCES.

DR. DRAPER exhibited the aortic arch from the body of a woman fifty-five years old, and presented brief notes of the clinical history of the case. Symptoms referable to the disease represented by the specimen began to develop in 1875, when the patient first had severe shooting pains in the left side of the neck, and between her shoulders; these were attended with dyspnoea, sometimes amounting to orthopnoea, symptoms which persisted during her life. At intervals of two or three months, between 1875 and 1879, she had attacks, which she described as "spells coming without warning, seeming as if a wave struck her on the back, rolled up over her shoulder, and broke as it crossed her head." During these nervous paroxysms her urine became dark-colored, and micturition was painful; the attacks ended in insensibility, the patient falling wherever she might happen to be.

In 1876, her attending physician, Dr. W. H. Campbell, of Roxbury, observed a slight fullness above and below the sternal end of the left clavicle; he detected some pulsation at this point, and a sound which he interpreted as an aneurismal bruit. At this time, also, there was a very perceptible difference between the two radial arteries, the impulse in the right being normal, that in the left being soft and small. Nothing wrong was observed about the heart.

In August, 1879, the patient was found, one evening, in an unconscious condition on the street, and was thereupon admitted to the City Hospital, where she was under Dr. Draper's observation for six weeks. At this time the prominence over the clavicle was not apparent. The left radial pulse was relatively much weaker than the right, and at times was wholly obliterated. The left carotid pulse was also scarcely perceptible. The voice was tremulous, and at times husky. The pupils were equal, although the patient stated that she had noticed a dilatation of the left pupil coincidently with the attacks of pain and dyspnoea. A musical murmur was heard above the middle of the left clavicle over a limited area. Nothing wrong was noticed about the heart. Under treatment the patient grew stronger, and her general condition improved; the oedema of the feet and ankles, somewhat annoying at the time of admission, subsided; the souffle above the clavicle was less distinct. Pain in the left arm developed during the latter part of her stay, but there was no change in the appearance of the arm. While a patient at the hospital she had no recurrence of the neurotic attack.

During the eighteen months after her discharge from the hospital, and up to a few days before her

death, she was able to live in comparative comfort most of the time. An occasional exacerbation of her previous symptoms occurred. Dr. Campbell noticed in the autumn of 1879 that the musical sound had wholly disappeared from above the clavicle, and the left radial pulse was lost. The pain in the arm continued. A fortnight before her death she had an attack simulating angina pectoris. She was found dead in her bed one morning, having retired in usual health the night previous.

At the autopsy the chief interest was found to centre in the heart and arch of the aorta. The heart was hypertrophied to a marked degree, and there was a moderate amount of dilatation of the left ventricle. The muscular tissue was of good color and firmness. All the valves were normal except the aortic, whose semi-lunar folds were thickened, retracted, and irregular, constituting a stenosis as well as incompetence of the aortic opening. The coronary arteries were healthy. The aorta throughout its extent was thickened, roughened, and reduced in calibre. Thin plates of calcareous matter were imbedded at intervals in the intima. But the most interesting feature was the fact that in the process of inflammation and consequent alteration in the coats of the artery, the orifice of the left common carotid had become wholly occluded by a semi-transparent tissue thrown across it, and presenting on the inner (aortic) side a small funnel-shaped depression, while the orifice of the left subclavian was in a similar manner almost obliterated, the opening for the passage of blood being reduced to a mere point, admitting a fine probe. Both the arteries (carotid and subclavian) above this obstruction were of normal size, and their walls were, apparently, a little thinner than usual. The innominate, on the other hand, was dilated so as to admit the tip of the index finger to the distance of nearly an inch; its intima in this dilated portion shared in the inflammatory process of the aorta. Above this part the innominate was normal. Other organs and regions of the body presented nothing noteworthy so far as they were examined. The head was not opened.

HIRSUTIES.

DR. WHITE made some remarks on the use of electrolysis in the treatment of hirsuties, and exhibited a battery adapted for this purpose. Vide page 412 of the JOURNAL.

LITHOTRITY.

DR. FRANCIS WILLIAMS, by invitation, described and exhibited a new evacuator for the bladder, the report of which will appear in a later number of the JOURNAL.

DR. BOLLES thought that the valve, which seemed to him similar in principle to that of the "flute-key" valve of a stomach pump, might be used with advantage in connection with a siphon for filling, emptying, or washing the stomach without the usual stomach-pump syringe. Its compactness and simplicity would commend it for that purpose, and the readiness with which the current can be reversed makes it more desirable than the siphon alone.

—"Three or four hours daily in the open air regardless of weather, light meals, and plenty of sleep," is the recipe for good health which Bancroft, the venerable historian, freely offers to the public.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

At a stated meeting, April 25th, Dr. Clinton Wagner read a paper on *Habitual Mouth-Breathing: Its Causes, Effects, and Treatment*. He first called attention to the fact that the habit of mouth-breathing, with its attendant evils, was confined to civilized nations, and entirely unknown among the savage races of mankind. Thus, Catlin had found that in one hundred and fifty tribes of North American Indians there was no deafness or disease of the air-passages, and after a careful study of the subject had arrived at the conclusion that this was attributable to the fact that nasal breathing was universally practiced among them. This experience was confirmed by Dr. Wagner's own more limited observations when he was an army surgeon in Idaho. Near the post where he was stationed was a large Indian village, the inhabitants of which were nominally under his professional care, and he had frequent opportunities for noticing the entire exemption of the community from ear, nose, and throat disease. Yet the sanitary conditions in which these people lived were, as a rule, of the most unfavorable character, and there could be no doubt that this immunity was due solely to the total absence of mouth-breathing among them.

The causes of this unfortunate habit, so prevalent in civilized communities, were to be looked for in the nose, mouth, and throat. In regard to the conditions giving rise to it, it had formerly been impossible to arrive at a correct diagnosis in many instances; but with the rhinoscope and other modern appliances at our command, this was no longer the case. Among the nasal causes was mentioned occlusion of the inferior nares, particularly by a deviation of the septum, which might be either congenital or acquired. Sometimes the septum was twisted like the letter S, a condition apt to produce stenosis on both sides. Other sources of mouth-breathing were found in the presence of nasal polypi, mixomata, fibromata, adenomata, exostoses, and false membranes resulting from syphilitic or strumous ulcerations. In some individuals there was a congenital imperforate condition of the nares, and in others there was a general thickening and hypertrophy of the mucous membrane. It was not necessary, however, that the nares should be completely closed. When any of the above pathological conditions existed, even a slight cold in the head would often render nasal breathing exceedingly difficult, and if this were to recur from time to time the pernicious habit of mouth-breathing would gradually be acquired.

Of mouth causes chronically enlarged tonsils constituted the most common. Among the others enumerated were tumors of the soft palate and pharynx, and also elongated uvula. If the latter was present, the patient would soon find by experience that the disagreeable tickling and irritation caused by it were relieved to a great extent by opening the mouth, which always caused more or less retraction of the velum, and with it of the uvula. Irregular, uneven, and imperfect teeth also sometimes give rise to the habit of mouth-breathing.

As to the effects produced by it, they could be at once recognized in any one who had been addicted to it for any considerable time. Among the characteristics plainly stamped upon the countenance of such a one are the retracted lips, the protruding teeth, the

open mouth with the peculiar wrinkles surrounding it, and the silly and almost idiotic expression which the observer could at once recognize. The law of compensation did not apply to the nose as to other organs. Thus, if one eye or one ear were impaired, the sensitiveness of the other became increased, while if one arm was amputated the strength and usefulness of the other was augmented; but the closure of the meatus on one side of the nose did not cause the other one to expand. On the contrary, this one also was apt to become diminished in size. The sense of smell became greatly impaired or was altogether lost, while the whole contour of the nose was changed. The sense of hearing was more or less affected, the relaxation of the muscles controlling the mouth of the Eustachian tube, leaving this continually open; and the trouble varied in different cases from slight to total deafness.

The effects upon the pharynx were readily recognized. The constant action upon the mucous membrane of cold air, which was very apt to be loaded with impurities, resulted in follicular pharyngitis or pharyngitis sicca, one of the most distressing of all throat affections. The patient was forever making efforts to dislodge the hard, dry, tenacious mucus, and so common was this trouble that a continual hawking saluted our ears, whether we were in the cars or at the social gathering, the church or the theatre. Chronic catarrhal laryngitis was also a common result of mouth-breathing; and when a strumous diathesis was present tubercular laryngitis was almost certain to follow. Snoring, too, was due to it, this habit being unknown among those who breathed through the nose.

The effects of mouth-breathing upon the general constitution were very serious, and in young subjects it was apt to result in the malformation of the thorax known as "pigeon-breast," and in imperfect oxygenation of the blood and faulty nutrition. Again, asthma might be produced by closure of the nasal passages from any cause, and nurslings suffering from coryza are sometimes subject to asthmatic attacks during sleep. In some cases, indeed, the tongue had been swallowed under these circumstances, and death had resulted from asphyxia.

Dr. Wagner then went on to speak of the treatment, and said that the local cause was first to be sought for in any case, after which such operation should be performed or topical medication applied as was necessary to remove it. After referring to the operative procedures for correcting the shape of a deviated septum and removing exostoses, polypi, and other forms of tumor, he advocated very strongly the use of dilatation by means of metallic sounds for stenosis of the lower meati from hypertrophy of the mucous membrane over the inferior turbinated bones. In this plan of treatment, which he had found very successful, he had been guided by the same principles which had proved of service in urethral surgery. At first the passage of the instrument proved quite painful in some cases, but not more so than the introduction of the sound into the bladder often proved. This hyperæsthesia passed off after a few applications, however, and the patient generally derived so much relief from the procedure that he was quite willing to have it repeated as often as was necessary. The dilators employed varied in size from that of an ordinary pocket-case probe to that of a No. 6 or 8 urethral sound, and weeks, and sometimes months, were required for the process. For the first week it was best to introduce the instru-

ment daily, but afterwards less often. Patients could also be instructed to practice the dilatation themselves in any case where this was desirable. In addition it was often advisable to make the following application to the mucous membrane:—

R. Iodinii	gr. ij.
Potass. iodidi	gr. iv.
Zinci iodidi	gr. x.
Aque	℥. ʒi.

In the above formula the chloride of zinc (five grains to the ounce) could sometimes be substituted with advantage for the iodide. Where the tissue was excessively hypertrophied the galvano-cautery was recommended.

If the mouth-breathing was due to enlarged tonsils, excision was to be regarded as the only satisfactory remedy, and Dr. Wagner stated that he never made topical applications in such cases except under protest, when urgent objection was made to the use of the knife. The operation, if performed with the guillotine, was very simple, and, in his opinion, wholly devoid of danger. When infants and very young children breathed through the mouth instead of the nose, an examination should be made to find out what the difficulty was. Mothers and nurses, the most careful to keep every other part of the child scrupulously clean, almost universally neglected the nose; and it was recommended that the noses of infants should be cleansed by means of a small syringe and warm water, or a small camel's hair brush. A little vaseline applied at night would prevent hardening of the nasal secretions until the child was old enough to learn to snuff up water with the nostrils from the hand. If the mouth was found open during sleep the lips should be gently pressed together, and all children at an early age should be taught the vital importance of always breathing through the nose instead of the mouth.

Dr. Wagner's paper was discussed by Dr. Andrew H. Smith and others, after which Dr. A. D. Rockwell read a paper entitled *Progressive Locomotor Ataxia Differentiated from Functional Conditions which simulate it*.

Recent Literature.

Students' Aid Series. Aids to Diagnosis. Part I. Semiology. By J. MILNER FOTHERGILL, M. R. C. P. London. 1881. *Part II. Physical.* By J. C. THOROWGOOD, M. D., M. R. C. P. New York: G. P. Putnam's Sons. 1881.

These are two very neat little primers of unusually attractive external appearance. They are primers intended for the medical student, not for the public. In Part I., or *Semeiology*, Dr. Fothergill has essayed to put in a compact form the signs or symptoms which are noted by the eye before a physical examination of the patient is made, and under the same heading are discussed the pulse, the temperature, and the examination of the urine. The author has succeeded in doing this cleverly and entertainingly, and on the whole very successfully.

There can be but one opinion of the importance of this part of medical education, and of the value to the practitioner of the acquisition of an *opticus eruditus*. No one becomes more entirely conscious of this than the physician to out-patients of a hospital in a large city. Though the importance of semeiology is still

recognized in the abstract, it is practically less and less cultivated since the introduction of so many new instruments of precision.

The old-fashioned physician and the country physician of to-day even, with their five senses educated to the highest point and well alive, will often reach conclusions in regard to a given patient which the ophthalmoscope, the sphygmograph, etc., will arrive at with scarcely greater accuracy and with much expenditure of labor and time. The danger, of course, lies in the temptation to "snap" diagnoses and to the exaggeration of certain signs, of which Dr. Fothergill's little compendium affords apt illustrations. Thus the student must be on his guard not to take him too seriously when he reads, under the title *Forehead*: "In some cases the forehead carries with it a moral significance. There is the broad, eburnated forehead, the forehead Jeremiah recognized when he said, 'Thou hast a whore's forehead, thou refusedst to be ashamed.' The woman with this forehead will deny pregnancy with the most unblushing effrontery, and is utterly untruthful when anything connected with morals is involved." And again, under the title *Chin*: "A prominent chin goes with the full underlip and the light morals." Again, under the title *The Ears*: "A wrinkled ear lobe, with a face seamed with wrinkles, usually goes with extensive but very chronic visceral cirrhosis." Under the title *Hands* we find: "Where there are black, sodden 'hang-nails' on the fingers of girls they tell of illicit practices, and so are very instructive. Especially is this the case where there is a cold, wet palm," etc., etc. A too literal interpretation of such passages would, of course, quickly get the student or the young physician into considerable trouble. The little book, as a whole, if followed prudently, contains many serviceable hints, and it is a good attempt to do what in future may be still better done.

The companion primer, on the principles of physical diagnosis, explains in sixty 16mo pages the usual methods practiced for the investigation and diagnosis of diseased states of organs.

Photographic Illustrations of Cutaneous Syphilis. By GEORGE HENRY FOX, A. M., M. D. Forty-eight plates from life. Colored by hand. New York: E. B. Treat, No. 757 Broadway.

The seventh, eighth, and ninth fasciculi of Dr. Fox's atlas are received. We appreciate the author's energy, we wish him well personally, we emphasize the necessity of such works, and we regret the slight measure of success attending the present one. The three parts just issued are inferior to their predecessors in the character of the negatives, and suggest that the stock is running low. The experience gained by the author in the publication of colored artotypes should forbid also the issuing of such half-finished work as this in question. There has been too much good chromolithographing done in this line to allow of contentment with vague and blurred pictures from any source. No. 7 represents tubercular syphiloderma under its simple, ulcerative, squamous, and crustaceous forms. The first is passable, but uncolored, the second is vague as the shades of Ossian's heroes, while its companion piece resembles a circinate erythema as much as it does a syphiloderma; the following plate is good, characteristic, and unmistakable; the concluding one represents the individual lesion well, but everywhere subject and

background are almost smeared, as it were, together. Nothing is clean cut, and even the tuberculo-squamous syphiloderm of the breast is obscured by the "natural quick-set, thick-set hairy cover" of its bearer. As a specimen of hirsuties and folliculitis he is certainly remarkable. No. 8 portrays cases of tubercular, suppurative, ulcerative, and pustulo-crustaceous syphilodermata, and one of scrofuloderma. These, though the artist does not represent loss of substance naturally, are all good, especially the pustulo-crustaceous, which is excellent. There are no black backgrounds here, and the plates gain immensely by their absence. No. 9 gives four cases of syphiloderma gummatusum: the first localized and single and good, the second diffused and pretty good, the subject blurred, the background bad; the third dubious, and suggesting fistulae from necrosis as much as gummata; picture, as a whole, cheap looking; the fourth and last plate represents a rubicund and jovial face of Shakespeare, situated like the old "man of the mountain," upon the knee of a lady evidently addicted to scrubbing floors. We shall not deny that the condition represented is pathologically gummatus, we accept Dr. Fox's statement, of course, but certainly, as far as appearances are concerned, it seems as if a better example of gummous syphiloderma might have been selected.

A word of praise here for Dr. Fox's earnest efforts in the direction of an improved nomenclature in syphilis. He divides the syphilodermata into, practically, two classes: (1) the early disseminate and symmetrical eruptions; (2) the later and non-symmetrical ones. The early he considers as erythematous, papular, pustular; the late as tubercular, pustulo-crustaceous, gummous. The vesicular eruption, very rare, he would place in Class 1. The squamous would be an early scaling papule, or a chronic, scaling, ill-developed tubercle. Under pustulo-crustaceous he includes bulbous eruptions, ecthymas, rupia, etc. All of the eruptions of Class 2 may, of course, be modified, and appear ulcerated or suppurative. Now, this is at all events an attempt at a better system of classification than the lesional one of Willan and Biett, which has been long outgrown. Most certainly, also, "too much stress is laid upon primary lesions."

The Metric System in Medicine, etc. By OSCAR OLD-
BERG, Pharm. D., Medical Purveyor, U. S. M. H. S.,
etc. Philadelphia: P. Blakiston. 1881.

In the work before us Professor Oldberg has attempted to present an easy transition from the use of the duodecimal to the decimal system of weights and measures. We cannot agree with him that the way can be made easier by following his plan, which consists of the employment of "fluigram" for cubic centimetres, "dime" for decigramme, and "cent" for centigramme, and "mill" for milligramme. It would seem in our judgment that the great advantage of the metrical system is for all nations to use the same name and symbols and figures, to represent uniformity in the employment of terms of weight and measure.

Some of our readers may be surprised to learn on page 15 that the Hon. J. K. Upton, Assistant Secretary of the Treasury, says in the concluding paragraphs of his report: "It should be borne in mind that the only legalized system of weights and measures in this country to-day is the metric system, and that this sys-

tem is the only one we possess in harmony with that of any country." We are not surprised that physicians hesitate to use the metric system in prescription writing, if they are compelled to "learn the equivalents of the units of either system in the units of the other by heart; to apply convenient rules of conversion, verifying the results by reliable tables; to use a posological table in which the doses are given in terms of both systems, thus enabling the physician to verify the metric dose by direct comparison with that in apothecaries' weights and measures after correcting or modifying the latter dose by the light of his experience and the requirements of the case in hand; and finally, to examine already prepared metric prescriptions such as afford abundant illustrations of familiar practice."

This may do well enough for the practitioner who carries fifty prescriptions in mind ready fitted for any bedside practice, but it will probably stagger him to go through this calculus, until he has learned them all by heart; and how would it be with the practitioner who applies his therapeutical knowledge to his individual practice, formulating his prescription from a single dose which he brings to bear to combat the symptoms before him? His therapeutical and physiological knowledge will be put to rout before this mathematical calculation suggested by our author.

In our judgment the only way to use the metric system in medicine is to learn the single doses in that system, and the posological table arranged by Professor Oldberg is valuable for this purpose, and is probably the best part of his book. However, if any physician cares to translate his duodecimal prescription into the metric system he can readily do so by applying the eleven rules on pages 20 and 21; for our part we should prefer to apply these rules to the doses we have already learned in grains and drams, and to build up each prescription from the single dose. The seventy-five pages of prescriptions in both apothecaries' and metric weights are interesting curiosities, and it would not take many days to learn these by heart, but we shall leave this trouble to our readers.

The Sympathetic Nerve; Its Relations to Disease. By
C. V. CHARIX, M. D., House Physician Bellevue
Hospital. Providence, 1881. Pp. 92.

This is the Fisk Fund Prize Essay for 1880, and is a very creditable epitome or résumé of what is known upon the subject. There are two or three characteristics which may be noticed. The first is brevity. No unnecessary words are used, indeed, the brevity is carried so far that it requires very close attention to follow the author understandingly. When it is considered that a few years since Vulpius published two volumes, of about six or seven hundred pages each, upon the vaso-motor nerves, this brevity will be better appreciated.

Another characteristic is completeness. The sympathetic is considered in nearly all its relations; the anatomy is very briefly reviewed, then its physiology is given in more detail, and, finally, the pathology of lesions of the sympathetic is treated under appropriate headings. Not only is the completeness of the work shown by the fact that almost every lesion is briefly mentioned, but there has been an exhaustive study of authorities, and the opinions of different observers have been sifted, and are given in very few words.

Again, not the slightest pretense is made to raise

the book above what it really is, a brief, compact, and very useful compendium of our present knowledge in regard to the sympathetic. No ill formed and half-digested theories of the author are advanced to lend to the book an air of originality, but the author modestly keeps himself in the background. For these reasons the book is deserving of commendation, and any one desiring to know what is the present state of information on almost any question in regard to the sympathetic will be likely to find it stated intelligibly in a few words.

The author mentions an experiment in regard to the condition of the blood-vessels during sleep, which is of interest. "Hearing it suggested that if sleep is dependent on cerebral anæmia, any nitrite, which promotes the circulation in the brain, should awaken sleeping persons, I tried it one evening. With the aid of my nurse I very carefully applied a few drops of the drug to the nostrils of ten or twelve patients who were sound asleep, and in every case they awoke in less than one, or at most two, minutes. This was repeated on several evenings, and on different patients, but with a uniform result. Lest it might be the odor of the drug, or its irritation of the fifth nerve, or my presence near the bed, I tried, on other occasions, bisulphide of carbon and oil of peppermint, but succeeded in awakening not a third of those on whom they were employed."

From the closing sentences in regard to trophic nerves it would seem that Dr. Chapin does not accept the view that there are such nerves distinct from vasomotor and sensory nerves.

So condensed is this book, and it is so almost entirely a record of experiments and opinions of others than the author, it is not possible to give an extended review of the facts and theories presented. So far as a careful reading can discover it is correct, and the authors quoted or referred to are not misrepresented. As references are given any one can satisfy himself on this point in regard to any subject in which he is interested.

The Student's Guide to Medical Case-Taking. By FRANCIS WARNER, M. D. Lond., etc. Philadelphia: Presley Blakiston. 1881.

The author of this little book, a 12mo of two hundred pages, held during three years the office of medical registrar to the London Hospital. Impressed, whilst holding that office, with the need of the student of some guide as to what to observe in case-taking, and how to arrange his observations methodically, he offers this volume for the use of the student at the bedside. It is well arranged, and will be found convenient.

A Manual of the Practice of Medicine, designed for the Use of Students and the General Practitioner. By HENRY C. MOTE, M. D. New York. 1881.

This book comprises 150 12mo pages, and treats of every disease which is likely to come under the notice of the practitioner. The author's object has been to present to the student and to the busy practitioner a book in which a single point may be easily looked up, and in which the morbid anatomy, ætiology, symptoms, and treatment of every disease are so arranged that any one disease can be quickly reviewed.

The student will cram, and some practitioners will be very busy, hence books of this class will be pub-

lished. The present volume is certainly very condensed. At the end are to be found about four hundred prescriptions arranged in alphabetical order, according to their therapeutical uses.

A Guide to the Clinical Examination of Patients and the Diagnosis of Disease. By RICHARD HAGEN, M. D., Privat docent to the University of Leipzig. Translated from the second revised and enlarged edition by G. E. GRAMM, M. D. Philadelphia and New York: Boericke and Tafel.

The excuse that there is an absolute necessity for more students' and busy practitioners' guides, aids, reference books, *vade mecum*s, etc., etc., will scarcely avail the writer, translator, or publisher much as a passport to support and patronage. The main difficulty of these two much-considered classes of the medical fraternity must be at present to make a choice. The task of aiding them in this we find not only difficult but invidious. We think they will not go far wrong if they provide themselves with one book compiled by an American, one by an English, and one by a German author. The present volume might represent the last mentioned. It, too, has its good points. The second and last edition of the original was published nearly ten years ago, but that is not a matter of great consequence in a book of this kind.

The Student's Manual of Histology, for the Use of Students, Practitioners, and Microscopists. By CHARLES H. STOWELL, M. D., Assistant Professor of Physiology and Histology at the University of Michigan. Detroit: George S. Davis. 1881.

It is a little difficult to assign this work its proper place. It does not pretend to be a thorough treatise on histology, and yet it is more ambitious than most of the works on technical methods, of which we have of late seen so many. It has a great many figures, most of which are from approved sources, but they are, as a rule, poorly executed. There are some discussions in the text which would suggest a larger work, as for instance, that on the origin of the red blood corpuscles. Dr. Stowell is evidently very well read on his subject, and there is a good deal that is valuable in the book. His remarks on the recognition of blood corpuscles for medico-legal purposes deserve praise for the caution which characterizes them on some points. Among these, however, we cannot class his instruction to wash and then stain corpuscles from a clot that may be too highly colored.

In the chapter on bone there is a very serious error due to confounding bone corpuscles with lacunæ. On page 84 there is a figure of two of the latter, canaliculi and all, described as the former. This is the more extraordinary that on the very next page we are told that in the living bone the lacunæ contain protoplasmic cellular matter.

In the chapter on the connective-tissue group we are surprised to find that migratory cells are described as lymph cells out of their proper places, which latter fact we think an assumption. The book has merits and defects like most others but, like many others also, it does not have a satisfactory *raison d'être*. It does not pretend to fill the place of an elaborate treatise and we have plenty of good manuals telling the student how to work.

T. D.

Medical and Surgical Journal.

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INSANE HOSPITAL CONFLAGRATIONS.

It will be remembered that we called attention to this subject in our issue of March 24th. We regret to be called on so soon again to chronicle another fire. The following telegram from the *Advertiser* of April 20th gives the details in brief:—

"ANNA, ILL., April 20th. A fire broke out in the bath-room of the second floor of the north wing of the Illinois Southern Hospital for the Insane at 11.30 o'clock Monday night. After getting the patients out an effort was made to check the fire, but as the building had a mansard roof it was not until the centre of the building was reached that the fire was mastered. A patient from Monroe County, named N. Thierkle, was burned to death. The loss is \$150,000."

In the same article we spoke of the importance of trained fire corps in insane hospitals; we quote these sentences from Dr. Arthur Mitchell, Scotch Commissioner of Lunacy, as being *apropos*. Speaking of the management of the Barony Asylum, he says: "The recent burning of one of the towers scarcely affected the appearance of any part of the house, and in no way interfered with the usual daily life of the inmates. It is very creditable to the management that, even when the fire was at its height, the wants of the patients received their customary attention, and perfect tranquility was maintained. No confusion occurred in any part of the establishment, and neither patient nor attendant received any injury. *The importance of possessing a trained and regularly exercised fire brigade was made very apparent.* By their exertions the spreading of the fire was prevented."¹

THE HORACE MANN SCHOOL FOR THE DEAF.

THE going to and coming from school of a crowd of children is always an attractive sight, and wherever you see the happy crowd just loose from school close observation will generally show more than one individual of mature years who pauses in his occupation to watch and ponder over the pleasant spectacle.

No one can pass a certain corner in the city at the hour of opening or closing school without having his attention drawn to a more than ordinarily interesting group of school children with bright and mobile faces, and a superfluity of gestures, and a very few moments will suffice to show that they are deaf and dumb.

Members of the Massachusetts Medical Society who were present at a late meeting will recall the very interesting address upon Visible Speech, by A. Graham Bell, in which he explained a method of teach-

ing deaf mutes the use of spoken language. At the close of his remarks several deaf mutes were introduced, who illustrated the results attained by his method. Though the pupils were somewhat disconcerted by the presence of so large an audience, and their speech was constrained and artificial, the exhibition was a striking and impressive one. Those who listened to the declamations of those pupils will be interested in a short account of The Horace Mann School for the Deaf, which appears in the *Popular Science Monthly* for May.

The school was suggested in 1843 by Horace Mann, secretary of the Massachusetts Board of Education, but it was not until 1869 that the school was actually opened. It now numbers about eighty pupils of various ages and stages of advancement. Professor Bell's system has been used since the beginning, but attempts are being made, with apparent success, to depart somewhat from this arbitrary method.

All the teaching must be in some way objective; the beginning is made by writing words on the black-board, and associating the word with the visible object. A number of such names are thus written, repeatedly, until the pupil learns the association, and advance in writing is earlier and easier than among children who hear.

The first vocal attempt is to close the lips and make the sound of the letter *m*, which he does by feeling the curious vibrating sensation in his teacher's lips and chin and trying to imitate it.

The congenital mutes and the semi-mutes, or those who become deaf in different stages of age and development, are separated so far as possible, for the semi-mutes usually retain a few words or sentences upon which to build, while those who have never heard must begin far behind them. Of those with acquired deafness scarlet fever is considered the cause in about one third of the cases.

Pupils are received at the early age of four and five years, and instruction is carried through all the studies of the upper grammar schools. The results attained vary, of course, in accordance with the natural gifts of the pupil.

Although Massachusetts was somewhat later than some of her sister States in the establishment of public schools for the instruction of deaf-mutes, it is interesting to know that she contributed somewhat largely to the first school of the kind in the United States, that at Hartford, and the school at Northampton, we believe, has the distinction of being the first school in the United States where articulation was systematically taught. Similar institutions now exist in a large number of States.

The sensitive feelings of the children are evidently carefully regarded by the authorities. The school was first known as the Boston School for Deaf Mutes, but as the pupils learned to speak they objected not unnaturally to being longer called "mutes;" in changing the name the city not only showed a deference to its still deaf though no longer dumb wards, but erected to the man who had the humanity to suggest the establishment of the school, a monument more lasting

¹ Journal of Mental Science, April, 1881, page 100.

than brass, and also much more graceful than many of the brazen images by which it attempts to bestow immortality.

MEDICAL NOTES.

—The method of teaching anatomy from the living model, to which attention was called in our issue of April 14th, has been practiced and appreciated for some time past, as we are informed, at the Harvard Medical School.

—We have received too late for useful insertion a notice of the annual meeting of the Connecticut River Valley Medical Association, which was held at Bellows Falls Wednesday, May 4th. The president delivered an address on Death; Its Physical Aspect.

—The Board of Health of Newton, Mass., has made the sensible regulation that before any work of plumbing or drainage is undertaken in any building a complete plan of all the pipes, traps, cess-pools, and other items shall be submitted to the city engineer for his approval or modification, as the case may be, and that no work shall be carried out except in accordance with a plan so approved or modified. — *Sanitary Engineer*.

—Dr. Little, of Shanghai, has communicated a method of treating abscesses of the liver by large and direct openings with antiseptic precautions. The plan consists in determining as accurately as possible the seat of the purulent collection, and in verifying the diagnosis by means of the aspirator. Very free openings are then made with a bistoury into the abscess, the aspirator needle being used as a director.

—Many people may have noticed the often disgusting odor proceeding from the size and paste of paper-hanging pervading an apartment for some time after the paper has been newly hung. M. Vallin, in the *Revue d'Hygiène*, reports an interesting case, which has induced him to make some inquiries in this matter. A lady, who, from time to time, came to town to supervise the decoration of her house, was three times successively seized with violent sickness and headache after sleeping in a newly-papered room. M. Vallin was struck with the putrefactive odor which pervaded the atmosphere, and, after examining into the matter, came to the conclusion that it proceeded from the wall. It was found that a horrible putrefactive odor proceeded from the size-pot, with which the paper-hanger, in the next room, was continuing to hang the wall-papers, and that his size was in a state of putrefactive change. On making further inquiries, various other cases have come under his notice in which illness has palpably been produced by the use, by paper-hangers, of size and paste undergoing or speedily entering on septic change; and it is extremely desirable that this should be borne in mind, and, if necessary, a little oil of cloves, salicylic acid, or some other antiseptic agent should be added to the material which they use for this purpose, or, at any rate, care should be taken to avoid these disagreeable consequences of carelessness which is only too common. — *Sanitary Record*.

—A temporary Museum will be opened in the rooms of the Geological Society during the sittings of the International Medical Congress in London this summer. All objects of novelty or rarity having reference to the processes of disease or the results of injury will be acceptable for exhibition. The following are some subjects to which it is intended to devote special attention: (a.) Methods of preparing, mounting, and preserving specimens. (b.) Special groups of injuries and results of disease (as illustrated by drawings, photographs, models, casts, or preparations). (1.) Injuries to Bone: Fracture of carpal end of radius, recent and old; specimens proving bony union after transverse fracture of patella; rare forms of fracture, dislocation, and separation of the epiphyses; repair of skull-bones after injury, especially of basis cranii. (2.) Bone Disease: Osteitis deformans; collections of scoliotic and other pelvic deformities; specimens of necrosis without suppuration; mollities ossium; specimens of rickets in the lower animals. (3.) Results of Operations: Arteries after catgut or other ligatures; osteotomy for genu valgum; specimens showing repair after excision of joints. (4.) Joint Disease: Charcot's joint-disease; rare forms of rheumatic arthritis and gout. (5.) Skin Disease: Rodent ulcer and allied forms; mollusum contagiosum. (6.) Parasitic and other diseases which occur solely or especially in particular countries; Madura foot, anthrax, etc. (7.) Lymphadenoma. (8.) External hydrocephalus. (9.) Rare and important specimens of comparative pathology. (c.) Arrangements will be made for the exhibition in groups on special days (of which due notice will be given) of Living Examples of certain Rare Diseases, etc. The following are the subjects selected by the Committee for illustration, in this manner: (1.) Addison's disease (bronzed skin and disease of supra-renal). (2.) The coincidence of true gout and rheumatic arthritis. (3.) Charcot's joint-disease. (4.) Myxoedema. (5.) Syphilitic bone-disease in children, simulating scrofula and rickets. (6.) Mollities ossium. (7.) Primary muscular atrophy. (8.) Rupture of brachial plexus or other large nerve-trunks. (9.) Scleroderma or morphea. (10.) Keloid of Alibert, especially with reference to its spontaneous disappearance. (11.) True leprosy. (12.) Lupus erythematosus. (13.) Xanthelasma. All communications regarding this Section should be addressed to the Secretary, 16 Palace-road, St. Thomas's Hospital, London, S. E.

—The empress of Germany, who, as is well known, is interested in all projects for the alleviation of the sufferings of the sick and wounded, has expressed her lively interest in the coming International Medical Congress, and her intention to delegate the distinguished director of the Augusta Hospital in Berlin (her special charge), Professor Küster, to represent her at the Congress.

MEDICO-LEGAL.

—*Winspear v. Accident Insurance Co.* (Court of Appeal. November 29, 1880.) By a policy of insurance, defendants agreed to pay to the representa-

tives of W. one thousand pounds if "the insured shall sustain any personal injury caused by accidental, external, and visible means, . . . and the direct effect of such injury shall occasion the death of the insured." The policy provided "that the insured shall not be entitled to make any claim under this policy for any injury by any accident unless such injury shall be caused by some outward and visible means, of which proof satisfactory to the directors can be furnished; and that this insurance shall not extend . . . to any injury caused by or arising from natural disease, or weakness, or exhaustion, consequent upon disease, . . . or to any death arising from disease, although such death may have been accelerated by accident." The insured, whilst crossing a stream was seized with an epileptic fit, fell, and was drowned. He did not sustain any personal injury to occasion death other than drowning. The plaintiff recovered judgment, and defendants appealed.

Cohen, Q. C., and Gainsford Bruce, for defendants. Assuming that drowning is an injury caused by accidental, external, and visible means, the case is nevertheless not within the policy, for what really occasioned the death was the epileptic fit, which caused the assured to fall down in the water and be drowned. The defendants are protected by the proviso, for this was a death arising from disease. [Brett, L. J. If there was an injury caused by accident, which accident was caused by natural disease, where is the exception applying to that?]

Lord Coleridge, C. J. I am of opinion that this judgment ought to be affirmed, and on the following plain and short grounds: The circumstances of the death are set out in paragraph four of the special case, which is a perfectly clear statement that the deceased died from drowning in the brook. Now drowning has been decided to be an injury "caused by some outward and visible means." I am therefore of opinion that the injury by which the assured died comes within the risks which the defendants have undertaken. Then the only question is whether the case comes within the proviso contained in the policy so as to exempt the defendants from liability. That clause provides that no claim shall be made for any injury from accident, "unless such injury shall be caused by some outward and visible means," etc. The remarks I have already made apply to these words, and therefore the case is clearly not within the first part of the proviso. Then it goes on to provide that the "insurance shall not extend . . . to any injury caused by or arising from natural disease, or weakness, or exhaustion, consequent upon disease, . . . or to any death arising from disease, although such death may have been accelerated by accident." Here the injury was caused by an accident, that is, drowning, and therefore I think that this clause has no application. It seems to me that the words of the policy must mean what they say, and in such a case as this the injury is what really causes death. Therefore, the defendants are clearly liable, and the judgment of the court below must be affirmed. Baggallay and Brett, L. JJ., concurred. — *Reporter*.

Miscellany.

LONDON LETTER: FROM OUR LONDON CORRESPONDENT.

COLOR-BLINDNESS.

MR. EDITOR, — Last night the Ophthalmological Society of the United Kingdom held a special meeting to receive the first report of its sub-committee for the investigation of color-blindness.

This report dealt with the results afforded by the examination of some 18,088 individuals. The average percentage with defective color perception had been amongst males 1.75, amongst females 0.1 per cent., or the defect was rather more than ten times as rare in females as in males. The examination had extended to Ireland, where amongst 2859 male children examined 4.2 per cent had been detected with defective color perception.

In the Merchant Taylor's School in the metropolis three pairs of color-blind brothers existed amongst 500 pupils. The prevalence of defective color perception had appeared to diminish as those examined had risen in the social scale.

Thus the police yielded 3.7, middle-class persons 3.5, professional persons 2.5, Eton boys 2.46 per cent. of more or less color-blind.

Persons of Jewish extraction, members of the Society of Friends, and deaf-mutes were grouped as exceptional classes. Their existence as such in relation to the prevalence of color-blindness has come out conspicuously, as may be gathered from the following: Amongst females of Jewish extraction no less than 3.1 per cent. were found with defective color perception; in the Society of Friends 5.5 per cent. of the females, and 2.4 per cent. of the female deaf-mutes were similarly conspicuous: whilst what was described as pronounced color-blindness, extreme examples of the defect, were found amongst the males of the three above named classes to the percentage of 4.9, 5.9, and 13.7, respectively.

The examples of the peculiarity were so prevalent as to reach close upon fifteen per cent. in one large college belonging to the Society of Friends, who had been most obliging in facilitating these investigations, and to whom it will be remembered Dalton, the distinguished describer of the defect, belonged. To this fact was due much of the comicality attaching to the well-known tale of Dalton having worn in the public streets his scarlet university gown, which he judged to be of saue color as the hedge rows, and not of a prohibited tint.

The sub-committee had not detected any case of monocular defective color perception, but as Mr. Carter suggested such would of necessity escape recognition unless each eye were tested separately. Mindful of Professor Holmgren's case, in which there was color-blindness well-marked in one, and but slightly indicated in the fellow eye, Mr. Carter suggested that a re-examination of the individual eyes of those who had been passed as slightly defective in color perception was likely to furnish more to the class of which Holmgren's patient was a type; as, if the causation of the defect lay in the retina (which appeared likely), its unilateral occurrence should not be excessively rare.

Mr. Frost mentioned a color-blind draper who required to have many of his wares ticketed as to the

color, who begat seven sons and three daughters, of whom six sons were extreme examples of color-blindness, whilst the remaining children had normal color perception; notwithstanding which, however, one of the daughters had a son, who, at the age of twenty-one, was too red blind to distinguish between emeralds and rubies, though a jeweler.

Mr. McHardy mentioned having noticed color-blindness as being most unduly prevalent amongst successful wood-engravers, a circumstance for which Mr. Carter suggested the explanation that possibly that trade was much confined to families in which it descended, like color-blindness, from generation to generation; whilst the president, Mr. Bowman, thought it likely that color-blind persons with artistic taste and ability had a tendency to become eliminated from working in colors and to drift, by a process of natural selection, into work in black and white.

Reference was made by Dr. McHardy to the experts' report upon the color perception of the Connecticut railway employes, and to the important direct testimony of the fatal consequences of employing color-blind navigators, which has been furnished by the collision in Norfolk harbor.

The president alluded to the urgent need of imperial and international legislation in reference to color-blindness and visual acuteness, also to the great and disinterested service ophthalmologists, by lending themselves to these investigations, were rendering to the traveling community, whose safety could not be secured until the color-blind had been eliminated, as could only be done by expert examiners, from those who were called upon to distinguish between colored signals.

Dr. Brailey, who read the committee's report, favored three factors as participating in connection with the existence of defective color perception: (1.) A physical defect probably situated in the eye itself. (2.) Education. (3.) Intermixture.

The first rapidly lent itself in connection with the known transmissibility of the defect. The second, if operative, must operate at an exceedingly early period in the infantile life, and thus possibly explained the rarity of defective color perception in girls who, being notorious for precocity, it was fair to assume developed their faculty of observation earlier than boys. The third was strongly supported by the facts elicited in connection with persons of Jewish or Quaker extraction. The former had for numberless generations intermarried, partly through necessity and perhaps in some cases through choice; whilst the latter, altogether a small and tolerable modern community, had until recently been prevented by the rules of the Society of Friends from marrying out of the sect. Dr. Bradley questioned the correctness of regarding red and green blindness as distinct. He considered the former an exaggerated degree of the latter, and had found there were vast numbers of cases intermediate between the two, which in many well-marked instances it was perfectly easy to recognize as standing at either end of a scale.

NEVOID EUPHANTHASIS.

At the Clinical Society to-night, Mr. Thomas Smith showed a living specimen, the third he had seen of this affection, which he has described in an illustrated paper, in the fifth volume of the St. Bartholomew's Hospital Reports. The patient, a lad aged fourteen, had exhibited superficial nevoid changes over his entire

right half since birth. The right leg, which was covered with an exaggerated growth of hair, appeared to be three times as bulky as its fellow. In Mr. T. Smith's first case, which was somewhat similar, the portions of the limb when squeezed gave the same sensation that a wet sponge would under like circumstances. As a preliminary measure, he had directed that limb to be carefully bandaged, with the sequence that the patient became excessively ill and died; as Mr. T. Smith now believed in consequence of the bandaging. In his first case the external iliac vein was of normal size, whilst the internal was not smaller than a man's thumb, and the navoid tissue, which contained considerable sinuses, extended into the pelvis. His second case occurred in a patient whose position enabled her to command every luxury that money could procure, she had attained the age of twenty-one years and appeared likely to live, with the aid of a weak elastic stocking, through the restricted career which her condition left open. The patient before the society had had the limb gently bandaged for a brief period, during which her health had so materially suffered as to recall the experience afforded by the first case, and lead to an immediate abandonment of a form of treatment which could so easily prove mischievous by forcing a vast volume of blood into a restricted area of the circulatory system.

MENINGOCELE AND MATERNAL INFLUENCES.

A hideous example of this deformity was quoted wherein much of the brain might be said to occupy the nose, and the infant had lived between three and four months. The mother attributed the malformation to a shock she experienced while three months pregnant with him, when in identifying a relative's body, subsequently to the autopsy, her hand came unexpectedly on to the irregularity of the deceased's forehead, which had been occasioned by removal of the skull cap.

LONDON, April 9, 1881.

LETTER FROM JAPAN.

A JAPANESE PHARMACOPEIA.

MR. EDITOR.—The question uppermost in the minds of men in the financial circles of this Island Empire is that of the decline of the paper currency as compared with that of the metallic; in the diplomatic, that of the revision of the commercial treaties; in the world of trade, that of the "balance of trade"; in the religious world, that of the advance of Sintoism in Okinawa, of the Greek doctrines about Tokio, and of Protestantism at Etchizenbori, and of the completion of Hongandji, a famous temple, near the foreign concession at Tokio; and in the medical world, that of a pharmacopœia.

At present there is no uniformity. In one hospital the English pharmacopœia, in another the American, in a third the Dutch, and thus on through the list, according to the nationality of the foreign physician employed in the same. Thus about these hospitals as centres have grouped practitioners using a different standard for preparations from that in use in the next hospital town. Also the druggists, slowly working out the mysteries of the Chinese drug-list, would enter into this confusion of authorities, flounder about, and, in all probability, would get up a system of their own. The confusion in matters of pharmacy in Japan is now greater than that which reigned in the United States

when the Dublin, the Edinburgh, the London, and the Codex were found on the shelves of every reputable drug shop. Small parts only of either of the Western standards have been translated into Japanese. No one book, complete in itself, has been translated or compiled for the use of the apothecary and the physician. The government some years since issued regulations for the examination of candidates for license to engage in the business of apothecaries; specified those who should be exempt from such examinations; called upon "the local authorities to take proper measures to distinguish such as have passed a satisfactory examination," and directed that any person who shall henceforth become an apothecary shall be examined in, among other subjects, "the general principles of pharmacy and the general principles of formulary."

The Imperial government decided at the close of Meiji 13 (1880) to have a standard pharmacopœia compiled and published. A special commission has been appointed by H. E. Mitoyoshi Matsukata, the Minister of the Interior, for this purpose. It is composed of the following gentlemen:—

Hosokawa, member of Gheuro-in, President.
Miyake, Professor of Medical University, Tokio.
Matsumoto, Surgeon General of Army.
Totsuka, Surgeon General of Navy.
Hayashi, Surgeon I. J. Army.
Nagayo, Director Department of Hygiene.
Ikeda, Imperial Surgeon.
Nagamatsu, Pharmacist, Army Department.
Takagi, Medical Staff.
Shibata, Sanitary Department.

Ten Japanese, and the following Europeans now in government service:—

Dr. Beukema (Holland) Ken Hospital, Kanagawa.
Dr. Baelz, Professor Tokio University, German.
Dr. Louggard, Professor Tokio University, German.
Dr. Geerts, Professor Tokio University, German.
Dr. Eykman, Professor Tokio University, German.

The work of the commission was entered upon at the first meeting, which was held at Tokio on January 11th. It is to be hoped that this commission will make diligent progress, will select all that is of superior quality in each of the pharmacopœias, and will incorporate such selections, with proper emendations, into a volume whose characteristics shall be plainness, simplicity, permanency, and brevity. And that, later, it shall be faithfully and conscientiously rendered into progressive Japanese, by appropriate and accurate equivalents.

Of the Japanese portion of this commission, the working, progressive part is from the army medical department, Matsumoto, Totsuka, and Ikeda were of the early students who flocked to Nagasaki to learn of the Dutch teachers. These are the men who have been in the van of medical progress in Japan, the men who have urged the claims of the new learning upon the attention of the government, the men who have battled nobly against the prejudices and interests of a medical school established for centuries, the men who have demonstrated, in so far as their personal influence lay, the value of Western medicine. They have gained the day in official circles, in the army, navy, and civil service hospitals, but the masses of the practitioners and of the people are not in accord with the innovations. There are at present in Japan, according to the *Mi-Nichi Chim-bun*, 65,200 practitioners of medicine, of which only 504 hold diplomas such as the notification of 1876 calls for. Of this large number of "doctors" it

is estimated that sixty-six per cent. follow the Chinese school, twenty-one per cent. the "western system" (that is, having a meagre knowledge of a few drugs and their applications), and thirteen per cent. follow the mixed Chinese and Japanese schools of practice.

As may be known to many of your readers, the Japanese government has been making certain financial experiments on an extended scale, such as floating upwards of 160,000,000 yen of fiat paper, and establishing a large number of national banks based on the national bonds; it has been engaging in commercial and industrial operations usually left to private enterprise; and has been making very extensive purchases of material for the army, navy, and civil services, all of which must be paid for in coin. The result is that specie has been drawn out of the country or locked up; that the bonds are quoted at about 68 with a par of 100, that the fiat paper ranges from 170 to 180 as compared with the silver yen; that the prices of commodities have enhanced much faster than salaries and prices of labor, with resulting inconveniences and even suffering. There is a general feeling, which the government takes no measure to disabuse, that all the embarrassments are owing to the excess of imports over exports, that the trade with foreigners is disadvantageous and prejudicial to the interest of Japan, and that the people and the government should draw once again a cordon of obstruction about the Empire. A man by the name of Sada, reports the *Choya Chim-bun*, has proposed publicly that the people of Japan shall use no articles which have been imported from America or Europe. This idea has obtained considerable support. Many so-called societies have been formed in Kioto and Osaka with this object. A doctor of the Chinese school is now occupied in the organization of a similar society for similar ends in medicine.

MEDICAL ORGANIZATION OF THE ARMY.

A recent estimate of the population of Japan has placed the figures at 33,300,675. The Japanese army, on its present peace footing, is 39,891 men. In a few years it is expected to embrace 160,000 men, in the following order: An active army, a reserve of the active army; a territorial army, and a reserve of the territorial army, each with a peace footing of 40,000 men. The medical department is in charge of two Inspector Generals of Health, with the rank of general of brigade. This service is independent of the war ministry. It is divided into four sections:—

Section I. General staff.

Section II. General Hospital, Tokio.

Section III. Hospitals of Teindai, that is, the six military divisions of the Empire.

Section IV. Regimental Service.

In Japan, the infantry alone is organized by regiments. Each regiment has one surgeon of the second rank. The artillery and cavalry service are dependent on the post surgeon for their medical attendance. The veterinary corps of officers is at present under the control of the army medical department. The veterinarian highest in rank has a position corresponding to chief of battalion. The pay of the regimental surgeon is fifty yen per month, and that of the assistant, when one is assigned, only thirty yen (one yen silver is now equal to ninety-one cents American gold). As all departments in Japan receive their pay in *Satsu*, or government notes, and as this paper is now only worth fifty-seven sen silver coin per yen, it is evident that the

medical service is very poorly paid. As a matter of fact, with the exceptions of the general staff, the talent and education in the army medical department is inferior to that in the civil service.

TITLES, DUTIES, SALARIES, AND RANKS IN THE MEDICAL DEPARTMENT OF THE JAPANESE ARMY, 14 MEIJI (1881.)

Japanese Title.	Duties.	Salary.	Rank.
Gun-I Sō-Kwau	Inspector General.	Yen. 3000	General of Brigade.
Gun-I-Kwau.	Chief Med. Dept.	2540	Colonel.
Yaku-Sai-Kwau.	Chief Med. Purveyor.	2540	Colonel.
Gun-I-Sei, I.	Staff Surgeon.	1740	Lieut.-Colonel.
Yaku-Sai-Sei, I.	Staff Purveyor.	1740	Lieut.-Colonel.
Gun-I-Sei, II.	Staff Surgeon, 2d rank.	1140	Major.
Yaku-Sai-Sei, II.	Staff Purveyor, 2d rank.	1140	Major.
Bu-I-Kwau.	Chief Veter. Dept.	1044	Chief of Battalion.
Gun I.	Regimental Surgeon.	750	1st Lieut. of Infantry.
Sai Kwau.	Regimental Purveyor.	750	1st Lieut. of Infantry.
Bu-I, I.	Veterinarian, 1st rank.	624	1st Lieut. of Infantry.
Bu-I, II.	Veterinarian, 2d rank.	578	1st Lieut. of Infantry.
Gun-I-Fuku.	Passed Asst. Surgeon.	510	2d Lieut. of Infantry.
Sai-Kwau-Fuku.	Passed Asst. Purveyor.	510	2d Lieut. of Infantry.
Bu-I-Fuku, I.	Passed Asst. Vet., 1st rank.	384	2d Lieut. of Infantry.
Bu-I-Fuku, II.	Passed Asst. Vet., 2d rank.	336	2d Lieut. of Infantry.
Gun-I-Ho.	Apothecary.	420	3d Lieut. of Infantry.
Sai-Kwau Ho.	Apoth. Dept. of Stores.	420	3d Lieut. of Infantry.
Bu-I-Ho.	Farrier.	254	3d Lieut. of Infantry.

KAITAKESHI HOSPITAL, SAPPORO, JAPAN, February, 1881.

CORRECTION OF THE RHODE ISLAND MEDICAL SOCIETY'S REPORT.

MR. EDITOR.—In your issue of April 11, 1881, under the heading of the Rhode Island Medical Society, the reporter was led into some inaccuracies, which I beg leave to correct.

The case of ununited fracture that I reported was of the *tibia*, and not of the femur, and the limb was not "encased in plaster for five months," but in my care for that time. It was originally put up in plaster.

Then, as to the case of litholapaxy, I merely stated that fearing a hard stone I used a Thompson fenestrated lithotrite instead of a delicate instrument I had used for measurement. I found the stone measured one half inch in its longest diameter and nearly one quarter inch in thickness.

I may take this opportunity of recording another case of litholapaxy in a man aged forty-three. The stone was small and hard, and proved to be entirely oxalate of lime. I used the Thompson fenestrated lithotrite, and removed forty-three grains. The length of the operation was about thirty minutes. A month after the operation no trace of any fragment was to be found, and the patient had been entirely free from all symptoms. He was up on the third day, and out of doors in a week. Very truly yours,

EDWARD T. CASWELL.

PROVIDENCE, April 25, 1881

A SOLUTION OF MORPHIA.

MR. EDITOR.—If "Querist" will refer to the *Philadelphia Medical Times* of January 1, 1881, he will find an interesting article, by Dr. H. A. Wilson, on Soluble Compressed Pellets. Those of us who are suspicious of a long-kept solution of an organic salt like morphia, and who are disinclined to inject that article mixed with, or perhaps changed into, a fungoid growth, like penicillium, — and there are some who would hesitate to use even small amounts of carbolic

or salicylic acids or other preservatives, — have been in the habit of carrying their morphia for subcutaneous use in the shape of powders. I have received from Messrs. Wyeth Brothers, of Philadelphia, within a few days, some of their pellets, made after the suggestions of Dr. Wilson, with the coöperation of Professor Roberts Bartholow and Professor Wolff, which are much more satisfactory, to my mind, than the powders I have used for many years. This firm prepares at least eighteen varieties of salts of morphia, atropia, and strychnia in definite amounts, and in perfectly soluble form. They are joined with sulphate of soda, a salt which is in no wise incompatible with the organic salts, and causes no pain or irritation, but even assists absorption. Moreover, morphia compressed alone becomes hard and insoluble after a time, but the chloride or sulphate of soda intimately mixed with the morphia acts as a disintegrator, and by its ready solution leaves it in a state of fine subdivision ready to be acted on by water. Dr. Wilson briefly summarizes the advantages of these pellets in four propositions: They are of convenient size, they may be used by the mouth if desirable, they are in fixed and definite doses, they are certainly and rapidly soluble. I shall be glad to show the new pellets to "Querist" or any other professional brother.

F. H. B.

AN APE-HEADED NATION.

At a meeting of the Anthropological Institute, held on March 22d, Professor Flower exhibited a collection of crania from the island of Mallicollo, in the New Hebrides, which had been lately presented to the Museum of the Royal College of Surgeons by Mr. Luther Holden. The peculiar conformation of the heads of the people of this island attracted the attention of Captain Cook and the naturalist Foster, who accompanied the great navigator on his second voyage, and who writes that "the depressed and backward inclining forehead causes an appearance in the looks and countenances of the natives similar to those of monkeys." Yet Cook bears testimony to the activity, intelligence, and honesty of this "ape-like nation," as he calls them. A few years ago, Mr. Busk described some skulls collected in the island by the late Commodore Goodenough, and found that they all showed signs of having undergone alterations in form, from pressure applied in infancy. The present collection corroborates Mr. Busk's views; some of the skulls being deformed to a remarkable degree, and closely resembling the well-known ancient Peruvian crania from the neighborhood of Lake Titicaca. This is the more remarkable, as on no other of the numerous islands in the neighboring ocean is this practice known to exist. Besides the deformed crania, the collection contained several monumental heads, said to be those of chiefs. In these the features are modeled in clay upon the skull, apparently with the intention of preserving a likeness of the dead person. The face is painted over with red ochre, artificial eyes are introduced, and the hair is elaborately dressed and ornamented with feathers. In one case the hair has been entirely removed and a neatly made wig substituted. The head thus prepared is stuck upon a rudely made figure of split bamboo and clay, and set up in the village temple, with the weapons and small personal effects of the deceased. This is a custom not hitherto known to exist among the Mallicollese, and its motive is not completely understood; but it is obviously analo-

gous to many others which have prevailed throughout all historical times and in many nations, manifesting itself, among other forms, in the mummified bodies of the

ancient Egyptians, and the marble busts over the mouldering bones in Westminster Abbey. — *British Medical Journal*.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 23, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	780	293	25.13	19.23	8.46	5.38	1.41
Philadelphia.....	846,984	423	134	21.99	8.27	3.31	2.84	.24
Brooklyn.....	566,689	246	95	21.54	15.04	11.79	4.88	—
Chicago.....	503,304	241	110	22.82	14.94	7.88	.83	3.32
Boston.....	362,535	163	42	12.27	19.02	8.59	1.23	—
St. Louis.....	350,522	184	71	29.89	9.78	2.72	.54	16.85
Baltimore.....	332,190	133	49	15.79	7.52	8.27	1.50	.75
Cincinnati.....	255,708	109	45	20.18	16.51	—	1.83	2.75
New Orleans.....	216,140	113	41	28.32	1.77	1.77	13.27	—
District of Columbia.....	177,638	71	29	12.68	14.08	1.41	1.41	—
Pittsburgh.....	156,381	81	36	34.57	6.17	6.17	9.88	6.17
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	64	33	29.69	9.38	9.38	6.25	10.94
Providence.....	104,855	50	12	20.00	20.00	2.00	4.00	—
New Haven.....	62,882	23	3	13.04	17.39	4.35	4.35	—
Charleston.....	49,999	50	13	28.00	4.00	—	28.00	—
Nashville.....	43,461	17	7	35.29	—	11.76	—	5.88
Lowell.....	59,485	30	6	6.67	16.67	3.33	—	—
Worcester.....	58,295	27	10	18.52	33.33	—	3.70	—
Cambridge.....	52,740	19	6	15.79	21.05	15.79	—	—
Fall River.....	49,006	22	10	13.64	—	4.55	—	9.09
Lawrence.....	39,178	13	4	—	15.38	—	—	—
Lynn.....	38,284	7	2	14.29	14.29	—	—	14.29
Springfield.....	33,340	10	5	10.00	10.00	10.00	—	—
Salem.....	27,598	14	3	14.29	7.14	—	—	—
New Bedford.....	26,875	9	4	33.33	—	—	—	—
Somerville.....	24,985	10	5	20.00	10.00	20.00	—	—
Holyoke.....	21,851	9	3	11.11	—	—	—	—
Chelsea.....	21,785	8	6	37.50	12.50	12.50	—	12.50
Taunton.....	21,213	10	3	20.00	10.00	10.00	—	10.00
Gloucester.....	19,329	3	—	—	33.33	—	—	—
Haverhill.....	18,475	2	1	—	50.00	—	—	—
Newton.....	16,995	3	1	33.33	—	33.33	—	—
Newburyport.....	13,537	11	1	9.09	—	—	—	—
Fitchburg.....	12,405	2	1	—	—	—	—	—
Twenty-five Massachusetts towns..	205,230	86	18	15.12	16.28	6.98	—	2.33

Deaths reported 3043 (no return from Buffalo); 1102 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 679, consumption 457, lung diseases 416, diphtheria and croup 193, scarlet fever 121, cerebro-spinal meningitis 75, typhoid fever 59, small-pox 54, measles 39, malarial fevers 39, diarrheal diseases 37, whooping-cough 19, erysipelas 18, typhus fever 13, puerperal fever 11, malignant pustule one. From *typhoid fever*, Philadelphia 19, New York 11, Pittsburgh 10, Chicago four, Brooklyn and Providence three, Cincinnati two, Boston, New Orleans, District of Columbia, Lowell, Salem, Quincy, and Westborough one. From *small-pox*, Philadelphia 33, Chicago 11, New York nine, Cincinnati one. From *measles*, Cincinnati 10, New York nine, Boston and St. Louis three, Philadelphia, Brooklyn, Chicago, Worcester, and Malden two, Baltimore, New Orleans, Providence and Nashville one. From *malarial fevers*, New York 14, New Orleans nine, St. Louis seven, Chicago three, Brooklyn two, Philadelphia, Baltimore, District of Columbia, and New Haven one. From *diarrheal diseases*, New York 12, District of Columbia five, Philadelphia, Brooklyn, and Baltimore three, Chicago, St. Louis, New Orleans, and Nashville two, Cincinnati, Milwaukee, and Providence one. From *whooping-cough*, Chicago four, New York, Philadelphia, and New Bedford three, Cincinnati two, Baltimore, New Orleans, Providence, and Salem one. From *erysipelas*, New York six, Philadelphia five, Brooklyn, St. Louis, Baltimore, New Orleans, Worcester, Chelsea, and Brookline one. From *typhus fever*, New York 13. From *puerperal fever*, St. Louis five, Brooklyn, Cincinnati, Milwaukee, Providence, Worcester, and Holyoke one. From *malignant pustule*, Newburyport one.

The mortality from cerebro-spinal meningitis has decreased from 80 for the week ending April 16th to 75.

Ten cases of small-pox were reported in Brooklyn, 31 in Chicago, one in Boston, one in Cincinnati, one in New Orleans, four in Pittsburgh, one in New Haven; diphtheria 37, scarlet fever 12, typhus fever seven in Boston; scarlet fever 20, diphtheria nine in Milwaukee; measles 45, röteln 14, scarlet fever 14, diphtheria seven, typhoid fever two, erysipelas one in Providence.

In 44 cities and towns of Massachusetts, with a population of 1,123,141 (population of the State 1,783,086), the total death-rate for the week was 21.26, against 21.43 and 24.16 for the previous two weeks.

For the week ending April 24, in 149 German cities and towns, with an estimated population of 7,909,880, the death-rate was 26.7. Deaths reported 4061; under five 1888; pulmonary consumption 640, acute diseases of the respiratory organs 425, diarrheal diseases 144, diphtheria and croup 140, scarlet fever 77, whooping-cough 55, typhoid fever 53, measles and röteln 26, puerperal fever 15, typhus fever (Königsberg five, Danzig and Erfurt two, Thorn, Posen, Leipzig, and Frankfurt-a-O. one) 13, small-pox (Königsberg four, Berlin two, Munich, Frankfurt-a-O., Aix-la-Chapelle, and Essen one) 10. The death-rates ranged from 11.7 in Weisbaden to 39.2 in Essen; Königsberg 34.7; Breslau 33.5; Munich 36.9; Dresden 28.8; Berlin 25.3; Leipzig 21.3; Hamburg 21.9; Hanover 16.6; Bremen 26.4; Cologne 27.3; Frankfurt 24.3; Strasburg 36.8.

For the week ending April 9th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 22.4. Deaths reported 3264: acute diseases of the respiratory organs

(London) 359, measles 78, small-pox (London 72) 73, whooping-cough 71, diarrhoea 30, fever 26, diphtheria 16. The death-rates ranged from 16.0 in Portsmouth to 28.0 in Liverpool; Manchester 26.1; Sheffield 23.7; Birmingham 24.5; Leeds 21.8; London 21.6; Bristol 19.0. In Edinburgh 22.1; Glasgow 24.5; Dublin 38.0.

In the 21 chief towns in Switzerland, for the week ending April

9th, population 479,934, there were 37 deaths from acute diseases of the respiratory organs, diphtheria and croup 16, diarrhoeal diseases 14, typhoid fever eight, measles three, small-pox three, scarlet fever two. The death-rate of Geneva was 18.7, Zurich 10.4, Basle 25.1, Berne 36.3, St. Imier 58.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
		Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
April, 1881.																				
Sun., 17	29.755	47	55	38	56	15	34	35	W	NW	W	12	20	2	F	C	C	—	—	
Mon., 18	29.865	46	56	36	42	10	36	29	NW	W	NW	14	12	4	F	C	C	—	—	
Tues., 19	30.086	45	55	38	45	23	26	31	NW	NW	NW	17	14	4	C	C	C	—	—	
Wed., 20	30.118	43	50	37	41	60	67	56	N	E	SW	3	8	9	O	F	C	—	—	
Thurs., 21	30.040	48	64	35	73	15	52	47	W	NW	E	8	15	16	C	C	C	—	—	
Fri., 22	30.113	42	43	38	82	74	75	77	E	SE	S	4	10	4	O	O	O	—	—	
Sat., 23	30.216	47	53	38	82	41	49	57	NW	E	S	7	10	6	F	C	C	—	—	
Week.	30.028	45	64	35				48											1.07	.02

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 23, 1881, TO APRIL 29, 1881.

BACHE, D., major and surgeon. Granted leave of absence for one month on surgeon's certificate of disability, to take effect as soon as a medical officer reports for duty at Benicia Arsenal and Barracks. S. O. 62, Division of the Pacific, Department of California, April 16, 1881.

GREENLEAF, CHARLES R., major and surgeon. To report to superintendent-general recruiting service to conduct a detachment of recruits to Department of Dakota, and on completion of this duty to join his station (Fort Shaw, Montana Territory). S. O. 95, A. G. O., April 26, 1881.

CROCKFORD, H. M., captain and assistant surgeon. To proceed from Camp Sheridan to Fort McKinney, Wyo., and report for duty at that post. Camp Sheridan to be discontinued May 1, 1881. G. O. S., Department of the Platte, April 20, 1881.

BIARR, V., first lieutenant and assistant surgeon. So much of paragraph 1, S. O. 205, September 24, 1880, from A. G. O., as relates to him is revoked. S. O. 94, A. G. O., April 25, 1881.

BOOKS AND PAMPHLETS RECEIVED. — The Student's Manual of Histology, for the Use of Students, Practitioners, and Microscopists. By Charles H. Stowell, M. D. Detroit: George S. Davis, Publisher. 1881.

Lectures on Diseases of Bones and Joints. By C. Macnamara, F. R. C. S. Eng. Second edition. London: J. and A. Churchill, New Burlington Street. 1881.

Eight Biennial Report of the Trustees, Superintendent, and Treasurer of the Illinois Asylum for Feeble-Minded Children at Lincoln. October 1, 1881.

De la Phthisie pulmonaire et de sa Curabilité. Par Jean-Louis-Simon Joly, Docteur en Médecine. Paris: Librairie J. B. Baillière et Fils. 1881.

The Diagnosis of Diseases of the Spinal Cord. An Address delivered to the Medical Society of Wolverhampton, October 9, 1879. By W. R. Gowers, M. D., F. R. C. P., etc., etc. With

Additions and Illustrations. Second edition. Philadelphia: Presley Blakiston. 1881. (From A. Williams & Co.)

United States Marine Hospital Service. Report on Trichinae and Trichinosis. Prepared under Direction of the Supervising Surgeon-General, by W. C. W. Glazier, M. D., Assistant Surgeon Marine Hospital Service. Published by order of Congress.

Fourteenth Report of the Medical Staff of St. John's Hospital, Lowell, Mass.

List of Members of the American Academy of Medicine, January, 1881.

Hallux Valgus, with a Report of Two Successful Cases. By Albert N. Blodgett, M. D. (Reprint.)

Valedictory Address to the Twenty-Ninth Graduating Class of the Woman's Medical College of Pennsylvania. By Rachel L. Bodley, M. D.

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, M. D. New York: E. B. Treat. Parts 7, 8, and 9.

A System of Oral Surgery; being a Treatise on the Diseases and Surgery of the Mouth, Jaws, and Associate Parts. By James E. Garretson, M. D., D. D. S. Third Edition, thoroughly revised, with additions. Philadelphia: J. B. Lippincott & Co. 1881. (A. Williams & Co.)

The Diseases of Children: A Practical and Systematic Work for Practitioners and Students. By William Henry Day, M. D. Second Edition, rewritten and much enlarged. Philadelphia: Presley Blakiston. 1881. (A. Williams & Co.)

Ueber den sogenannten Schwellenden Finger (doigt à ressort). Von Dr. Carl Fieber. (Separat-Abdruck.)

Sturz aus einem Fenster des dritten Stockwerks ohne gefährliche Verletzungen. Mitgeteilt von Dr. Carl Fieber. (Separat-Abdruck.)

Ein Fall von Lipoma multiplex symmetricum. Dr. Carl Fieber. (Separat-Abdruck.)

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Lectures.

CLINICAL LECTURE ON SUBPERITONEAL UTERINE FIBROIDS.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROF. T. GAILLARD THOMAS, M. D.

GENTLEMEN,—The patient who will now engage our attention, and who has been sent to us through the kindness of my friend, Dr. P. Brynberg Porter, is a native of Ireland, forty years of age, and unmarried. She states that she has been suffering for seven years, but has been able to work all the time. When asked the nature of her complaint, she replies, "I am all pains," and when requested to designate the special seat of the pain, she says that it comes "all around the lower part of the stomach and down the legs." She furthermore says that her "stomach often swells up," and that she sometimes has headache. She is regular in her monthly periods, but says that she suffers very much at such times, the pain coming on almost a week before the flow makes its appearance. When it is added that she suffers sometimes from backache, and occasionally has a slight leucorrhœa, you have the complete history of the case as elicited from the patient herself.

You will notice that there are really very few important symptoms indeed. There is a good deal of pelvic pain, certainly, and some dysmenorrhœa, but that is about all. She has, however, a certain uterine disorder in an unusually marked form. Under the circumstances, I think it has been the greatest blessing in the world to her that she has been obliged to work for her living; for if she had been a wealthy lady, with nothing to think about except her own ailments, I can hardly doubt that she would have altogether succumbed before this.

Now let me describe to you and roughly indicate on the black-board the condition of affairs that I discovered on making an examination in this case. When I carried my finger up into the vagina I found a nulliparous uterus, rather low down in the pelvis, and with a round, hard growth on its anterior surface. On resorting to conjugal manipulation, which could be employed with remarkable facility in this case, on account of the laxity of the abdominal walls, I discovered another hard mass, as large as a small cocoa-nut, situated behind the uterus, while beneath it could be felt two other similar growths. Neither of the ovaries could be detected, and the fact that all these growths moved with the uterus when it was rocked from side to side, or forward and backward, by means of the sound, showed that they were without doubt all outgrowths of that organ. The uterus is, then, the centre of at least four solid tumors, and the question now arises, What are they? There can be but one answer to this, and that is that they are uterine fibroids, although very different in character from the fibroids we frequently meet with. They can, indeed, be nothing else. If they were phlegmons they would be fixed immovably in the pelvis. They cannot be ovarian tumors, on account of their position, to say nothing of their characteristics; and if they were malignant in character other symptoms would be present, and the patient's general health would be completely broken down. Indeed, it would have been a miracle if the patient were alive at

all at the end of seven years. Finally, not to go into the process of exclusion more at length, it is impossible that they should be fecal accumulations.

I wish to call your attention particularly to the insignificance of the symptoms here, where there is such a very marked abnormal condition in the pelvis, for the reason that I know of no cases which are so apt to entice the young practitioner into giving an erroneous opinion, especially as regards prognosis, as those like the one now before us. When he finds, on making a physical exploration, such a state of affairs as we have seen to exist here, he thinks that he has made a diagnosis of the utmost importance, and, led on by his imagination to suppose that the worst results must inevitably ensue, he makes a dreadful prognosis. Every word that he tells the patient, however, is contradicted by the subsequent history of the case, and ten years afterward it may be that he will have it thrown in his teeth that he made this great blunder in regard to it. The inexperienced gynecologist can hardly realize that such a state of affairs can exist in the pelvis without producing the most serious consequences, and, therefore, I want to forewarn you especially on this point.

Klaub, in his work on the Pathology of the Sexual Organs, the deductions in which are founded entirely on autopsies and microscopical examinations, has shown that fibroids of larger or smaller size (many of them, of course, quite minute) exist in nearly forty per cent. of all Anglo-Saxon women who have reached the age of forty. The remarkable prevalence of fibroids among negro women is notorious, and in my experience it is quite exceptional to find one of them in whom one or more fibroids cannot be detected. Some years ago I had the opportunity of being present at the autopsy of a negress who died of inflammation of the lungs, and it is an actual fact that no less than thirty-five fibroids, of all sizes, were found on her person. The largest was about the size of my head, and the next as large as a cocoa nut. Thousands of women who are affected with fibroids are in happy ignorance that they have a tumor, and in this connection I would offer the following piece of advice to you: When in any case you have made the diagnosis of fibroids, do not inform the patient of the fact unless you are forced to do so; because the very name of tumor is a kind of shibboleth to most women, and it will probably have a very bad moral effect upon her. This should be observed as a general rule, although cases occasionally occur in which it is best to make the diagnosis known. It may be objected to the rule that there are some instances in which if we tell the patient that there is nothing serious the matter the future course of the case will not be in accordance with our predictions; but these are very rare exceptions indeed, and it is always possible for us to exonerate ourselves from blame by stating that the case is an exceptional one.

It is an important point in connection with the present case that the patient is approaching the menopause, after which she is scarcely likely to have any trouble whatever. As far as I am able to make out, there is every prospect of her living to a good old age, and if, when she had died at the age of ninety, for instance, an autopsy should be made, nothing abnormal would be detected about the pelvic organs except a considerable number of cretaceous particles embedded in some hard, fibrous masses of comparatively small size, the remains of the extensive growths which now surround the uterus.

But it may be asked, Is there nothing that we ought to do for this woman? Unquestionably there is something that can be done for her. The very fact of the existence of these fibroids shows that the patient's system is below par, to borrow a commercial expression. There are exceedingly few persons, as you know, who can be said to be in perfect health, and in this instance the presence of the fibroids is the evidence that something is wrong. I would, therefore, recommend a sufficient amount of exercise, a nutritious diet, and careful attention to all the emunctories of the body. I would surround the patient with the best hygienic conditions possible in her case, and, in short, would endeavor to get her system in the same condition that I would that of an individual in the first stage of pulmonary tuberculosis. She is not losing too much blood at her menstrual periods, and some efficient tonic is all the medication that she seems at present to require. It should be the physician's endeavor to cheer the patient up as much as possible in such a case as this. Such women, when they find that they have fibroid tumors are very apt to imagine the most terrible evils, and you will find that they are always asking if there is any danger of a tendency to cancer in their case. In regard to this point I may say that I never heard of but one instance of fibroid in which carcinoma occurred, and that was not very well authenticated. It is a remarkable fact that negro women never have cancer of the uterus, and yet, as I have mentioned, they almost invariably have uterine fibroids. Some time ago there was a discussion in the journals on the subject of uterine cancer in the negroes, and a distinguished medical professor of Charleston, S. C., a gentleman of immense experience in diseases of women of the African race, then stated that he had never seen a single instance of it. As another point of interest here I may mention that although I have had the opportunity of examining a vast number of cases of ovarian cyst, I have never yet met with a single instance of it in the negroes.

Original Articles.

ULCERATIVE ENDOCARDITIS.

BY G. M. GARLAND, M. D.

THE following case is interesting on account of the great obscurity which usually surrounds ulcerative endocarditis and the consequent difficulties in the diagnosis of the same.

The patient was a very fleshy man, thirty-four years old, of sedentary habits, a liberal drinker. He never had a rheumatic fever, but a mitral regurgitant murmur has been audible over his heart for ten years. Four years ago he suffered from some spinal irritation, which lasted a few months and then disappeared. Two years ago he became jaundiced, but was comparatively well after that until February 13, 1880, when he was seized with sciatica in his left leg. He says he played a game of billiards in a warm room on the previous evening, and then stood talking on the corner of the street for some time. On February 14th he was helpless in bed, but soon improved so as to sit up and move about the room, and I made my last visit on March 1st. On the afternoon of March 4th I happened to run in for a friendly call, when I found my patient in a rocking-chair, reading, but looking terribly pale and weak.

He complained of no pain, but said he was very weak, and had no appetite. His pulse was 120, rapid and feeble. The temperature was 101.5° F. I could find nothing unusual in his lungs or heart, and the sciatica was no worse, so that I was at a loss to account for his condition. On March 5th I called my friend Dr. M. L. Chamberlain in consultation. We found the patient in bed, with his face slightly cyanotic, and the breathing somewhat accelerated. His wife said he had breathed rapidly for two days. He made no complaint, except of weakness. The pain in the leg was not troublesome, and with most careful examination we could find no evidence of hip-disease, and no tenderness along the spine. The pulse was 120, feeble. Temperature 101° F. Respirations 30. No pain in chest. Percussion and auscultation of the lungs normal. Mitral regurgitant murmur and hypertrophy of heart as before. Liver and spleen were enlarged. No ascites. No oedema of legs. Finding no indications but the great weakness, we ordered gin and infusion of digitalis, and requested a specimen of his urine for examination. The urine was normal. No albumen or casts.

On March 6th he was a trifle stronger, but on the following day he began to fail rapidly. Ceased to read and grew drowsy. He began to dream a great deal, and was wandering when awake. Pain in the leg was almost gone, and he could move freely in bed.

On the 8th and 9th he began to have hallucinations and delusions, which were extremely pleasant in character. Also began to be aphasic, and swore roundly when misunderstood. He became slightly cross-eyed, and the eyes had a marked lateral vibratory movement. He failed to recognize me once, and then immediately apologized for it. The temperature and pulse remained the same as on previous visit.

March 11th. Brain trouble evidently increasing, but no paralysis of motion or sensation. Fails to recognize old friends, and is rambling all the time. Hypostatic congestion of lower lobe of right lung. The face is more or less cyanotic and cold to the touch, although the internal temperature is 101.5° F. Heart is working harder, as shown by heaving of chest, but no other change in that organ could be detected. Pulse 120.

March 12th. Patient has been unconscious for twelve hours. Moves freely in bed, however. Vomits all food and medicine. Speech is thick. Both sides of chest full of loud, coarse, mucous râles. No oedema of extremities. In trying to feel of feet to see if they were cold, my hand fell across the tibial artery, where I noticed a strongly-marked Corrigan pulse. The sensation to my hand was as if a tight cord were snapped up against the palm and suddenly withdrawn from the same. This pulse is pathognomonic of aortic insufficiency, and on auscultation Dr. Chamberlain and I thought we could distinguish an aortic regurgitant murmur, but the coarse mucous râles above referred to were so noisy that it was difficult to settle the question. Our confidence in the significance of the Corrigan pulse was so great, however, that we diagnosed aortic valvulitis, with resulting insufficiency, as the trouble in the heart.

March 13th. Rapid superficial breathing. Profuse sweating of head. Slight increase of reflex movement on tickling feet. Scowls if face be pressed. Entirely oblivious of everybody around him. Urine passes unconsciously. No movement of bowels for four days.

Nothing was retained on stomach for previous forty-eight hours. Peculiar sweet death odor noticeable on entering room. Died quietly at 4.30 p. m., that is about eleven days after beginning of cardiac attack, as nearly as can be reckoned.

The autopsy was made by Dr. W. F. Whitney on the next day, with the following result:—

Autopsy twenty-four hours after death. Ice had been placed on abdomen. Body of a very large man. Rigor mortis absent. Head not opened. Subcutaneous adipose tissue largely developed. Large amount of fat deposited in omentum and mesentery. Otherwise nothing abnormal in peritoneal cavity.

Pericardium normal. Heart enlarged. Walls of left ventricle three eighths of an inch in thickness; of right ventricle one fourth of an inch. Color of muscle light reddish brown. Microscope showed no change in muscular structure. The free edges of the mitral valve slightly thickened and irregular, of a yellowish-white color. No evidences of recent disease. The aortic valves showed insufficiency by the hydrostatic test. The free edges of the valves were irregular in outline, showing a marked loss of substance. The curtains of the valves were slightly reddened, and on the surface, especially near the edges, was a yellowish-white deposit, mixed with recently-clotted blood, and on which small whiter specks were to be seen. These were found to be composed of minute round bodies (micrococci) larger than the granular detritus which composed the mass of the substance covering the valves. The right heart presented nothing abnormal.

The right lung was bound to the chest wall by moderately firm adhesions. The lung did not collapse on removal from the body, and was of a dark reddish color. Upon section a reddish fluid, mixed with bubbles of air, could be pressed from the cut surface, which was homogeneous throughout. This was especially marked in the lower lobe.

The left lung presented the same appearance, though to a less degree.

The spleen was of twice the normal size. On section the pulp was found to be of a dark-reddish color, and very soft.

The kidneys were increased in size, soft. The capsule slightly adherent in places. On section the cortical substance was slightly increased in thickness, and was of a slightly opaque yellowish-white color, not uniform, but giving it a streaked appearance. The outline of the separate cells, under the microscope, was not to be distinguished, and their bodies were filled with a fine granular substance.

The liver was large, of a lightish-brown color, the acini distinct from each other, but the surface had an opaque look, and was rather dry. The outline of the cells was more rounded than normal. Some of them contained well-marked fat drops, but the larger number contained fine glancing particles, not turning black with osmic acid.

Other organs presented nothing unusual.

Diagnosis: Acute ulcerative endocarditis. (Edema of lungs and hypostatic congestion. Cloudy swelling of liver and kidneys. Acute splenic tumor.)

If we exclude the cyanosis, which, of course, would make one think of the heart, we notice in this case the conspicuous absence of any symptoms pointing to that organ until the destruction of the aortic valves was revealed by the Corrigan pulse. There was no præcordial pain or oppression in breathing, and the

patient presented rather the appearance of typhoid fever than of heart disease. There is no doubt but that this trouble is often mistaken for ague, pyæmia, enteric fever, subacute rheumatism, or tuberculosis. The beginning of the disease is always obscure. It may be ushered in by a chill or even a rigor. The pulse is then quickened, the tongue dry. Fever is a conspicuous symptom, and the temperature may rise to 104° or 105.8° F., but may also run at a lower level. The temperature often assumes a pyæmic type of irregular fluctuations, which is a very important symptom. The pulse is always rapid, 120 to 160. There may be jaundice, and articular pains are often complained of. Vomiting and diarrhea are common.

These symptoms are general, and point in no particular direction. But now follow a series of phenomena which are very characteristic. Ulcerative endocarditis is distinguished by an accumulation of septic vegetations upon the endocardium, or upon the valves of the heart. These vegetations are soon torn from their attachments, swept away, and distributed among all the organs of the body. Lodging in the skin, they produce petechiæ, and even large purpuric blotches. In the spleen they cause enlargement and softening, with tenderness to pressure. The kidneys become inflamed and swollen, and albumen appears in the urine. Emboli in the brain produce all degrees of cerebral aberration, from muttering delirium to somnolence and coma.

This series of successive explosions of nutritive and functional disturbances in numerous and remote organs, combined with great physical prostration, and possibly with pyæmic fever, are the chief symptoms which lead us to suspect this disease. Of course, the case becomes immensely simplified if we obtain evidence of recent valvular changes in the heart itself. But the first point is to suspect the heart, and to examine it frequently. Dr. Thompson says whenever he finds a murmur or medley of murmurs at the præcordium, combined with delirium, he thinks of embolism of the extreme arterioles of the brain, and especially in the cortical substance of the convexity.

The conditions under which this disease occurs are as uncertain and ill-defined as are the symptoms which accompany it.

My case was preceded by sciatica, and the disease sometimes follows rheumatism. Dr. Osler¹ found that out of fifty-seven cases 26.3 per cent. were associated with rheumatism. The disease may occur spontaneously, and no possible cause he discovered for it, and again it may be superimposed upon an old valvular trouble. It is occasionally secondary to some inflammatory focus. Again one case is reported where it was associated with a suppurating corn on the foot.

The nature of ulcerative endocarditis has long been the subject of discussion and experimentation. Virchow detected, many years ago, a difference between this and ordinary endocarditis, seeking an explanation of this difference he cut up various substances and injected them into the veins of an animal. Bits of caoutchouc simply produced the ordinary results of mechanical obstruction to the circulation, while animal substances (bits of muscle, fibrin, etc.) caused severe inflammation, suppuration, and sloughing. Virchow therefore concluded that the phenomena of infection were due to chemical changes in the emboli. Others

¹ Recent Progress in the Theory and Practice of Medicine. By G. B. Shattuck, M. D. Boston Medical and Surgical Journal, March 31, 1881.

followed this idea in assuming that the irritant effects are due to the decomposition of the emboli which plug the vessels. Lanceraux thought the poisoning was caused by an alteration in the connective tissue of the valves themselves, and not by disintegration of the vegetations alone. Virchow noticed that the valvular deposits contained fine closely-packed granules, which were insoluble in potash, acetic and hydrochloric acids, but were dissolved in chloroform. He considered them to be of a fatty nature.

Professor Winge was the first one (1869) to advance the theory that these granules are living organisms, and he called the disease mycosis endocardii. This same view was taken by Professor Heiberg, of Christiania, who sent specimens to Virchow for examination. With further study Virchow, Klebs, Koster, and a number of other Germans have given their approval to this theory, and they say that the organisms found are micrococci, vibriones, bacteria, and leptothrix filaments. Some of these observers believe that the germs are the essence of the disease. Heiberg inclines to the germ side of the question, but he allows that cases of ulcerative endocarditis present themselves wherein no parasites can be detected. Eberth thinks that the bacteria are introduced into the blood from without, and become aggregated into a sticky mass, which adheres to the surface of the cardiac valves. Here they multiply rapidly, and, dropping off, are distributed to all parts of the body. On the other hand, some writers repudiate the germ theory with great vigor, and claim that the parasites, if present, are merely the accidents of the disease. Miller says that bacteria and leptothrix are constantly present in the healthy mouth, and if they are so dangerous we ought to be poisoned all the time. He thinks the granules described are merely detritus.

Examining a case of ulcerative endocarditis after death, one finds one or more of the valves and portions of the endocardium covered with patches of vegetations and ulcerations. These patches are generally small in area, and may be on either side, and in any one of the four chambers of the heart. Of course, when the disease is limited to the right side of heart the brunt of the embolic explosion comes upon the lungs, which usually contain scattered abscesses. The liver is pale and flabby. The spleen is soft and pulpy. The kidneys present cloudy swelling, and hemorrhages may be seen in any or all of the chief organs and tissues. Dr. Hall Curtis¹ reports a case where small spots of superficial gangrene formed on the right leg from minute emboli in the skin.

Little can be said in regard to the treatment of this formidable disease. Nearly all the cases reported have been fatal, and some were rapidly so. I have seen one doubtful case of recovery described, but it seems as if our chief consolation in this disease will be the satisfaction of having detected its presence before it was revealed by the autopsy.

— On the first day of the American Medical Association, by request of Dr. Gross, the rules were suspended to allow Dr. Gross to make a motion for the establishment of a section of dentistry. The motion was seconded by Drs. Sayre and N. S. Davis, and was adopted without a negative. The section is to be in working order at the next annual session.

¹ Boston Medical and Surgical Journal, May 13, 1880.

THE NECESSITY OF THE LONG NOZZLE IN MAKING INTRA-UTERINE INJECTIONS AFTER CONFINEMENT.²

BY EDWARD JACOB FORSTER, M. D., CHARLESTOWN, MASS.

In cases where there remains in the uterus after confinement any clots, portions of the placenta or membranes, which by undergoing decomposition may be the source of septicæmia, the use of the common vaginal tube or nozzle sold with the ordinary bulb injection syringe has, I am convinced by observation, been the cause of giving general practitioners a false sense of security, that by their use, they were doing all that was necessary to disinfect the uterine cavity and combat the tendency to septicæmia. Such a tube should never be used unless the point is made to enter the os, and is carried well up to the fundus. A neglect to thus reach the fundus may be and is the cause of fatal consequences, as two of the cases which I report this evening will, I think, clearly show.

The Davidson Rubber Company have made a tube twenty-seven centimetres long (about ten and one half inches), resembling the ordinary one except in length and the direction of the openings: the latter is only eleven centimetres (or four and one half inches). They have also, at the suggestion of Dr. Wm. L. Richardson, made a tube (here represented) of the same



length as the first, that is, twenty-seven centimetres, in which the openings are so pierced that the stream is recurrent and the holes make a spiral turn about the tube, and thus wash thoroughly every part.

Some of these have been made which have at the end which joins the rubber tubing a joint so that they can be turned while *in situ* without at the same time turning the bulb.

One of these long nozzles should be in every obstetrician's bag.

In certain positions of the uterus the joint cannot be used. The tubes are made of block tin, and can be bent to any reasonable extent deemed necessary. Tubes of a poorer quality are made of lead nickel plated, and when bent the plating cracks off.

CASE I. While at dinner on the evening of Monday, the 18th October, 1880, I was called suddenly, in the absence of the family physician, to Mrs. X., thirty-four years of age, primipara, who was supposed to be at full term. I found her lying upon the bed, dressed, unconscious, with head thrown back, eyes protruding, and violently convulsed.

Ether was immediately given, and the following history obtained: The waters had broken five days before; the amount of urine passed during the last few days had been notably diminished; the patient having had severe headaches, had just before the convulsive seizure complained of great pain in the head.

An examination per vaginam showed the cervical neck patulous, but otherwise as in the eighth month. Assistance was asked for, and Drs. J. G. Dearborn and R. A. Blood responded.

The necessity of emptying the uterus of its burden, and thus relieving the kidneys of the mechanical pressure under which they were attempting to perform

² Read before the Obstetrical Society of Boston, March 12, 1881.

their function, was acknowledged by all present, and the induction of labor by manual dilatation was agreed to. Dr. Dearborn took charge of the anæsthetic, and Dr. Blood and myself undertook the dilation, working alternately.

The vagina offered the most resistance, for when the whole hand had reached the os it was easy work to dilate it. After deliberation it was decided to complete the delivery by the forceps.

I applied one blade, but a sudden crick in my shoulder prevented me from passing the second. So the application was finished by Dr. Blood, who locked and passed them to me, but before attempting delivery the physician who had been engaged to attend the case made his appearance, and I immediately offered them to him. Taking the forceps he at once extracted a rather small female, the cord pulsating strongly. All attempts made by the family physician to resuscitate the child failed. After giving him the history of the case up to the time of his arrival, I left the patient in his hands.

I learned, accidentally, that on Wednesday, two days after delivery, the patient had a chill.

Four and a half days after delivery I was called about four o'clock in the morning by the husband, asking me to see the case in consultation, saying that the attendant had given an unfavorable prognosis.

I found the patient delirious, pulse 104, full and strong, abdomen tympanitic and tender over the fundus which was high up. The skin was said to have a yellowish tint which, however, did not appear in the gas-light. There had been diarrhœa, for which opium had been given; the temperature was 102° F., and had never reached a higher figure.

Quinine and stimulants in large doses, with antiseptic injections every three hours, I think, had been the treatment pursued. The time for an injection being at hand I asked and was accorded permission to see one given; the nurse gave the injection with a fountain syringe, the common vaginal nozzle being used, the proximal end not passing the vulva. The nurse, in answer to my query if she always gave the injections and in that manner, replied in the affirmative.

Retiring with the attendant I agreed to the quinine and stimulants, and suggested that he give the injections himself, passing the tube well up, to which suggestion he acquiesced.

Later in the same day I was requested to see the case again and meet Dr. William L. Richardson at 11.15 A. M.

At that hour the attending physician, Dr. Richardson, and myself were present. The patient's condition was much the same as in the early morning. On examination Dr. Richardson found the perinæum had been ruptured and stitched but the wound appeared well. The cervix was found to be torn in two places and the cavity of the uterus filled with old clots and decomposing *débris* of a very offensive character. The physician informed us that three hours before he had thoroughly cleansed the uterus.

Upon retiring to the parlor Dr. Richardson advised a thorough syringing and cleansing of the uterine cavity, a continuance of the brandy and quinine, and thought that the diarrhœa was an effort of nature to eliminate the poison and should not be checked. He gave an unfavorable prognosis.

At about six P. M. I was informed that the attendant had been dismissed and was asked to take charge of

the case. After some hesitation I assented, and soon after had Drs. Richardson and Blood in consultation.

We at once thoroughly washed the uterine cavity, the first returning fluid being very offensive and containing putrescent matter. The catheter was also passed, but, owing to the eyes of the instrument becoming clogged with diphtheritic membrane, several attempts were necessary before a tablespoonful of urine was obtained. The patient was soon unable to take stimulants, the temperature rose rapidly, and death ensued at 11.15 P. M.

An examination of the urine showed it to be highly albuminous, and every field examined was filled with coarsely granular and fatty casts and blood cells.

CASE II. On the 27th of November, 1880, I was called to a neighboring town to see in consultation Mrs. Y., twenty-six years of age, primipara, who a week before had been delivered of a female child after an easy and natural labor.

When seen the patient was unconscious, pulse too rapid to be counted, temperature 102° F. No tympanites. The nurse remarked that the lochia had less odor than usual, no offensiveness having been noticed. Three days after the confinement the attending physician noticed the uterus much enlarged and informed the nurse that in all probability some clots would shortly come away. Stimulants were being given but sparingly, a tablespoonful of brandy only in the twenty-four hours.

A daily antiseptic injection had been given by the nurse with the ordinary nozzle, and no offensive odor had been noticed.

Making a vaginal examination I found the cervix torn and my finger covered with the most offensive fluid I have ever encountered.

Using the long nozzle which I have described, I brought away large quantities of the same offensive matter, and continued the injections until the returning fluid had no longer any odor but that of the carbolic acid which it contained. Hypodermic injections of brandy were given, notably strengthening the pulse for a few moments. The case, however, soon terminated fatally.

In contradistinction to the foregoing unfortunate cases the following is reported.

CASE III. In the evening of the 9th of December, 1880, I was called in consultation to see Mrs. Z., multipara. The patient was a stout Irishwoman. An examination showed the head engaged in the superior strait, the face to pubes, the cord prolapsed, and the anterior lip well down. She could not be made to assume the face and knee position, and all efforts to return the cord were unavailing.

Ether was absolutely refused. The forceps had repeatedly been applied and as often slipped. At a second visit, an hour or more later, after much urging, consent was obtained to administer ether, and I at once took charge of the anæsthetic.

In one of the attempts to extract the child the forceps again slipped, and the cord was broken in two. The head was finally brought down, and with it there appeared at the vulva what the attending physician who first saw it thought to be the congested urethra and meatus, which had prolapsed; examination showed it to be the greater portion of the anterior lip, all but separated from the uterus, lying antero-posteriorly in the vagina, and resembling in size, shape, and color, a small Bologna sausage.

Antiseptic injections with the long nozzle were given at once and continued; the anterior lip sloughed off in a few days, the patient making a good recovery, with scarcely an untoward symptom.

While Cases I. and II. are reported to show that the common vaginal tube gave a false sense of security, there are other points which are open to adverse criticism.

The use of forceps in such cases as No. I. was formerly taught, but latterly authorities advise delivery by turning as preferable in rendering the accidents mentioned less likely to recur. In the light of my experience in this case I should, under similar circumstances, practice turning.

The importance of recognizing some slight lacerations of the perinaeum, as insisted upon by Dr. G. H. Lyman, and the necessity of operating at the earliest possible moment, should cause an early examination of and attention to such injuries.

In regard to the checking of the diarrhoea by opium, Dr. Armstrong, writing of Puerperal Fever in 1849, says that he found a diarrhoea coming on in the first stage sometimes carried off the disease; on the contrary, constiveness was always an unfavorable circumstance.

In Case II. the sudden enlargement of the uterus on the third day, which the attending physician rightly interpreted to be due to a clot, should at the same time have suggested the necessity of at once removing it.

In both cases the injections were at first given by the nurses, an operation which should only have been done by the physician.

Dr. Edward W. Jenks, in his article on Intra-Uterine Injections for Septicæmia,¹ gives his opinion strongly upon this point, saying:—

"The administration of these injections ought never to be intrusted to a nurse or inexperienced assistant, but should invariably be given by the accoucheur himself, with as much carefulness and attention to every detail as he would exercise in the performance of a surgical operation."

In the discussion which followed the reading of his paper, Dr. Fordyce Barker, speaking of these injections, said "they should never be trusted to a nurse," and Dr. T. G. Thomas added that he never intrusted this delicate duty to one.

The principal objections to using these injections after confinement are:—

I. The alleged danger of air being made to enter the uterine sinuses.

II. The alleged danger of the fluid entering the peritoneal cavity through the open Fallopian tubes.

In regard to the first, if the tube is filled with the antiseptic fluid this accident cannot happen. In regard to the second objection, the tubes or nozzles here described lessen the danger of forcing fluid through the Fallopian tubes, the direction of the openings being reversed from those in the ordinary vaginal one.

In using this tube for vaginal injections in the non-puerperal state, this distal opening is again dangerous, as fluid may unintentionally be forced into the uterine cavity. At the suggestion of physicians the company have discontinued making the central aperture.

In using intra-uterine injections in the treatment of septicæmia, and of their value I am thoroughly convinced, we cannot do better than bear in mind the following precautions given by Dr. Jenks:—

"(a.) The mouth and neck of the uterus should be well dilated, and a free outlet insured for the injected fluid.

"(b.) Air must not be admitted with the injection.

"(c.) The fluid should be injected slowly, and without much force.

"(d.) The fluid used for injection ought not to be of a lower than the normal temperature of the body."

22 MONUMENT SQUARE, CHARLESTOWN DISTRICT,
BOSTON, 12 March, 1881.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

E. G. CUTLER, M. D.

CHANGES OF THE SALIVARY GLANDS IN HYDROPHOBIA.

THOUGH the infective character of the saliva in hydrophobia is well known, there have been hitherto no positive descriptions of the changes met with in the salivary glands of animals affected with this disease. It is stated, indeed, that the glands are found to be in a hyperæmic condition, though Bruckmüller contradicts this statement. The observation of Nepveu² throws a little light on this subject. He found a tolerably extensive small-celled infiltration of the interstitial tissue in the salivary glands of a boy seventeen years old, who died of hydrophobia. Elsberg³ gives the chief results of his investigations undertaken on twelve dogs and two human beings affected with the disease.

In the dog he found the greatest change in the submaxillary and sublingual glands. The former was slightly enlarged, presented a smooth surface on section, with here and there indistinct acinous structure, and had a grayish-red color. Examined with the microscope there was a considerable infiltration of the interstitial tissue, with small cells having one or several nuclei, and resembling precisely the colorless corpuscles of the blood. This infiltration was greatest about the excretory ducts and veins of medium calibre in the hilus of the acinus; it diminished gradually towards the periphery, and at the hilus of the gland it was entirely absent. At times the infiltration of the acinus assumed such dimensions as to represent microscopically a collection of pus. The infiltration in the interacinous tissue was very much less.

The fixed cells of the interstitial tissue were slightly enlarged, swollen up, without a trace of division.

The blood-vessels, particularly the small veins and capillaries, were much dilated, and the blood filling them contained a large number of white corpuscles lying both irregularly distributed amongst the red corpuscles and also next the wall of the vessel.

The epithelium of the alveoli of the submaxillary gland as well as the crescent-shaped cells (Lunulæ Gionuzzi) also did not remain unchanged. The contents of the secretory cells first became slightly granular instead of consisting of a transparent, slimy mass, the granular mass gradually increased, while at the same time the circumference of the cell diminished one third. The nucleus became rounder, increased in size, and its former peripheral position became a more central one. Such cells were readily stained by pikro-

² Gazette Médicale de Paris, 1873, No. 47.

³ Centralblatt für die medicinischen Wissenschaften, March 26, 1881.

¹ Volume IV. of the Transactions of the American Gynecological Society.

carmine or hamatoxyline, and occasionally two nuclei were seen in them.

The crescent-shaped cells swelled up, sometimes enlarged so much as to fill up two thirds of the entire alveolus. At the same time the number of their nuclei increased considerably, so that one found in a crescent-shaped cell three and more times as many nuclei as in a normal cell.

In addition to the above changes an inconsiderable number of small round cells, analogous to white blood corpuscles which had pushed in from the neighboring interstitial tissue, were sometimes seen in the glandular alveoli. The same appearance was also met with in the excretory ducts of middle calibre. The small cells piercing the wall lifted up the epithelium, separated the single cells from each other and got into the interior of the duct.

A moderate infiltration of small cells occurred about the nerve ganglia, and sometimes it even penetrated the ganglia.

Similar changes to those in the submaxillary, though of less intensity, were found in the sublingual gland.

The orbital gland of the dog, which, like the two former, belongs to the same group of mucous salivary glands, was always very slightly altered.

In these three glands Elsenberg always found the changes described above; the parotid showed only in four dogs inconsiderable alterations. The small-celled infiltration of the interstitial tissue was always moderate; the gland cells were a little enlarged, appeared granular, and contained two and more nuclei. Similar changes to those in the gland cells were observed also in the epithelium cells of some of the excretory ducts of medium size.

In the human subject Elsenberg found no changes at all in the parotid, in the submaxillary only very slight ones, confined to a small-celled infiltration of the tissue surrounding the excretory ducts and medium-sized veins, while the most marked alterations were met with in the sublingual, and were similar to those found in the dog, though less intense.

These changes convince Elsenberg that there are disturbances of circulation and nutrition which may be regarded as inflammatory. The cause of this inflammatory process is the infectious material which circulates in the blood, and is eliminated by the saliva.

Since the greatest changes affect the submaxillary and sublingual glands, and, on the other hand, the mucous glands at the base of the tongue are very rarely found to be altered, it may be affirmed that the saliva of the submaxillary and sublingual glands chiefly, perhaps exclusively, contains the specific infectious material of hydrophobia.

The alterations of these two glands render it possible to diagnose hydrophobia in the dog, since they occur only in this disease.

Diseases of the salivary glands in animals are altogether very rare, and such have not hitherto been described in dogs. Many alkaloids, as nicotine, pilocarpine, and muscarine give rise to a few changes in them, but they are so slight as to be scarcely mistaken for alterations such as have been seen by Elsenberg in hydrophobia. In the human subject these glands present slight and therefore for hydrophobia little characteristic changes, since similar alterations also occur in people after different infective diseases, and, moreover, many medicines in frequent use give rise to similar and quite as slight disturbances.

THE RESULTS OF LIGATURE OF THE URETERS AND RENAL ARTERIES IN ANIMALS.

Popoff¹ gives the results of eleven experiments performed on animals. He ligated the ureters five times in dogs, and the renal arteries an equal number of times, and further he tied the ureters once in a rabbit. Two of the animals died of hæmorrhage and one of peritonitis, all the rest died in consequence of stopping the secretion of urine two or three days after the operation; the symptoms being those which are usually designated as uræmic. The clinical appearances observed in the uræmic animals in ligature of the ureters and of the renal arteries were partly alike and in part different from each other.

The gross appearance of the *brain* and its membranes in almost all cases was a greater or less degree of hyperæmia, chiefly of a venous character; sometimes also there was observed in the brain in comparison to the normal a somewhat greater amount of fluid, so that it appeared to be moister and softer than usual. With the microscope a net-work of capillaries and also larger vessels was apparent, characterized by the presence in or near them of more or less refractive, almost colorless, or faintly yellow or greenish hyaline masses of variable size, from that of a red blood corpuscle to three or four times as large. These masses were either single or in groups, and could be seen in fresh brains or, better, after hardening in bichromate of potash, Müller's fluid, or chromic acid. With a high power (Hartnack ocular three, objective seven) these masses were very frequently seen to be situated outside the vessel in the so-called perivascular lymph space; moreover, in most cases, they were found at the point of division of the vessel. Their accumulation at these places might be so great as to completely compress the lumen of the vessel. Inside the vessel they were found either in the walls between the different layers, especially between the fibres of the adventitia in the so-called intra-adventitial lymphatic courses, or in the lumen of the vessel itself. When situated in the wall of the vessel there was a certain regularity of their position, as they lay in the spaces of the connective tissue where the fixed connective-tissue corpuscles were, or suggested the position of the nuclei in the capillaries. This accumulation of hyaline masses, both between the elements of the wall of the vessel, in the lumen, and outside of it, must naturally present a very considerable obstruction to the free circulation of blood; in many cases it may, indeed, entirely interrupt it, and thus cause very considerable functional disturbances of the brain. On carefully examining the bodies described above many of them, both in appearance and size, greatly resemble red blood corpuscles, though without the double contour of the latter. Their color, also, sometimes did not vary much from red corpuscles. Some elements, however, though exhibiting similar characters, were much smaller than red blood corpuscles, suggestive of a partial dissolving of the same; and others, again, considerably larger, indicated a swelling of them. They differed from fat drops both optically and chemically. Addition of alcohol and ether changed them and dissolved them partially only, thus showing that they were not fat and distinguishing them from colloid masses which it is well-known are insoluble in alcohol and ether. Osmic acid gave them a darker color than the rest of the elements of the brain tissue, yet this staining was not so energetic, and did not appear so black, as is usually the case with fat. Fur-

¹ Virchow's Archiv, vol. lxxxii., p. 40.

thermore, like iodine, osmic acid broke up the larger masses into the smaller elements of which they were composed.

Popoff draws the conclusion that the hyaline masses above described are really red blood corpuscles in a state of metamorphosis.

In the liver a considerable amount of fat was found in the connective tissue which accompanies the hepatic capillaries; it was seen more especially in the branched cell of the connective tissue. Besides the occurrence of fat in the liver there was usually a granular change of the hepatic cells sometimes attaining a high degree. Acicular crystals formed very readily in sections examined in glycerine.

Among the appearances in the *kidney* after ligation of the ureters was especially increase in volume and hemorrhage into the capsule and surrounding connective tissue and partially into the kidney itself. The organ in most cases was in a more or less pronounced condition of anæmia, especially in the cortical portion. On section usually a considerable quantity of yellowish watery turbid fluid flowed out and in such cases the pelvis was considerably distended by urine; microscopic examination showed the capsules of the Malpighian bodies to be in the same condition, and the vessels of the glomerulus to be pushed aside. The epithelium of the tubules, especially the convoluted ones, was for the most part very granular, some of them showing a marked fatty or colloid degeneration. In the lumen of both convoluted and straight tubules various crystals are frequently met with, the chemical nature of which requires special investigation. The kidneys whose arteries were ligated appear somewhat diminished in size or shrunken. The cortical portion had a very striking grayish-yellow color, and was sharply bounded from the dark-red medullary portion which usually exhibits a general venous hyperæmia. Microscopic examination showed a high degree of fatty degeneration of the urinary tubules of the cortical layer.

The *spleen* showed no special change in either set of experiments. The *stomach* and *intestines* in both cases presented the appearances of a more or less considerable catarrh. Usually the *heart* was filled with abundant firm coagula, its tissue had a grayish color and was flabby, and the muscular fibres often appeared decidedly granular under the microscope. The *pericardium* and *pleura* were often hyperæmic, and not rarely small ecchymoses were found in them. The *lungs* usually exhibited no special change. The *muscles* of the body and extremities were usually of a very pronounced dark-red color, and with the microscope often showed a greater or less marked granular degeneration, like that of the heart.

To formularize the symptoms:—

(1.) The animals in each case lived about the same length of time. Almost always death occurred in the course of the third day; in ligation of the ureters a few (four to five) hours later.

(2.) The chief phenomenon, which in both cases occurred soon after the operation, was sinking of the temperature. The use of narcotics during the operation, as chloroform, morphia, or opium, made the depression of the temperature more marked (on the first day), but could not be regarded as the cause, since the temperature also fell in cases where no narcotics were used. This fall of the temperature, while it fluctuates only a little at first (especially on the second day), becomes more considerable as time goes on. Inflammatory com-

plications, as of the peritonæum, may exercise an influence on the height of the temperature and raise it a little; nevertheless it sinks even here below the normal.

(3.) Besides falling of the temperature, diminution in the frequency of the pulse was often observed (the strength of the pulse was not diminished, at least at first).

(4.) Vomiting and diarrhœa, sometimes accompanied by blood, were observed in both cases.

(5.) Most constant and characteristic, in all the animals operated on, were the appearances of relaxation and somnolency, which generally ended in coma.

(6.) Tonic and clonic convulsions were very often present, and strongly marked in ligation of the ureters. They were only observed in one case after ligation of the renal arteries, and then only very slightly marked.

It was found that the crystals observed in the liver were due to the storing up of urea in that organ. They were observed more especially in ligation of the ureters, and were not constant in ligation of the renal arteries.

Csokor, Adjunct and Docent in the Veterinary Institute in Vienna, in a late number of Virchow's *Archiv*, calls attention to the fact that the changes described above by Popoff, as occurring in the brain after ligation of the renal arteries and ureters, are met with in healthy dogs, and are to be regarded as indicative of a normal senile change which occurs in the brain of every dog.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. GAY.

REPORTED BY DR. J. N. BULLARD, HOUSE SURGEON.

COMPOUND COMMINUTED FRACTURE OF ELBOW-JOINT: EXCISION.

CASE I. Frank M., nine years of age, fell from a fence, September 3, 1880, striking directly upon the left elbow. On entrance, a small opening was found over the external condyle, large enough only to permit the passage of a probe, which impinged upon the bone. The elbow was much swollen and distorted; the external condyle appeared to be displaced downward, the internal condyle not being made out. The patient being etherized, an incision was made, under Lister spray, three inches long over the external condyle. The lower end of the humerus was found to be denuded of periosteum and comminuted into three pieces, the internal condyle being forced downwards back of the olecranon, with the external condyle displaced downwards and forwards, there being a third smaller fragment resting in the head of the ulna. The humerus was excised about two inches above the condyles, the periosteum, however, being torn from the bone for a distance one and a half inches higher than this. The wound was carefully washed with carbolic water and dressed with Lister gauze, and the arm laid in a straight position on an oakum pillow.

September 8th. Dressed on alternate days under the spray. Discharged considerable. Edges of wound healing slowly.

September 25th. Not having improved was etherized and an incision made two inches long over inner aspect of arm. A single flow of pus followed, a drainage tube was passed through to the other opening; wound was directed to be syringed through and dressed every other day under spray.

October 1st. Patient was etherized and under spray the external opening was enlarged and nearly two inches of the humerus, bared of periosteum and roughened, was removed. Dressing of Lister gauze continued.

October 25th. It was healing rapidly. Inner wound was entirely closed. Very little purulent discharge. Lister dressing continued.

November 3d. Dressed with zinc ointment. Patient gets up.

November 16th. Arm all healed but a little point of granulation over outer side, through which the probe passes to dead bone. Uses arm very well, can touch with his fingers his forehead but not his nose.

November 27th. Condition as above. Is discharged at own request.

COMPOUND COMMINUTED FRACTURE OF ELBOW-JOINT: EXCISION.

CASE II. Lawrence H., aged ten, was struck by a horse-car in crossing Washington Street, September 26, 1880. On entrance was etherized. Examination showed a piece of skin two and one half by three inches forcibly torn away from over the inner condyle and anterior aspect of the arm. A small opening here existed leading into the joint. There was a T fracture of both condyles, the external being displaced downward upon the head of the radius. The olecranon was completely broken off. Under the spray, an incision was made in line of the olecranon and the end of the humerus sawed off. The head of the radius and ulna were also removed, the insertion of the biceps not being destroyed. Very little hemorrhage. Washed with a strong solution of carbolic acid and drainage tube passed through. Lister dressing applied.

November 29th. Some sloughing about the edges where skin was torn away, and a slight redness extending up the arm. Dressed under spray every other day, each dressing causing him considerable pain.

October 26th. Edges granulating slowly. The opening into joint has entirely closed, the tube being removed ten days ago. Considerable purulent discharge from granulations.

November 5th. Lister dressing omitted and zinc ointment substituted. Discharge much less. Healing fast.

November 13th. Gets up with arm in sling. Granulating surface nearly closed.

December 14th. Arm entirely healed for some time. Very fair motion at joint. Can swing arm forward but cannot touch the top of his head nor his face. Discharged well.

NECROSIS OF ELBOW: EXCISION: DEATH.

CASE III. M. G., a scrofulous looking young man of twenty-one, from Prince Edwards Island, entered hospital October 25, 1880, with following history. One year ago his elbow became sore and swollen from no known cause. Abscesses had formed and broken and showed no tendency to heal. The elbow had slowly enlarged and became stiff. There are now several sinuses leading to dead bone about the joint. At the

middle of the forearm was an opening apparently superficial, discharging pus. Patient was put to bed with poultice for elbow, and treated with tonics and extra diet.

October 29th. Etherized, and under the spray, an incision was made over the olecranon. The ulnar nerve was reflected to the inside and muscles and tissues dissected away from the bones. The bones were roughened, and surrounded by a jelly-like material. Three inches of humerus and two of the radius and ulna were bared and removed. A drainage tube was put in, the opening on the forearm enlarged, and the arm dressed with carbolic gauze.

November 3d. Has been dressed daily. Considerable suppuration with pus burrowing about the arm. Suffers from no pain. Temperature reaches 102° F. in evening with morning remission.

November 15th. Wound dressed with soda wash under carbolic gauze. A few small abscesses have formed about the wound and discharged pus. Granulations looking well.

November 30th. Has been dressed with weak solution of nitric acid. Wound looks healthy.

December 7th. Temperature running to 105° F. every night. Very little discharge. Brandy, five ounces daily.

December 13th. Has been very stupid and quiet of late. Is passively delirious. Takes very little nourishment. Tongue dry, brown. Fingers of right arm tonically contracted. Temperature 105° F.

December 18th. Has been slowly failing of late. Has to be roused for food, of which he takes but little. Very little suppuration.

December 20th. Died 8.20 P. M.

CASES OF TRACHEOTOMY.

CASE I. Willie D., aged six, entered hospital October 3, 1880. Suffering from severe dyspnoea. His skin is purplish, respiration quick and labored, with deep retraction of intercostal spaces. Discharge from nostrils constant, but no bleeding. No membrane can be seen in his throat, although his brother, aged eight, who entered with him, had well marked patches upon both tonsils. No swelling about the neck. Administration of ether produced marked lividity of face. A spasm of the glottis occurred before the trachea was opened, with cessation of respiration for a moment. Hemorrhage free, partly due to cutting vessels, partly to congestion of parts; this ceased on introduction of tube, and respiration became easy. The next day temperature rose to 101.5° F. Took nourishment well and breathed with no difficulty.

October 9th. Was troubled with cough and mucopurulent discharge which disappeared in two days more.

October 20th. Tube was finally removed, seventeen days after operation, all attempts to remove it before having been futile. Coughed some, and respiration had a croupy sound.

October 25th. Wound was entirely healed over, he breathed easily, voice was natural. Discharged well.

CASE II. Murtagh D., a feeble-looking child of eighteen months, entered November 2, 1880, with history of measles and whooping cough the past summer. Two days ago he developed symptoms of trouble in the throat. Examination showed the whole back of the pharynx covered with a diphtheritic membrane, thick and yellowish, respiration labored; pulse rapid and

weak. An incision was made, without ether, down to trachea, this was very soft and entered with difficulty. Patient collapsed for a moment after insertion of tube but soon rallied and breathed easily. Next morning patient had pulse of 160, with very rapid respiration. Refused nourishment. Failed rapidly, and died at 2.45 P. M.

CASE III. Ellen C., three years of age, entered November 21, 1880. One week ago caught cold but had no trouble till yesterday when she began to choke up. Her breathing is very labored with deep depression of intercostal spaces in inspiration. Face is livid, and pulse rapid and feeble. Etherized and tube inserted without difficulty, a large vein lying over trachea being drawn to one side. After ether, patient suffered with repeated attacks of coughing between which breathing stopped entirely. Pulse very rapid and feeble. Given enema of brandy two drachms. In three quarters of an hour breathing became easier and she was transferred to ward. Next day the neck was somewhat swollen, pulse and respiration rapid, would take but little nourishment. Failed rapidly and died at 4.30 A. M.

CASE IV. Joseph G., seven years of age, entered hospital November 23d on medical side, and next day developed measles. A younger sister had died at home, a short time previous, of membranous croup [?]. His mother entered hospital November 15th suffering with diphtheria, for which tracheotomy was performed. She died November 22d. By November 27th the eruption had disappeared on the boy and his tonsils became much swollen with a small white patch upon the right. Croupy cough and hoarse respiration, with swelling at the angle of the lower jaw. November 28th was etherized slowly, and trachea tube inserted without difficulty, considerable mucus being forcibly ejected on incision of trachea. Patient breathed easily afterwards. Pulse good. Given brandy, \mathfrak{ij} , in milk every four hours. Tr. ferri chlor. , gtt. iij. , pot. chlor. , gr. v. , every three hours. Next day the neck was badly swollen. Temperature 104, pulse rapid and feeble. Takes but little nourishment. Respiration was difficult and labored. Tube removed, when some pieces of tough, thick, membrane were coughed up. Tube replaced, and removed again later, but with no relief. Membrane was evidently invading the trachea below the tube; respiration became hurried and labored. All nourishment was vomited. Died of suffocation at two A. M.

[The most satisfactory manner of performing tracheotomy is as follows: The first incision is made by transfixing the skin with a narrow knife. By careful and repeated strokes in the median line the tissues, including the thyroid gland, are divided down to the trachea. The large vessels can usually be seen and avoided, the small ones require no special attention. The trachea having been seized on each side by a hook an incision is made between them, when the wound immediately opens sufficiently to allow of the introduction of the tube without the use of a dilator.

I no longer use a director in dividing the structures over the trachea, as in two instances, while making a careful dissection with the aid of this instrument, the cellular tissue became engorged with air and blood, the depth of the trachea was increased, and the operation was finished entirely by the sense of touch. In a small trachea the dilator takes up too much room, and, besides, the blades, not infrequently, get

between the rings of the trachea and fail to open the wound.

Unless the color of the skin is pretty good it is better to do this operation without ether. The pain is not great, and there can be no doubt that this agent obstructs respiration very much in patients enfeebled by great dyspnoea. It is said that chloroform relieves rather than increases the dyspnoea in these cases, but the prejudice against this anæsthetic is so strong in this city that one hesitates to make use of it. G. W. G.]

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. T. CABOT, SECRETARY.

FEBRUARY 7, 1880. DR. G. M. GARLAND reported at length a

CASE OF ULCERATIVE ENDOCARDITIS,

which appears in this number of the JOURNAL.

DR. F. C. SHATTUCK expressed himself as much interested in Dr. Garland's case, which brought to mind a recent case in the service of Dr. G. C. Shattuck at the Massachusetts General Hospital.

A man of twenty-three, previously in good health, entered the hospital November 25th with what seemed acute articular rheumatism, confined to the left knee, which was much swollen, painful, and tender. Five days before he had had a chill after decided exposure to wet and cold. Nothing abnormal was discovered about the heart or kidneys, and there were no remarkable developments in the case till December 1st, when two small abscesses were noted, one above the left elbow, the other on the outer aspect of the right thigh. During the night both testicles became swollen, hard, and painful, and then the left leg rapidly became the seat of a phlegmasia alba dolens. On this day it was noticed that the apex of the heart was visible inside of and on a line with the left nipple, and that a slight, short systolic murmur was audible in the region of the apex.

The following day this murmur was more distinct and longer. The patient grew steadily worse, the breathing became labored, and the lungs filled with rales. In the superficial cardiac space a sound suggesting friction was heard. The man died on December 7th, thirteen days from entrance into the hospital, and seven days after the first serious symptoms. The temperature vacillated considerably, but was never very high. All efforts to procure an autopsy were unavailing. The clinical diagnosis was acute rheumatism, pyæmia, and probably ulcerative endocarditis.

DR. PARKS said that he thought the disease was more common than might be supposed from reported cases. The cardiac symptoms appear late, and often are not characteristic. In a case seen at the Philadelphia Hospital there were no symptoms till near death, then those of pericardial effusion.

DR. F. C. SHATTUCK remarked that the disease known as ulcerative endocarditis is to be distinguished from ordinary endocarditis resulting in loss of substance in the valves and embolism, the difference being that the former is septic, the diseased products starting in the heart, and the emboli resulting from them being filled with micrococci, while the latter is relatively be-

nign. Endocarditis with ulceration is not uncommon, whereas he believes ulcerative endocarditis to be quite rare.

DR. WHITNEY said that in Dr. Garland's case there were no septic emboli. This disease is generally connected with some external injury or other means of septic absorption. In this case of Dr. Garland's there was but little evidence of rheumatism, and it would be interesting to know whether the joints were free from suppuration.

DR. GARLAND said that he regretted that the hip was not examined, but no clinical evidence could be obtained of any lesion there. Thompson calls the disease a form of pyæmia. Great fluctuation in the temperature is a marked feature in these cases.

FEBRUARY 21, 1881. DR. E. W. CUSHING spoke of an epidemic which had recently broken out among the cows in a herd at Cohasset. Among a large number three had been affected with an eruption on the udder. This appeared first vesicular, then pustular, and finally dried into scabs. Nothing of this sort had been noticed in this herd before, and it was supposed to be cow-pox.

DR. BOWDITCH thought the cases ought to be referred to Dr. H. A. Martin.

DR. CUTLER read a paper on a

CASE OF FIBRINOUS BRONCHITIS.

The patient, a lady of sixty-five, ordinarily enjoyed excellent health. During the month of February, 1880, she had a slight bronchitis, which did not confine her to the house, and for which she used only household remedies.

On March 4th, a cold, raw day, she walked some distance, and thought she added to her cold, as on returning home she had a sensation of chilliness, with fullness of the head. The next day and night she had considerable cough, with slight expectoration of saliva and some tough mucus. She felt, however, so little inconvenience as not to think the services of a physician necessary. On the following morning, however, March 6th, the friends, alarmed at her appearance, summoned Dr. Cutler, who found her sitting, dressed, in bed, but deeply cyanosed, and in a profuse perspiration. The pulse was feeble, 136, and the respirations 30. Percussion was normal throughout the chest, while auscultation revealed fine, dry râles over the whole chest. There were also coarse tracheal râles.

The diagnosis of diffuse capillary bronchitis was made. Brandy and carbonate of ammonia, which were already being given, were continued, and a large sinapism ordered to the chest. Dr. Cutler then went for other restoratives and professional aid, but on his return the patient was already dead.

The autopsy revealed the following condition of things:—

The pharynx and larynx healthy. The tracheal mucous membrane in its lower half was injected and slightly thickened. A croupous membrane lay reflected on itself over the entrance of the two primary bronchi. When laid in place this membrane reached less than half way up the trachea. Downward it extended into the minutest divisions of the bronchi, in many of them forming an almost solid plug. The alveoli contained no solid matter, and except in a few places where there was œdema or collapse they contained air.

DR. BOWDITCH asked whether the old treatment for dyspnoea, with strong emetics, might not have been of service in this case.

DR. CUTLER said that emetics were thought to be of use after the bronchial secretion has been increased with iodide of potash. In his case the membrane could not have been detached, extending as it did into the finer bronchi.

DR. BRADFORD showed some specimens of bones which he had obtained of Professor Putnam, of the Peabody Museum. These were from the mound builders or cave dwellers, and are known to have been from tribes existing before the arrival of the whites. These diseased bones had been picked from a thousand skeletons.

I. A femur with a perforation partially filled up and surrounded by evidences of suppurative osteitis. This may have resulted from some external violence.

II. Two tibiae. One normal, while its mate had evidences of caries of the ankle. An exostosis showed an attempt at repair. The possessor of this bone must have been long sick, requiring care, and must have gone about with some artificial support, as by cane or crutches.

III. Caries of the spine. The whole dorsal region was involved, and a cure by anchylosis had taken place. The rest of the skeleton showed the person to have been a young female. Years must have elapsed before the cure was effected, during which she must have required careful nursing.

IV. Two fractured femurs. The fragments were united in such good position that it seemed as if they must have been treated with quite considerable surgical skill. There was no bowing outwards or forwards, and but little rotation.

This position could not have been maintained till the cure was attained without some pretty efficient means of preserving the axis of the limb. The results would be considered good in these days in cases where extension could not be employed.

From the consideration of these specimens we must, then, believe that these Indians had some rude surgery and nursed their sick.

DR. TARBELL called attention to the fact that in the spinal case, notwithstanding the extreme deformity, the canal was not narrowed. This is a confirmation of the oft-observed fact that in spinal caries paralysis is due to inflammatory changes in the cord, and not to compression.

DR. JOSEPH STEDMAN reported the following case of

PERFORATION OF THE VERMIFORM APPENDIX.

A young girl, previously in good health, complained one morning of pain in the stomach, and at noon was unable to eat any dinner. At six P. M. she vomited a large quantity of food containing, among other things, tomatoes eaten five days previously, none having been taken since that time.

At eight P. M. Dr. Stedman was called, and found her complaining of pain in the neighborhood of the cæcum. Pulse much accelerated. The next day she was fairly comfortable, with a pulse of 100, temperature 100.5° F. Towards evening she vomited again, and had slight pain over the cæcum, with some tenderness. Opiates were given and fomentations applied. On the third day she was easy. Pulse about 100. Temperature 99° F. At his evening visit he found her doing well, and was about to leave the house

when she vomited about one half a pint of dark fluid like broken-down blood. Soon after she vomited again, and seemed on the point of dying, but lingered till the next morning.

Dr. FITZ, who made the autopsy, said that there was perforation of the appendix vermiformis about half an inch from the bowel. The appendix itself was peculiar in being enclosed in a fold of the omentum.

In regard to the advisability of opening the abdomen in cases of obstruction or obscure disease, Dr. FITZ said that recorded cases show great difficulty in arriving at the nature of the trouble after the peritoneal cavity is opened; even in autopsies it is often extremely difficult to unravel the conditions from which the trouble has resulted, and therefore one should be very cautious in recommending abdominal section in such cases.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, SECRETARY.

MARCH 26, 1881. Seventy-two members present. Dr. R. M. HODGES in the chair.

Dr. C. F. FOLSOM read a paper entitled

SOME POINTS IN THE EARLY DIAGNOSIS AND TREATMENT OF THE GENERAL PARALYSIS OF THE INSANE.

Dr. J. H. WHITEMORE said that during his residence at the McLean Asylum for the Insane he had only seen two cases in which there had been any reason to believe a cure had been effected. The first patient had been taken home by his friends, who felt sanguine of his having completely recovered. Six months afterward Dr. Whitemore learned that the delusions still existed, and there was little doubt that the disease would terminate fatally. The second was an inmate of the asylum several months, and went out very much improved. Dr. Whitemore had received that very day a letter, stating that he considered himself perfectly well; that he was engaged at present in light literary work, translating Latin and Greek for publication, and gaining his living thereby. The man's handwriting was very legible, and did not present at all the appearance it had when he was at the asylum, it being then considered very characteristic of the general paralytic.

Dr. T. W. FISHER spoke of the difficulty of obtaining general paralytics as patients in the beginning of the disease, especially in private practice. He had seen many cases in the early but many more in the later stages. It is almost invariably the case that the date fixed by the patient or his friends as that of the beginning of the disease is far from the true one. It is only by the most careful inquiry that this can be elicited. Dr. Fisher referred to five cases, three of which were supposed to be traumatic in origin. A careful inquiry into these would probably elicit the fact that they were tending to general paralysis before the injuries occurred. The condition of parietic patients in the earlier stages was such as to make them peculiarly liable to accidents, and the result was thus often considered the cause. Dr. Fisher spoke of a patient who had been under observation at the South Boston Asylum since July, 1878; his case illustrated the fact that illusions were sometimes present in the earlier as well as in the later stages. He had a great

variety of illusions and perverted sensations. Three days before death he had what is known as a congestive attack, during which, by mistake, an attendant administered some oat-meal gruel; this brought on a violent attack of vomiting and coughing, complete coma, extremely contracted pupils, stertorous breathing, and convulsions ensued. At the autopsy there was found thickening and opacity of the pia mater in patches; considerable clear fluid in the meshes of the pia; thickening and granular condition of the ependyma of the lateral and fourth ventricles; considerable diminution in the thickness of the gray matter of the cortex; diffuse yellowish discoloration of the thalami optici; acute desquamative pneumonia from inhalation of particles of food. Microscopically, increase in the connective tissue, fibres of the pia, with abundant round cell infiltration, more marked about the vessels; general pigmentation of the ganglion cells of the gray matter of brain and cord; infiltration of the adventitial lymph sheaths of vessels of brain and cord, with round cells and granular pigment. Considerable free pigment in the thalami optici. Hyperplasia of the connective tissue forming the ependyma of the ventricles with papillary-like growths of the same projecting into the cavity of the ventricles.

Dr. WHITEMORE, referring to one of the cases cited by Dr. Fisher, where the disease was claimed to have resulted from injury, said the friends had recently admitted that symptoms existed previously, not noticed at the time, but since recalled.

Dr. F. H. DAVENPORT read a paper entitled

A CASE OF URETHRISMUS OF TEN YEARS' STANDING CURED BY A SINGLE CATHETERIZATION.

"The severity of the symptoms and the marked effect of treatment made it of interest. The existence of a chronic spasmodic structure of the urethra is still, to some extent, a disputed question, that is, a cramp of the urethra lasting for years, present whenever an attempt is made to bring the muscle in question into play, simulating organic stricture, and giving rise to cystitis with its long array of symptoms; certainly this train of events is, to say the least, not fully recognized." Sir Henry Thompson says, "Spasmodic retention occurs seldom, and deserves special mention. Spasmodic stricture is an excuse when it is not possible to pass an instrument." Roser says, "What has been taught of spasmodic stricture rests on supposition against which much may be said." Bardeleben doubts if it can cause any hindrance to the passage of an instrument. Dittel thinks "it is certain that spasmodic stricture seldom occurs, certainly more seldom than it is diagnosed. I myself have never seen but one." Van Buren and Keyes state that it is of common occurrence, but unless complicating pre-existing organic stricture is of no special importance. Bamstead writes, "a spasmodic stricture is characterized by its short duration." On the other hand, Es-march says it is not only of common occurrence, but may last a long time, and give rise to most severe symptoms. Also, Otis, Berkeley Hill recognize it as reflex and existing under two conditions, first, depending on an anterior stricture, second, on inflammation of the adjacent mucous membrane.

My patient was seventy years of age. First seen three years ago; he had no urinary trouble up to ten years previously. He then began to micturate with difficulty, a slight effort was necessary, and the desire more frequent. These symptoms increased so that in

three years the inconvenience was considerable. The urine was clear and without sediment. The attending physician, after rectal examination, diagnosed hypertrophy of the middle lobe of the prostate. Iodine in some form was given with no benefit. When I first saw him the trouble had increased so much that even when straining the urine would dribble away, five minutes or more being consumed in emptying the bladder. Micturition very frequent, pain at the end of the penis, and a sense of heaviness at the base of the bladder. On rectal examination I was unable to determine the existence of an enlarged prostate. Was there a stricture, and did the bladder empty itself thoroughly? The patient having previously passed as much urine as he could, an English rubber catheter was introduced, but was arrested at apparently the membranous portion of the urethra. A silver catheter, No. 7, was now tried with the same result. A steady pressure being kept up for several minutes, much to my surprise the resistance ceased, and the instrument glided on to the bladder. There was very little urine found, not more than might have been secreted in the interval since micturition. The next day the report was most surprising and gratifying. There was only a slight soreness during urination. The difficulty had entirely disappeared. The stream was full and strong; the water could be retained four to five hours without inconvenience. This state of affairs had persisted up to date, there having been a complete cessation of all symptoms.

The interesting features of this case are the long duration of the trouble, some symptoms simulating graver disease, and their complete relief after one catheterization.

Momentary spasmodic urethral contraction is of common occurrence. It is seen in persons unable to urinate in the presence of others; it is often reflex in origin, as seen after operations on the neighboring parts, or disease of the mucous membrane or bladder may suffice to produce it.

Dr. Otis refers to the last cause as obtaining in many cases where two strictures have been diagnosed, one anterior, the other in the bulbous portion. If the first is divided the second disappears. He considers the second stricture a reflex cramp. This was noticed and explained by Civiale in 1850. Later Verneuil called attention to it, and both he and his pupil, Tolet, reported numerous cases.

The diagnosis and treatment are happily combined in catheterization. The two conditions with which it may be confounded are inflammatory swelling and stricture. The sudden relaxation and easy passage of the instrument, sometimes only possible after anaesthesia, is inconsistent with inflammatory swelling, and the tight grip which a stricture maintains, preventing the easy withdrawal of the instrument, excludes the latter.

Dr. Otis has detailed a series of cases illustrating this; in all of them there had been gonorrhœa, followed by symptoms of stricture, lasting in one case seventeen years. In all the diagnoses of double stricture that had been made the division of the anterior stricture, sometimes so slight as to be overlooked unless tested by the urethrometer, was usually followed by the easy introduction of a large sound into the bladder. What the exciting cause was in my case I am unable to say. There was no suspicion of gonorrhœa. He was not of a nervous temperament. The urine was normal.

In other analogous affections a similar method of

treatment is employed with the best results, as in vaginismus and cramp dependent on fissure of the anus. I am convinced that many cases of dysmenorrhœa are due to spasmodic contraction, and that division of the cervix might be replaced by systematic forcible dilatation. Cystitis in the female seems to be frequently dependent on cramp of the urethra, if not previously for its occurrence, at least secondarily for its continuance. Numerous cures have been effected by forcible dilatation. A writer in the *Lancet* reports between thirty and forty.

The seat of urethral cramp is between the two layers of the deep perineal fascia, or triangular ligament, where lies the complex muscular arrangement which prevents the escape of urine. The sphincter is situated, not at the neck of the bladder, but beyond the prostatic portion, in the so-called *pars muscularis*.

There are one or two points of practical interest in connection with the case. It is not safe to assume the existence of prostatic hypertrophy even with a train of symptoms most suggestive of it. In catheterizing it is well to make continued pressure for some minutes."

Dr. T. B. CURTIS said that the name *urethrismus* was new to him; he thought it eminently suitable, however, to designate long-lasting or permanent spasm of the urethral sphincter or "cut off muscle." The latter, anatomically known as the *compressor urethrae*, is composed of striped muscular fibres, encircling the membranous portion of the canal and situated between the two layers of the triangular ligament. It has long been recognized that these sphincteric muscular fibres, surrounding the deep urethra just in front of the apex of the prostate, at a distance of about six inches from the meatus, were liable, by inopportune and persistent contraction, to oppose occasionally the exit of urine and the entrance of instruments, and thus to cause symptoms of urethral obstruction more or less closely simulating organic stricture.

Micturition, when normally executed, takes place readily, as the result of a desire or call to pass water, the latter originating from an irritation of the exquisitely sensitive mucous membrane lining the neck of the bladder and the prostatic urethra. Any irritation of this mucous surface, whether physiological, pathological, or accidental (*e. g.*, by catheterism), whether by the penetration of urine from within, of injected liquids from without, of instruments or foreign bodies, occasions instantaneously a peculiar sensation which is perceived almost exclusively as a call to urinate, and which, being transmitted centripetally by the sensory nerves to and through the lumbar medulla, serves as a reflex stimulus, motor and inhibitory, to the retaining and evacuating apparatus of the bladder. The effects so produced, under normal conditions, comprise, simultaneously, the inhibitory relaxation of the sphincteric muscular fibres and the active contraction, more or less energetic, of the unstriped muscular fibres contained in the bladder wall, and occasionally also of the abdominal muscles.

This somewhat complicated nervo-muscular mechanism operates to a certain extent automatically, being subject to volitional control only partially, and in a variable degree in different individuals. In some emotional or neurotic subjects the operation of the retaining and evacuating apparatus, involving as it does the orderly consensus of mutually antagonistic sets of muscles, is easily deranged; a form of disordered or ataxic action, which Sir James Paget, in his clinical lecture on Stammering with other Parts than those of Speech,

calls "urinary stammering," may, under certain disturbing influences, then be observed. The speaker had a friend in Paris whose bladder was subject to this sort of stammering, and was so unruly that he could never succeed in passing water except in the familiar privacy of his own bedchamber; in consequence of this infirmity he would sometimes, when far away, have to return home, at great inconvenience, in order to relieve his distended bladder.

In certain pathological conditions of the urinary organs (such as obstructive hypertrophy of the prostate, with retention, complete or only partial; vesical calculus; stricture, narrow or wide; cystitis, however caused), involving as a complication inflammation of the neck of the bladder (cysto-prostatitis), and thereby giving rise to a hyperæsthetic, exalted, and perverted sensibility of the prostatic mucous membrane, the urethral sphincter not only may cease to be subject in any degree to volitional control, but also becomes liable to act automatically in a disorderly manner. Spasmodic action then occurs at the very moment when the physiological inhibitory relaxation is wished for, impatiently expected, and ought to take place; when expulsive efforts are being made, when vesical tenesmus even is being experienced, or when, on the other hand, attempts at catheterism are being made. Many patients who are dependent upon the habitual use of the catheter, are unable, when suffering most severely from vesical repletion and urgent desires to urinate, to relax the sphincter, so as to allow the penetration of the instrument, until the conclusion of a prolonged and painful contest between the evacuating muscles on the one hand and the retaining sphincteric muscle on the other hand. This struggle for the supremacy, at which the patient assists without being able either to abridge it or in any degree to control the opposing forces, sooner or later eventuates in the discomfiture and abdication, so to speak, of the sphincter; a few drops of purulent urine are with difficulty expelled from the prostatic urethra, after which all opposition to the penetration of the catheter ceases.

These disturbances are most common perhaps in persons suffering from urethral stricture; not only in cases of inveterate, narrow, deep-seated, perineal strictures, which every practitioner, however inexperienced and uninformed, is ready to recognize as such; but also, as shown by Verneuil, Guyon, Otis, J. W. White, and many others, in cases of tolerably wide, anterior stricture, of recent development. In such cases the most conspicuous symptom, or perhaps, the only other symptom complained of by the patient besides the urinary stammering and the urethrismus, is an obstinate gleet. Not only acquired strictures of comparatively wide calibre, but even, as abundantly shown by Dr. F. N. Otis, and others, congenital contractions of the meatus, more or less pronounced, and playing the part of strictures, behind which chronic urethritis or gleet has established itself, may be the origin and perpetuating cause of the nervous disturbances which are expressed in the form of chronic urethral spasm.

Until the publication of Dr. Otis's views and experience, in 1876, corroborated by the testimony of Dr. J. W. White, in 1877, it had been almost universally agreed that spasm of the urethral sphincter was always temporary, and that the obstruction so caused was in all cases to be distinguished from that due to organic or permanent stricture by its short duration or by its intermittent character. Dr. Otis's very curious and strik-

ing cases show, however, that a spasmodic contraction possessing almost all the recognized clinical characters of deep-seated, perineal, narrow, organic strictures, including the persistent obstruction caused by the latter, and maintaining a chronic course, may be perpetuated by a chronic irritation of the deep urethra, originating either in slight, that is to say, wide, organic stricture of the anterior part of the urethra, or in contraction, even moderate in degree, acquired or congenital, of the meatus. In 1877 Dr. Otis had published seven very remarkable cases of this kind. In one of these cases, a New York surgeon, over sixty years of age, had been under treatment for deep organic stricture for nearly twenty years; he had at times been able to pass only filiform bougies; false passages had been inflicted; chills and fever had often occurred; there was habitually a high degree of vesical irritation and tenesmus. Notwithstanding all these apparently unequivocal symptoms of confirmed, inveterate, narrow stricture, from which the patient himself expected no relief except from a cutting operation, Dr. Otis, to the amazement and even alarm of the patient, introduced with ease through the canal a 28 (French) steel sound, such being the calibre of the patient's meatus. Meatotomy was performed in presence of several surgeons, among whom were Professor Willard Parker and Dr. Gurdon Buck. After enlargement of the meatus, by incision to 34, such being, according to Dr. Otis's scale of proportion, the normal calibre of the urethra in this case, a full-sized bougie was easily introduced, and subsequently all the distressing symptoms disappeared.

The diagnosis between a symptomatic urethrismus, dependent upon a wide, incipient, anterior contraction of the urethra or upon a narrow meatus, on the one hand, and a deep-seated, narrow, organic stricture, on the other hand, rests mainly, according to the teachings of the most experienced specialists, — such as Otis and Guyon, among others, — upon the results to be obtained by a careful exploration of the anterior part of the urethra, preferably by means of a series of graduated acorn-tipped exploring bougies.

Organic stricture, except in cases of traumatic origin, where a close, cicatricial, transverse contraction situated in the perineal urethra, in the neighborhood of the triangular ligament, is developed in a few weeks after a violent contusion of the perineum, is almost invariably a very remote result of a long-standing gleet, succeeding repeated attacks of gonorrhœa. In such cases a chronic urethritis perpetuates itself behind a narrow meatus or behind a wide anterior stricture; the urethral mucous membrane becomes gradually more and more thickened, inextensible, and contracted; imperfect drainage results, and the canal fails to empty itself completely at each act of micturition; the morbid process creeps slowly backward, and the urethra is progressively narrowed by the retrograde alterations which ensue. After years of continuance, marked by the persistence of gleet, accompanied, perhaps, by more or less functional disturbance of the genito-urinary apparatus, a narrow, deep-seated organic stricture, constituting a permanent obstruction both to the exit of urine and to the entrance of instruments, is the result. But, although here, as in cases of symptomatic urethrismus, the chief point of obstruction is in the deep urethra, the entire canal in front of the narrowest point is also more or less contracted and thickened; and a condition of organic disease exists throughout the anterior urethra which a methodic exploration with acorn-tipped bougies cannot fail to reveal.

DR. CURTIS alluded to a common error of practitioners which consisted in relying upon a digital examination *per rectum* in cases where senile hypertrophy of the prostate was suspected. The size of the prostate *per se* was really of no consequence whatever, unless the retaining and evacuating functions of the bladder were thereby interfered with. The prostatic disease of old men should be called *obstructive hypertrophy* of the prostate, or chronic prostatic obstruction. Unless such obstruction existed, habitually preventing the bladder from emptying itself, and causing complete or partial retention of urine, the disease known as *hypertrophy of the prostate* could not be said to exist. The sole trustworthy diagnostic test for the recognition of this disorder consisted in the introduction of a catheter immediately after full attempts on the part of the patient at complete natural micturition. The detection, by this simple means, of unevacuated urine, "back-water," or "residual urine," afforded conclusive diagnostic evidence of the incurable, chronic malady which the rational signs had led the practitioner to suspect.

DR. H. F. DAXON reported a case of Glanders occurring in a Woman.

It was voted that the meeting on the second Saturday of the month be discontinued.

Recent Literature.

A System of Oral Surgery: Being a Treatise on the Diseases and Surgery of the Mouth, Jaws, and Associate Parts. By JAMES E. GARRETSON, M. D., D. D. S. Illustrated with numerous Steel Plates and Wood-Cuts. Third Edition, thoroughly revised, with Additions. Philadelphia: J. B. Lippincott & Co. 1881.

An extended review of this admirable work is unnecessary, it having been for years accepted as a standard text-book in the dental schools. The author's eminent position giving great weight to his opinions, it is worth while, however, to call attention to some points about which there may be a difference of opinion. Although professing to be a work on surgery, space is given to the anatomy of the teeth and surrounding parts. Perhaps the reason for this is to be found in the needs of the dental student, who in most of the dental schools is obliged to study surgery as soon as anatomy.

When a progressive medical education is recognized as a necessity for every one who practices upon the mouth, then students will not attempt the study of surgery till they have mastered anatomy, and the text-books can be confined each to its special province.

In the work under consideration the advantage which would result is apparent, as slight errors are to be found in the anatomical descriptions. For example, on page 31, the author, in describing the molars, says "these teeth have crowns of cuboid shape, are four cusped." Any one, however, may see by examining a number of skulls that the inferior first permanent molars have five cusps,—two internal, two external, one externo-posterior. Nor are their crowns cuboidal in shape. In passing to the treatment of decay we find partial excavation recommended for cavities extending under the gum. The cavity is then to be packed with cotton, which by the next day will have pushed the gum away. Such treatment would give unnecessary pain, for when living dental fibrils are cut an inflammation results, making the tooth acutely sensitive for

several days. On page 61 the author justly says, "mechanically viewed the coffer-dam is undeniably perfect, surgically considered no means employed in dental art is more abused." Up to the present time the coffer-dam has done more harm than good, because it has made long, exhausting operations possible and popular.

On page 66, in directing attention to oxychloride of zinc as a lining for cavities to be filled with amalgam, the disintegration of all oxychlorides, which takes place in the mouth, seems to have been forgotten. A cavity so filled would in most cases soon show a narrow fissure between the amalgam and the walls of the tooth, out of which the oxychloride had crumbled. Under the head of oxychlorides and zinc phosphates nothing is said to indicate the temporary nature of these fillings. In the enumeration of the methods of treating decay in teeth vitrine fillings are not mentioned, though they are useful where appearance is of consequence. More explicit directions should be given for drying the cavity after excavating decay in a tooth. The mechanical means should be followed by the use of warm absolute alcohol; the semi-desiccated tissue should then be filled with wood creosote.

We notice with pleasure in the chapter on artificial crowns that Dr. Bourvill's ingenious method is fully illustrated. Chapter VI. is devoted to irregularities. The author says the period from twelve to seventeen years is to be selected for treatment. This is certainly the general opinion, yet when the incisors come far out of place they should be regulated soon after eruption. For the cells of bone surrounding the teeth are at this time comparatively large, so there is less absorption of bone, and consequently less irritation in moving the teeth than at a later period when the sockets are smaller and more dense. Besides, if we wait till most of the teeth are in place we shall often be obliged to regulate teeth which have come out of place on account of previous unreduced mal-eruptions. Regulating at this early age is attended with little inconvenience, even to a sensitive child, if we use proper apparatus. In Chapter X.—Prosthetic Dentistry—the reader is surprised to find no mention of Godiva modeling composition. Nor does the author speak of taking impressions of natural teeth as an aid in making artificial ones, though a series of such models is of great value. The chapter on associated lesions of the first dentition is full and clear. Lancing the gums is advocated to relieve irritation from erupting teeth. On page 296—Anomalies of Second Dentition—we find this passage: "The permanent set is to comprise in number sixteen, and each tooth quite as large again as its predecessor." This is untrue, particularly of the premolars, the successors of the temporary molars. Nor can we accept as final the statement, "in proportion to the number of deciduous teeth removed prematurely will be the curtailment in size of the arch," resulting in "approximal caries, periosteal troubles, trismus, odontocoele, necrosis, and the violent inflammations attendant on the development of the dentes sapientiae." The truth is we may take out almost all the temporary teeth except the canines without having the permanent set come irregularly.

Beside, permanent teeth may be killed by allowing devitalized, deciduous teeth to remain.¹ In this and the succeeding chapters the author is evidently more at home than in the mechanical operations about the

¹ Boston Medical and Surgical Journal, vol. xcvi., pp. 393, 394.

teeth, the work consequently increases in interest. We should advise orists to read this portion of the work carefully, for all are too apt to neglect to treat caries of the teeth except by filling. In Chapter XVIII., Diseases of the Teeth, attention is called to the importance of the late eruption of the deciduous teeth as an aid in the diagnosis of rickets, which, it is stated, may be present without bone symptoms. In enumerating the causes of dental caries this passage occurs: "The surface most liable to suffer from caries is the approximal. This in many instances finds explanation in the constant abrasion here going on as the result of motion produced by the act of mastication, the enamel being literally worn or cracked away." One may be allowed to differ here, for if constant abrasion be present polished surfaces will result, and such surfaces will not be likely to decay. Rare indeed are cases where such abrasion will crack off the enamel. Nor can we accept this statement without question: "In other cases the dentine becomes deprived of its protecting covering as the result of lateral pressure, such pressure being increased with the development of each tooth."

In looking at the work as a whole the author's width of view is clearly apparent, his grasp of the more purely medical and surgical portion of his subject is firm, but in the mechanical operations about the teeth he is less at home. It is therefore to be regretted that the work was not confined within narrower limits, as much of the subject matter could be better studied in works on anatomy, operative and mechanical dentistry.

ROLLINS.

Anatomical Plates, arranged as a companion volume for The Essentials of Anatomy, and for all works on descriptive anatomy, comprising four hundred and thirty-nine designs on steel by Professor J. N. Masse, of Paris, and numerous diagrammatic cuts selected or designed by the editor, together with explanatory letter-press. Edited by AMBROSE L. RANNEY, A. M., M. D. New York: G. P. Putnam's Sons. 1881.

The Essentials of Anatomy, by Professors Darling and Ranney, which appeared rather more than a year ago, is very happily completed by this small, portable, and very satisfactory atlas. The plates, to be sure, represent descriptive anatomy; that is, muscles, vessels, nerves, etc., are treated separately; but, though rather unequal in execution, they are very good of their kind. Some of the diagrams please us very much.

Medical Heresies: Historically Considered. A Series of Critical Essays on the Origin and Evolution of Sectarian Medicine, Embracing a Special Sketch and Review of Homoeopathy, Past and Present. By GONZALVO C. SMYTHE, M. D., Professor of the Practice of Medicine, Central College of Physicians and Surgeons, Indianapolis. Philadelphia: Presley Blakiston. 1880. Pp. 228.

The author very modestly prefaces his book with the remark that "every person who proposes to inflict a new book upon the profession should be able to give a good reason therefor." His object is to present in a condensed form the history of the "rise, progress, and fall of the various schools, sects, or systems of medicine from the earliest historical period to the present." The first part of the book does not differ much in general

scope and plan from many of the condensed text-books in general history that have appeared in the last few years, and might very properly be called Outlines of Medical History. The second and larger part is appropriated to homoeopathy. The author's second, and, judging from the space devoted to it, his chief reason for writing lay in his desire to disseminate information in regard to this subject which he believes to be much needed. It is his aim to present the views of the believers in the dogma fairly, and with this object in view he quotes liberally from the Organon of Hahnemann and the writings of his disciples. The present status of homoeopathy is shown by extracts from society proceedings and current periodical literature which illustrate the various schisms and shades of belief which divide the sect. Few practitioners have the time or opportunity to investigate the claims of the present generation of homoeopathic practitioners; to all who desire to be informed upon the subject Dr. Smythe's book will prove welcome.

— St. Paul, Minnesota, was selected as the place for the next annual meeting of the American Medical Association, and Dr. Stone was appointed chairman of the local Committee of Arrangements.

The following officers were elected for the ensuing year:—

President, Dr. T. J. Woodward, U. S. A.

Vice-Presidents, Drs. P. O. Harper, Arkansas; L. Conner, Michigan; Eugene Gressom, North Carolina; and Hunter McGuire, Virginia.

Secretary, Dr. Wm. B. Atkinson, Pennsylvania.

Treasurer, Dr. R. J. Duglison, Pennsylvania.

Librarian, Dr. Wm. Lee, Washington.

Dr. Joseph J. Woodward, the newly elected president, is from Washington, D. C. He was born in Philadelphia in 1832. He was educated at the Philadelphia Central High School, from which he received the degree of A. B. in 1850, and that of A. M. in 1855. After receiving his first degree he began the study of medicine and graduated from the University of Pennsylvania in the spring of 1853. For some time thereafter he practiced his profession in Philadelphia, acting during that time as examiner and teacher upon microscopical and pathological anatomy. He entered the army and rose rapidly, and is now the chief-assistant in the surgeon-general's bureau at Washington, with the rank of lieutenant-colonel. He is the medical editor the Medical and Surgical History of the Rebellion. His professional labors have been of distinguished character, none more so than his comprehensive series of experiments in microscopic philography, by which the profession has been placed in possession of records of the highest value and usefulness. Dr. Woodward is the author of many valuable works, all of which have been most favorably received by the medical profession. He was a member during his residence in Philadelphia of the Philadelphia County Medical Society; is a member of the American Medical Association, and was its second vice-president in 1875; was a delegate to the International Medical Congress, at Philadelphia, in 1876, and is a member of the Medical Association of the District of Columbia. There is no doubt but what he will make a most efficient officer.

The election of Dr. Woodward to the presidency is all the more complimentary, as he was not present, and the high honor was entirely unought and unexpected. — *Virginia Medical Monthly*.

Medical and Surgical Journal.

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MANAGEMENT OF AMERICAN PUBLIC INSTITUTIONS SEEN THROUGH ENGLISH GLASSES.

IN the April number for 1881 of the *English Journal of Mental Science* there is, among other good things, a highly edifying editorial entitled, *The Influence of Democratic Feeling in America on the Management of Public Institutions*. Public institutions here refers particularly to insane hospitals, the writer having, evidently, very recently, made a visit to a number of these. Much clearness of perception and sharp penetration are shown in this article, as well as an honest desire to tell the truth without shrinking, and we therefore propose to give some extracts, criticising such of them as we believe are not quite correct, believing, as we do, that there can be no harm in occasionally hearing what our friends have to say of us behind our backs.

The writer begins by saying that "The mode in which the political constitution of a country affects its social arrangements has always been an interesting subject of study. But there has not been nearly so much attention given to the way in which the politics of a country affect the origin, government, and administration of its public institutions. . . . America, with its distinct States and state rights, its democratic constitution, its intense and jealous parochialism, as regards local affairs, is an admirable field in which to study this branch of sociology. Indeed, its public institutions cannot be understood except we take into account the political constitution of the society in which they originated. One might as well criticise a landscape without reference to the sunshine and the geology of the country, as speak of the colleges or asylums of America without taking into account its state legislatures, its county government, and its never-ceasing legislation. An educated democracy is easily moved, is very much given to spasmodic bursts of charity, and is always creating public institutions of some sort, while it is intensely jealous of them, and often very unjust to them." We will grant that public institutions are easily created in this country, but we have not observed the jealousy of them of which the writer speaks. On the contrary, unless some instance of gross mismanagement has been, perhaps accidentally, unearthed, they pursue the even tenor of their way, a source of pride and satisfaction to the people, who are singularly ingenuous in the confidence they repose in their managers. We are a people sudden and quick in action when aroused, but put up for

an astonishingly long time with public abuses. We are jealous of certain corporations, it may be said with truth, and are constantly legislating to modify and suspend their powers, but our indignation has been awakened by their corrupt practices in past years, which have made us suspicious of them.

The writer continues, "There is no finer field for small autocrats, too, than in an absolute democracy. Conservatism of a certain kind is never so secure against change as when it has universal suffrage to back it. Individualism is more marked in America to-day than it is in Great Britain, but it takes different directions. Plenty of people are to be met with in America who declare that Washington was an old fool, that the present republic there is a mistake, that universal suffrage is a delusion, and that they would be better off under an emperor." We are surprised that the writer should have fallen in with such a number of anti-Washingtonians, for in our own experience the persons who would express themselves in the above words are much more rare. It is a part of our education, of our very inmost soul's belief, to reverence Washington, and though his personal influence is no longer felt, as all men are dead who came into contact with him, his name is held so high that it is above the reach of our national irreverence for men and things.

To continue with our extracts, "If the head of a public institution there is strong and bold enough, he may administer its affairs further off the beaten track than could be done in Europe. But, on the other hand, all the average and weak administrators dare not for their lives turn to the right or the left of the path which the public opinion of the place and time prescribe." The last sentence is capable of a considerable modification, for the average and weak administrators are often controlled by the "boss," or other persons, whose tool they are, and not by public opinion. Take, for instance, the recent street-cleaning difficulty in New York. There was a case in which public opinion said, unanimously, the streets must be cleaned, but a few politicians saying otherwise, the weak administrators were sustained, and public opinion was ignored. So we could cite other instances where weak and corrupt administrators are continued in office, where the public cry for their removal, and the newspapers are loud in their denunciations, but the powerful arm of one or more politicians shields them from the storm.

"In America there is a far greater social equality between the governors of asylums and the physicians than there is in the English or Irish counties. There is no such thing there as an asylum physician who does not mix in the same society as his Board of Governors. This is certainly more conducive to his *amour propre* than the state of matters in some counties of England, and it gives him a more direct power and authority with them. But for that very reason he needs to be at all times educating his masters in some way, who are often changing and often personally jealous of his superior knowledge of his own subject." We ourselves have not happened to come

across many such instances of jealousy, but we have often been struck with the spirit of admiration which seems to fill the breast of many trustees for their superintendent. They show him off like a prize baby; they hold him up to the light, exhibit his charms, and ery in an enraptured chorus, "See what a prodigy we have! See how he manages the kitchen, the garden, and the sewing-room! So young, and yet so wise!" Turn to the statements of trustees in their annual reports for easy verification of these assertions.

In the next sentence the writer says, "This accounts for the tone of rather strained philanthropic zeal that pervades many American asylum reports. The expression of religious sentiments in reports, too, is thus accounted for, conforming to the remaining shadows of the former Puritanical modes of feeling prevalent in many portions of the country." We have ourselves frequently occasion to deplore the melancholy religious platitudes which are gracefully sprinkled through the pages of insane hospital reports, and we explain this not by any relationship between trustee and superintendent, but partly by our inherited religious superstitions, as asserted by the writer, but much more from a lack of anything better to say. When the science of insanity is more thoroughly understood and more time devoted to its study in asylums, as is the case abroad, we shall find scientific observations replacing religious truisms and antiquated generalizations.

"The direct dependence on local public opinion gives a sense of insecurity of tenure, and produces a faint-heartedness of management that we think often affects the efficiency of institutions. In reality, there is far more conservatism in American asylums than we have here. There is far more diversity, too, comparing one asylum with another, there being no central authority to produce uniformity and convey the precedent of what is done in one place to another.

"There is, thus, in America a more direct appeal to the public, as to the philanthropic character and aims of hospitals for the insane than here and less of the settled-down official character about them. The pulse of that human charity that originally started such institutions has to be more constantly felt and relied on than here. Therefore the external and visible matters need to be more attended to. The imagination of the public requires to be more directly appealed to. In no other way can we account for the magnificent costly architecture, the grand porticoes, the gorgeous entrance halls, and the luxuriously furnished reception rooms in some of the new asylums in some of the Northern States. A strong man at the head of an institution in America, who is reckoned fairly honest, who can do electioneering, so far as it concerns himself, who can make a good public appearance, and who has a good social position, is master of the situation. He can do anything, and get anything, and make his governors believe anything; but he can't rest on his oars. He must always be on the alert."

The element of philanthropy is certainly a prominent one in our republican form of government. All men being born free and politically equal, we feel

obliged, as a matter of principle, to treat every unfortunate as if he were our own dear brother, and consequently in providing for our insane we give our paupers too sumptuous surroundings, and the better class of impoverished persons, grown poor from their disease, surroundings hardly good enough. In time, no doubt, social lines will be more sharply defined and the different social classes of the insane more separated.

The "costly architecture," the "grand porticoes," etc., we think are not owing to the necessity of appealing to the public imagination, as the public common sense strongly shows its displeasure at these stage effects, but grows rather out of an accidental combination of circumstances. A new hospital is to be built, a building commission is appointed by the governor. They consult an architect ignorant of the needs of the insane, but anxious to introduce innumerable cornices and other architectural ornamentation inside and out. The commissioners, in all probability equally ignorant of both insanity and architecture, readily yield to his propositions, perhaps calling to their aid some hospital superintendent who cannot be assumed to know much of architecture. The process of building is more or less hap-hazard at its inception, and when too late the State finds itself burdened with an elephant built after the crude designs of the building commissioners, the architect, and the superintendent. We cannot deny that the quarters of the patients are too uniform, while the officers' quarters are unnecessarily sumptuous, but would ascribe this to mistaken ideas of the treatment of the insane rather than to narrow self-seeking for personal comfort.

The quotations made above nearly finish this pithy article, which certainly contains suggestions enough to set us all a-thinking. We regret that want of space prevents the insertion of the closing paragraph.

TRAVERS VERSUS BOARDMAN. THE SEQUEL.

On February 14th of the current year we spoke at some length of this case, and expressed the hope that it might speedily be brought a second time before the court, and terminate in accordance with justice. We again call attention to the case to record the result of the second trial.

The plaintiff was duly put upon the stand as her own chief witness, and again told her story; before the cross-examination was concluded, or had even advanced beyond preliminaries to the main facts at issue, her lawyer abandoned the case, stating that he had been grossly deceived by his client. The judge ordered a verdict to be recorded for the defendant.

The case proceeded far enough to show the witness to be entirely untrustworthy in all minor matters. She claimed to have been born thirty-one years ago, and had rearranged the other dates of her life — her marriage and her husband's death — to support that claim. Cross-examination showed her testimony to be false on these points, and the defense was ready to show that she was over fifty years of age, and that

consequently the cessation of menstruation, which she alleged had followed her treatment, was but the natural result of years. Placing her husband's death later than the actual occurrence, she denied her own signature affixed to papers which were produced in court connected with the administration of his estate, and, finally, denied her signature affixed to a document pertaining to the present trial, and executed before her own lawyer.

To Dr. Boardman we extend our congratulations. No one who knew anything of the case could doubt what the verdict would be if it were once fairly presented, but the mental disquietude inseparable from such persecution is by no means slight.

To the guileless victim of his artful client's wiles, the plaintiff's legal adviser, we extend the sympathy due to a much-wronged man. He, too, has suffered. For his outraged feelings, for his betrayed confidence, we offer the only consolation in our power, to wit, the gratifying reflection that less harm has been caused to innocent individuals and to society at large than might at one time have been anticipated.

There is one poor consolation to be found in the matter. Probably the profession in the city was never so thoroughly canvassed for a witness as in this case, but, notwithstanding the supposed readiness with which medical men can be found to testify on any side of any case, no one with the slightest claim to professional standing was ready to support the plaintiff's allegations; legal talent, however, proved in this instance less scrupulous.

There is also a lesson to be learned from the double trial. Truth needs to be well supported when she appears before a jury, and no man can, in a medico-legal case, so far rely upon the simple justice of his cause as to safely leave the search for witnesses until the very morning of the trial.

MEDICAL NOTES.

—The somewhat full report of the meeting of the American Medical Association at Richmond, which we publish, has crowded out our usual material from the second part of this issue of the *JOURNAL*.

—The bill to prevent incompetent persons from doing business as apothecaries was rejected in the Massachusetts House of Representatives by a vote eighty-eight yeas to ninety-six nays.

—The sparks continue to fly. Two further cases of small-pox have been reported to the Board of Health. One was infected by a case already mentioned in the *JOURNAL*. The second came from New York to a boarding-house in the Brighton district. Measles was already present in the house, and the small-pox eruption, on its appearance, was considered of the same nature, and no physician was called for two days.

—Prof. L. McLane Tiffany has been elected professor of surgery in the University of Maryland. He succeeds Prof. Christopher Johnston, who has been made emeritus professor.

Miscellany.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.¹

The American Medical Association began its thirty-second annual session at eleven o'clock A. M., Tuesday, May 3d, at Mozart Hall, at Richmond, Va. About five hundred members were on hand.

FIRST DAY'S PROCEEDINGS. GENERAL SESSION.

The Association was called to order by Dr. Frank Cunningham, chairman of the local committee of arrangements.

Dr. H. D. Holton, of Vermont, vice-president of the Association, occupied the chair, with Dr. William B. Atkinson, of Philadelphia, Pa., acting as secretary.

The exercises opened with prayer by the Right Rev. Bishop J. J. Keane.

Dr. Cunningham then, in brief and appropriate language, introduced Governor F. W. M. Holliday, who had kindly consented to deliver the address of welcome.

The address of Governor Holliday was cordial and appropriate, and his remarks were loudly applauded.

The secretary next called the roll of members who had registered.

A motion to dispense with the calling of the roll was laid on the table.

The names read were, on motion of Dr. Toner, all confirmed in their membership.

Dr. Cunningham, from the committee of arrangements, read to the Association invitations from the Commercial, Richmond, and Westmoreland Clubs tendering the hospitalities of these clubs to the members during the session of the Association. The invitations were accepted, and, on motion of Dr. D. J. Roberts, the thanks of the Association tendered for the same.

The president, Dr. John T. Hodgen, of St. Louis, then delivered the annual address. The subject selected was the Recent Exceptional Strides in the Progress of Medical Science, both in the Direction of Extending the Domain and Perfecting the Methods of Operative Surgery.

He divided surgeons into those seeking to perform every practicable operation, and those avoiding operations whenever it is possible.

The former include the bold, the enterprising, the ambitious, and the reckless of our profession. The other, the timid, the conservative, the cautious, and the procrastinating. The former class is largely made up of young men, enthusiastic and full of inspiration, caught from professors, whose task is to make the way clear and easy, students of the current medical literature, which teems with new suggestions and is crowded with reports of remarkable cases and wonderful operations, generally ending, or reported as ending, happily to the patient, and to the great credit of the reporter.

Simon excises a kidney, turns an aberrant ureter into the rectum, touches, through the natural passages, a stone in the kidney, and immediately hundreds of ambitious surgeons are seeking kidneys to excise, ureters to turn, and renal calculi to touch. Battey removes an ovary for the relief of an obscure nervous disorder, and forthwith ovaries are removed for almost every imaginable nervous disorder. Billroth cuts out

¹ Our reporter wishes to acknowledge his indebtedness to the daily issue of the *Virginia Medical Monthly*.

a cancerous larynx or a diseased pylorus, and at once a demand springs up for similar cases, and the daring operations are repeated in all the four quarters of the globe.

The second class is recruited largely from the first, and often only after many lessons of bitter disappointment drawn from the experience of many and grave disasters.

Dr. Hodgen then illustrated the practice of operating by blindly following the dicta of authority by two procedures resorted to by gynecologists with great frequency during the last twelve or fifteen years, namely, the division of the cervix uteri for flexures, and the methods adopted for the cure of lacerations of the cervix uteri.

He touched upon the great danger of specialties being based upon too narrow a foundation, and said: In the best sense a specialist is a physician and something more, in the worst, he is something else and something less than a physician.

He thought that, captivated as men were by the rapid progress made of late years in the precision and perfection of regional surgery, they were in danger of overlooking the general influences which are ever present to modify and control the results of local injuries. After referring to a number of these conditions, the speaker concluded his address with the following remarks:—

Besides want of space, another reason for the omission of reference to other conditions which may demand or forbid a resort to the knife, is our want of exact knowledge. Especially is this true of those constitutional conditions we term diathesis. Using the word in its broadest sense, diathesis is any condition varying from the normal standard which disposes to the development of disease in the presence of trivial exciting causes. Other conditions which we habitually include under diathesis are themselves diseases—such, for instance, are scurvy, the scrofulous habit, tuberculosis, and syphilis. A diathesis may be transient or permanent, retrogressive or progressive; it may be so marked in its manifestations as to force its recognition upon even the most careless observer, or it may be so obscure as to elude the most painstaking scrutiny; and yet it may respond immediately and disastrously to an injury. In acknowledging our ignorance regarding the precise nature of such variations from the normal standard as we believe must exist in diseases like scurvy, scrofula, tuberculosis, etc., we recognize the existence of wide uncultivated fields, rich, no doubt, in promise to future investigators. A more perfect animal chemistry, a more thorough histology, and a deeper research into the possibilities of pathological change, will doubtless throw many a ray of light into regions where the darkness is now too dense for our vision to penetrate. To these fields coming generations of physicians will surely be attracted, in the faith that as man advances in knowledge, and approaches somewhat nearer to the comprehension of the perfect wisdom which designed the wonderful physical organism, through which he is brought into relation with the world around him, he will be enabled to solve more and more of the difficult problems which now perplex and baffle us, and will gradually raise medicine to a position more nearly akin to that now accorded to the exacter sciences.

Dr. Joseph H. Warren, of Boston, chairman of Committee of Foreign Delegates Abroad, then presented his report. The reading of the report was deferred, and it was referred to the Publication Committee.

SECTIONS.

I. SURGERY AND ANATOMY.—Chairman, Dr. Hunter McGuire, of Virginia; secretary, Dr. Duncan Eve, of Tennessee. Dr. J. H. Warren, of Boston, opened the work of the section by exhibiting a collection of instruments devised by himself, which have been previously described in the columns of the *JOURNAL*. In regard to some of these instruments, both Dr. Sayre and Dr. Gouley, of New York, thought that they possessed nothing—not even simplicity—to recommend them.

Dr. Burgett reported an interesting case of ulceration of the appendix vermiformis, with remarks upon abdominal section in cases of perforation of the bowel. The writer took grounds strongly in favor of operative interference, and based his opinions on experience in many cases. Dr. Burgett advocated early operative interference in inflammatory affections around the cæcum.

Dr. James E. Reeves, of Wheeling, West Va., presented for Dr. B. W. Allen, of Wheeling, a report of a case of pyonephrosis, exhibiting a nephritic calculus weighing 480 grains. The case was that of a widow, age, fifty five years. Her general appearance was that of a great sufferer. She was sallow, emaciated, asthmatic, and constipated. Her bad health dated from her menopause. On examination a large tumor was found extending from the right hypochondrium to the left and pelvis. Fluctuation was marked. Aspiration evacuated eighteen pounds of sero-purulent matter, and this was followed by immediate relief. It was now found that the tumor had no connection with the liver, and the history of the case forbade the idea of its being ovarian. The benefit from the operation was only temporary and death resulted. An autopsy showed a tumor extending from the under surface of the liver with which it was in contact but not adherent, downward into the cavity of the pelvis. The lower end of the ileum ran across the tumor to the ileo-cæcal valve, producing a constriction noticeable before death. The sac was fifteen inches in length, twelve inches wide, and six through. It contained ten pounds of purulent fluid, and was found to be the remains of the left kidney. An enormous renal concretion was found imbedded in the sac, together with smaller ones, weighing 416 grains. At no time were there symptoms of uræmic poison, and the other abdominal organs were healthy.

[A special and full report of Section II. for The Diseases of Children will appear in our next issue.]

III. ORTHAEOLOGY, OTOLOGY, AND LARYNGOLOGY. Chairman, Dr. D. S. Reynolds, of Kentucky; Secretary, Dr. S. M. Burnett, District of Columbia.

A paper was read by Dr. G. T. Stephens on the Perimeter, invented by himself for measuring the field of vision. Dr. Stephens described the instrument closely, remarking that most of the instruments hitherto used are very large, weighing a good many pounds, and consequently inconvenient for using. His instrument removes some of the difficulties. The gentlemen present were invited to examine the instrument.

Dr. W. C. Jarvis next addressed the meeting on the subject of Nasal Catarrh with Hypertrophy. He remarked that the persistence of the disease is due to hypertrophy of tissue. This must be removed, and instruments are necessary to effect this result. The cæraseur is the same instrument described in the *Medical Record*, April, 1881. The wire used is very fine, but exceedingly strong, and made of the best steel. The

transfixion needles are provided with metal handles, and are made of various sizes. The simpler forms of hypertrophies can be removed with the *cérasseur* alone, but sessile growths require both. Dr. Jarvis stated that all degrees of hypertrophy can be removed by means of these instruments. In one patient who had not breathed through the nose for fifteen years, and in one who had never breathed at all through the nostrils, the relief was almost immediate. All kinds of nasal growths can be reached by means of the instruments, and there is no longer any use of resorting to caustics, cutting, and the galvano-cautery.

Dr. Joseph A. White said that he had used the instrument mentioned by Dr. Jarvis, and had obtained excellent results. In one case in which the hearing was only two fiftieths, the result was such as to produce perfect hearing in one side, and partial hearing on the other side, where organic trouble was added.

Dr. Daly said the instrument was a very useful one. In his experience deafness of greater or less degree had often been relieved by removal of nasal growths, and that, too, without treating the deafness at all.

Dr. Chisolm read a paper on the treatment of Conical Cornea. He said that it is a pertinent question how to get the projection back. Suggestions had been made of cutting out a piece of the cornea and bringing the surfaces together. After reading a French article on puncture of the cornea with a needle heated to redness, he determined to put it into practice. A case of exophthalmic goitre with a complication of eye troubles was selected; objects could not be distinguished one foot off. No anæsthetic was given and the needle was thrust suddenly through the cornea. The anterior chamber was immediately emptied; no pain was felt; and atropia and cold water were used. There was no inflammatory action. As soon as the eyes were opened the patient read at six feet. The same operation was used on the right eye, and eight months afterwards the cornea was perceptibly flattened — sufficiently so as to admit of an iridectomy.

Dr. Little said that he had assisted Dr. Noyes, of New York, in a case of conical cornea, where tapping was resorted to. The result was highly satisfactory.

IV. PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY. — Met at Mozart Hall at 3 P. M. Dr. Pepper being absent, Dr. J. A. Oesterlony, of Louisville, was called to the chair; Dr. T. A. Ashby, of Baltimore, Secretary.

Dr. W. C. Wile, of Sandy Hook, Conn., read a paper upon Blood-Letting as a Therapeutic Measure in Pneumonia. He said that it was with great hesitation that he approached such a subject, but that, in the light of his past experience, he felt it to be his duty to do so. He could not, in the limited time at his disposal, say anything in regard to the etiology or diagnosis of pneumonia, but should confine his remarks to the consideration of a therapeutic measure. He then proceeded to say that, while he knew he was treading upon almost forbidden ground, and that he would meet with great opposition from the profession at large, he felt compelled to urge the importance of the free use of the lancet in pneumonia. He cited a typical case of what he called "acute catarrhal pneumonia," in which he had recommended the abstraction of blood in the first stage, but in which, owing to the opposition of the family, he had been unable to carry out the practice he recommended until the disease had advanced to the second stage, but even then with the most marked and im-

mediate favorable results. He entered very fully into the details of this case, as it was one of a class which had proved peculiarly fatal in Connecticut, under any treatment he had adopted; and reported a series of twelve other similar consecutive cases, with like favorable results.

Dr. Pepper having arrived at this moment, assumed the chair, and called upon Dr. Gross to open the discussion. Dr. Gross said he should prefer to hear some other gentleman first.

Dr. John J. Lynch, of Baltimore, remarked that he thought, from Dr. Wile's description of his cases, that he had made a mistake in diagnosis, as they were evidently "croupous" and not "catarrhal" pneumonia. The doctor was also probably mistaken in attributing the rapid recovery of his cases to the bleeding, because croupous pneumonia most frequently ends in from two to eight days by sudden crisis, and Dr. W.'s cases would probably have recovered just as soon without the bleeding. Dr. L. admitted that for rapidly extending collateral hyperemia in pneumonia bleeding might be necessary, and was most efficient, but this was from the merely mechanical effect of the remedy, and in no sense curative. The disease would run its course afterwards in spite of the bleeding.

He hoped he would never see the day when the profession returned to the sanguinary method of treating pneumonia less than half a century ago, when the average mortality was more than twenty-five per cent., while by the modern, purely rational method, it was, in uncomplicated cases, not more than four or five per cent.

Dr. Whittaker, of Cincinnati, said that he thought too earnest protest could not be made against this revival of venesection at this late period in the history of science. Pneumonia is now known to be a general disease with a local expression in the lungs, just as typhoid fever is a general disease with a local expression in the intestines. There could be no justification of venesection in pneumonia, except upon the theory of a local inflammation. That pneumonia is, however, not a simple local inflammation is proven by the fact that it differs in its temporal and spatial relations with local inflammations, like bronchitis, and that the local and general symptoms do not correspond in severity. The local signs may be slight, and the constitutional severe, and *vice versa*, just as in typhoid fever or any of the exanthemata. Pneumonia prevails at all times and places, and occurs at all ages of life like the various infectious diseases, and modern pathology has put pneumonia in the category of the acute infections. It would be impossible, therefore, to do anything but harm by the letting of blood at any stage of the disease. How could the letting of blood clear up a consolidated lung? The essayist has, evidently, mistaken the crisis for a cure. The crisis in pneumonia may occur at any time between the fifth and eighth days, and often as early as the third, and neither blood-letting nor any other treatment could possibly cut it short. As for *veratrum viride*, that dangerous cardiac sedative to which the speaker had alluded, it could do nothing but harm. What advantage is there in checking the force and frequency of the heart, when this increase in force and frequency is only compensatory, and is to be favored rather than checked. Pneumonia is due to a poison entering the blood and affecting the whole body, and no amount of blood-letting could let it out, any more than we can drain out the impurities of a stream with a bucket. Our illustrious professor of surgery — may the lustre of his name never

grow less — may succeed by the force of his genius in restoring venesection, the lost art as he calls it, to a place in the domain of surgery, but in internal medicine it is hopelessly and irretrievably lost.

Dr. N. S. Davis, of Chicago, said that he had practiced medicine for nearly half a century, and that for fifteen years he had practiced venesection after the regular sanguinary method, and that he must say that he had found the best results from blood-letting in pneumonia, when discriminately employed.

Dr. Oeterson, of Louisville, Ky., said that he did not wish to discuss the general subject of pneumonia, but to offer some remarks in analysis and friendly criticism of Dr. Wile's paper. In the first place, he did not deny that cases are occasionally met with in which blood-letting is indicated and will prove beneficial in relieving venous congestion, but he did not think Dr. Wile's cases sufficiently numerous to establish a law, nor were they reported with sufficient care to make them available.

The first case, which the Doctor designated as *catarrhal pneumonia*, was evidently *croupous pneumonia*. Of the other cases he gave no account of the physical signs, and so had left the Society in doubt as to the diagnosis.

The first stage of the disease was the period during which Dr. Wile would have us bleed, because this was the stage of engorgement; but that he (Dr. O.) claimed that even at this period exudation had already occurred, as shown by the physical signs, dullness, absence of vesicular murmur and the presence of fine crepitant *râles*. Bleeding will not return this exudation to the vessels; this can only be accomplished by a vital process. The mortality in Dr. W.'s cases was 1 in 13 — far greater than that resulting from the plan of *promoting the natural progress of the disease and supporting the strength of the patient*. The duration of his cases was not less but greater than our knowledge of the natural history of the disease shows to be the rule.

In conclusion, he must insist that the writer had not proved his proposition, namely, that pneumonia is a very fatal disease, nor that the mortality or duration of the disease have been diminished by venesection. On the contrary, it seems to be a well-established fact that pneumonia is a self-limited disease. The blood-letting plan of treatment used to give a mortality of 1 in 5. The purely expectant plan, 1 in 13. The plans he had here recommended gave, in Bennett's hands, a mortality of 1 in 36.

Dr. J. H. Claiborne, of Virginia, said that he did not think we could fail to go astray if we followed the teaching of the gentlemen who always recommended bleeding, nor could we fail to go astray if we believe those who tell us never to bleed. The middle course was safest, and we should be guided more by experience than by theory. There was no one method of treatment applicable to all varieties of pneumonia.

Dr. Post, N. Y., said that in his opinion no dependence could be placed in statistics, as they were drawn from a class of patients found in hospitals, who had been badly clothed and badly housed and fed all their lives, and such statistics were not reliable guides. We must be guided solely by experience. He could not sympathize with the gentleman who expressed the opinion that the lancet could no longer be used in medicine, for he believed that when properly and discriminately used, recovery was more rapid after bleeding.

Dr. Coleman, of Vermont, said that theoretically he believed in the lancet in a certain class of cases, but that in practice he did not meet with that class of cases where the blood was being forced into the lungs so rapidly as to produce strangulation, as he was not called in time to see them in that condition.

Dr. Quimby, of Jersey City, said that in all acute inflammatory cases where he used stimulants he lost his patients. Under a modified treatment he had lost not a patient. All cases where he had used the lancet he had done so on first or second day. He thought we did not often see these typical cases in the very first stages. We can't treat patients as if they were machines. He advocated the free use of the lancet, when properly and timely used.

Dr. Whitney, of New York, said that when he first commenced practice, he had felt it to be his duty to bleed all cases of pneumonia, since then he had to a great extent abandoned the use of the lancet. But that he thought the mortality had never been so great before as since the abandonment of venesection. He thought we did not bleed half enough.

Dr. Jackson, of Virginia, thought it objectionable to speak of blood-letting as a treatment of pneumonia — we ought to speak of it as an adjuvant or auxiliary. It was wrong to let it go abroad among the younger men that we had either advised against or for blood-letting.

Dr. S. D. Gross belonged, he said, to the younger members of the profession. He had listened with deep interest to the remarks made here. Pneumonia was an inflammatory affection, and the lancet, in such affections, was applicable in young, robust, and healthy subjects. Bleeding was not applicable in *all* stages of pneumonia, but only in the commencement, when the disease was in its infancy — not later. We employed bleeding simply as an adjuvant, and under such circumstances we employ it wisely. If, however, we wait until consolidation has taken place, bleeding does harm, no matter what be the form of pneumonia, whether croupous or catarrhal. If bleeding was performed in time, and on proper subjects, it was the great remedy in this disease.

Dr. Lester, of Michigan, did not think the practice of venesection so good as the theory. We did not bleed in cerebro-spinal meningitis, because we knew we should lose our patients; but we used the supporting treatment. He asked what was the difference between the two inflammatory conditions? He was surprised at so much advocacy of the lancet in pneumonia, and would like to see it dispensed with.

Dr. Martin, of Massachusetts, trusted that it might go out to the world that the American Medical Association sanctions the *occasional* use of the lancet, at least.

Dr. Wile, of Connecticut, in closing the discussion, expressed his gratitude for the courteous manner in which his paper had been discussed, and he accepted from the gentlemen their diagnosis of his cases. He felt delighted to learn that pneumonia was such a pleasant disease to treat as those gentlemen who prescribed the lancet seemed to think it. The cases he had reported were of the class, and the only class, he had met with in Connecticut. He did not wish to be understood as saying that the lancet was the only mode of treating pneumonia, but that it was the only way of treating those cases of pneumonia with which he had come into contact in Connecticut.

On motion of Dr. Gross, adjourned.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 30, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York.....	1,206,590	814	293	27.76	17.20	8.85	5.65	2.09
Philadelphia.....	846,984	397	139	23.43	7.81	2.02	3.52	10.58
Brooklyn.....	566,689	278	106	22.66	12.95	10.59	7.91	5.29
Chicago.....	503,304	321	165	28.35	15.90	4.98	2.80	—
Boston.....	362,535	188	51	18.09	13.83	12.23	—	—
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	136	58	17.65	9.56	5.15	2.21	—
Cincinnati.....	255,708	122	39	18.03	9.84	1.64	.82	—
New Orleans.....	216,140	136	53	22.06	5.88	2.94	8.09	.73
District of Columbia.....	177,638	96	33	13.54	14.58	6.25	—	—
Pittsburgh.....	156,381	88	37	29.55	14.77	2.27	7.95	1.14
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	65	38	29.23	7.69	9.23	4.62	—
Providence.....	104,855	37	9	24.32	—	21.02	—	—
New Haven.....	62,882	27	5	18.52	14.81	—	3.70	—
Charleston.....	49,999	33	14	36.36	3.03	—	33.33	—
Nashville.....	43,461	22	5	9.09	13.64	—	—	—
Lowell.....	59,485	18	5	27.78	11.11	5.56	—	—
Worcester.....	58,295	23	10	26.09	26.09	4.25	4.25	—
Cambridge.....	52,740	17	6	11.76	23.53	11.76	—	—
Fall River.....	49,006	22	9	4.55	13.64	—	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	11	4	36.36	9.09	18.18	—	—
Springfield.....	33,340	13	2	7.69	7.69	—	7.69	—
Salem.....	27,598	7	1	—	28.57	—	—	—
New Bedford.....	26,875	11	3	18.18	—	9.09	—	—
Somerville.....	24,985	6	2	—	16.67	—	—	—
Holyoke.....	21,851	10	2	—	10.00	—	—	—
Chelsea.....	21,785	9	3	22.22	—	22.22	—	—
Taunton.....	21,213	2	—	50.00	—	—	50.00	—
Gloucester.....	19,329	2	2	100.00	—	100.00	—	—
Haverhill.....	18,475	6	2	—	16.67	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	12	4	16.67	—	8.33	—	—
Fitchburg.....	12,405	10	1	10.00	10.00	—	—	—
Twenty-seven Massachusetts towns.....	223,528	99	28	12.12	12.12	5.05	2.02	—

Deaths reported 3038 (no return from St. Louis or Buffalo); 1129 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 710, consumption 483, lung diseases 392, diphtheria and croup 201, scarlet fever 133, small-pox 69, diarrhoeal diseases 72, cerebro-spinal meningitis 60, typhoid fever 41, measles 38, malarial fevers 25, erysipelas 20, typhus fever 18, whooping-cough 17, puerperal fever 16. From *diarrhoeal diseases*, Chicago 31, New York 19, Philadelphia five, New Orleans four, Brooklyn three, Boston and Baltimore two, Cincinnati, District of Columbia, Pittsburgh, Charleston, Attleborough, and Milford one. From *cerebro-spinal meningitis*, New York 19, Chicago 11, Pittsburgh 10, Milwaukee seven, Philadelphia four, Cincinnati two, Brooklyn, Baltimore, District of Columbia, Lowell, Worcester, Fall River, and Palmer one. From *typhoid fever*, Philadelphia nine, New York eight, Baltimore four, Chicago, Boston, and Pittsburgh three, District of Columbia, Lowell, and Lynn two, Cincinnati, Providence, New Haven, Worcester, and Holliston one. From *measles*, Cincinnati 12, New York seven, Chicago and New Orleans five, Boston three, Philadelphia, Baltimore, Pittsburgh, Milwaukee, Nashville, and Westfield one. From *malarial fevers*, New York 12, New Orleans five, Brooklyn three, Chicago, Baltimore, District of Columbia, Milwaukee, and Lowell one. From *erysipelas*, New York five, Baltimore four, Cincinnati three, Philadelphia two, Brooklyn, Chicago, Milwaukee, New Haven, Worcester, and Newburyport one. From *typhus fever*, New York 17, Philadelphia one. From *whooping-cough*, Philadelphia five, New York and Chicago four, Brooklyn, Baltimore, Nashville, and Worcester one. From *puerperal fever*, Boston three, Philadelphia, Brooklyn, Chicago, District of Columbia, and New Haven two, Pittsburgh, New Bedford, and Fitchburg one. The mortality from cerebro-spinal meningitis has decreased from 75 for the week ending April 23d to 60.

Nine cases of small-pox were reported in Brooklyn, 32 in Chicago, two in Cincinnati, two in New Orleans, four in Pitts-

burgh; diphtheria 31, scarlet fever 18 in Boston; scarlet fever 33, diphtheria eight in Milwaukee.

In 44 cities and towns of Massachusetts, with a population of 1,085,266 (population of the State 1,783,086), the total death-rate for the week was 22.39, against 21.26 and 21.43 for the previous two weeks.

For the week ending April 9th, in 149 German cities and towns, with an estimated population of 7,203,611, the death-rate was 26.3. Deaths reported 3992; under five 1790; pulmonary consumption 617, acute diseases of the respiratory organs 436, diarrhoeal diseases 144, diphtheria and croup 142, scarlet fever 78, typhoid fever 52, whooping-cough 45, puerperal fever 27, measles and r6theln 25, typhus fever (K6nigsberg four, Danzig, Thorn four, Posen, Braunschweig) 11, small-pox (K6nigsberg, Munich three, Celle, Essen, Berlin three) nine. The death-rates ranged from 15.1 in Metz to 35.7 in Munich; K6nigsberg 28.8; Breslau 34.7; Dresden 23.8; Berlin 24.8; Leipzig 22; Hamburg 23.1; Hanover 15.7; Bremen 27.8; Cologne 21.9; Frankfurt 20.1; Strasburg 27.9.

For the week ending April 16th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 22.9. Deaths reported 3343; acute diseases of the respiratory organs (London) 395, whooping-cough 93, measles 81, small-pox (London) 77, scarlet fever 65, fever 47, diarrhoea 31, diphtheria 15. The death-rates ranged from 14.8 in Brighton to 28.3 in Portsmouth; Bristol 19.7; Birmingham 20.3; London 23; Leeds 23.4; Manchester 24.5; Sheffield 24.7. In Edinburgh 20.1; Glasgow 22.5; Dublin 29.

In the 21 chief towns in Switzerland, for the week ending April 16th, population 479,934, there were 38 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 12, measles 10, diphtheria and croup nine, typhoid fever eight, small-pox two. The death-rate of Geneva was 25, Zurich 35.9, Basle 16.7, Berne 33.9, St. Mier 58.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	9 P. M.	9 P. M.	Mean.	7 A. M.	9 P. M.	9 P. M.	7 A. M.	9 P. M.	9 P. M.	7 A. M.	9 P. M.	9 P. M.	Duration.	Amount in inches.
April, 1881.																			
Sun., 24	29.899	67	80	44	52	22	40	38	SW	SW	NW	15	26	4	C	F	C	—	—
Mon., 25	30.036	52	65	47	42	46	45	44	E	E	SW	3	12	3	C	C	F	—	—
Tues., 26	29.816	58	69	42	69	72	72	71	SE	S	SW	7	4	3	C	O	F	—	—
Wed., 27	29.923	49	59	46	86	85	85	85	NE	NE	N	10	9	2	O	O	O	—	—
Thurs., 28	30.949	63	71	45	68	39	30	46	Calm.	NW	W	0	12	3	C	F	C	—	—
Fri., 29	29.986	50	63	46	85	87	32	68	NE	SW	W	1	6	23	R	O	C	—	—
Sat., 30	30.248	47	59	39	45	32	39	39	W	NW	NW	8	8	8	C	O	C	—	—
Week.	29.980	56	80	39				56										13.50	.22

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 30, 1881, TO MAY 6, 1881.

MIDDLETON, J. V. D., major and surgeon. Granted leave of absence for one month. S. O. 78, Department of the East, May 2, 1881.

CALDWELL, D. G., captain and assistant surgeon. Relieved from duty at Fort Fred. Steele, Wyo., and assigned to duty at Fort Sanders, Wyo., as post surgeon, relieving Assistant Surgeon Kimball. S. O. 36, C. S., Department of the Platte.

LIPINCOTT, HENRY, captain and assistant surgeon. Having reported at these headquarters, is assigned to duty as post surgeon at Fort Niobrara, Nebr. S. O. 36, Department of the Platte, April 29, 1881.

KIMBALL, J. P., captain and assistant surgeon. Assigned to duty at Fort Sidney, Nebr., as post surgeon, relieving Assistant Surgeon Mosley. S. O. 36, C. S., Department of the Platte.

MOSELEY, E. B., captain and assistant surgeon. Assigned to duty as post surgeon at Fort Fetterman, Wyo. Ter. S. O. 36, C. S., Department of the Platte.

REED, W., captain and assistant surgeon. Relieved from duty at Fort Henry, Md., and to report to the commanding officer U. S. Barracks, D. C., for duty at that post. S. O. 76, Department of the East, April 29, 1881.

BURTON, H. G., first lieutenant and assistant surgeon. Relieved from duty at Fort Niagara, N. Y., and assigned to temporary duty at Fort Wadsworth, New York Harbor. S. O. 78, C. S., Department of the East.

WORCESTER NORTH DISTRICT MEDICAL SOCIETY.

THE Worcester North District Medical Society held its annual meeting at the Fitchburg Hotel, Fitchburg, April 26, 1881. The following officers were chosen: President, Dr. E. J. Sawyer, Gardner. Vice-President, Dr. J. P. Lynde, Athol. Secretary, Dr. F. W. Russell, Winchendon. Treasurer, Dr. E. P. Miller, Fitchburg. Commissioner of Trials, Dr. C. C. Field, Leominster. Counselors, Drs. Ira Russell, George Jewett, F. H. Thompson, George D. Colony, R. F. Andrews. Censors, Drs. J. M. Blood, A. L. Stickney, B. H. Hartwell, A. O. Hitchcock, J. M. Randall. Reporter, Dr. G. B. Swasey, Westmin-

ster. Committee on Ethics, Drs. R. F. Andrews, F. W. Adams, W. H. H. Shepard. Library Committee, Drs. F. H. Thompson, C. H. Rice, A. O. Hitchcock. Orator, 1882, Dr. J. M. Blood.

The annual dinner was served at the Fitchburg Hotel, at which a goodly number of ladies were present. The annual address was then delivered by Dr. Levi Pillsbury, of Fitchburg; subject, Sunshine and Shadows of Professional Life. Meeting adjourned.

G. B. SWASEY, Reporter.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held Monday evening, May 16th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. J. L. Hildreth. Subject, A Case of Pylephlebitis.

M. H. RICHARDSON, M. D., Secretary.

THE list of members recently admitted, after the necessary examination, to the Royal College of Surgeons of England, contains the name of Walter Brewster Platt, M. D. Harvard, Boston, U. S. A.

BOOKS AND PAMPHLETS RECEIVED. — The Sanitary Care and Treatment of Children and their Diseases, being a Series of Five Essays by Drs. Elizabeth Garrett-Anderson, Samuel C. Busey, A. Jacobi, J. Forsyth Meigs, and J. Lewis Smith. Prepared by request of the Trustees of the Thomas Wilson Sanitarium of Baltimore, Md. Boston: Houghton, Mifflin & Co. 1881.

Constitutional Syphilis. A Critic Criticised. By G. M. B. Maughs, M. D. (Reprint.)

Transactions of the Medical Society of the State of New York for the Year 1880.

Bovine Tuberculosis in Man. An Account of the Pathology of Suspected Cases. By Charles Creighton, M. D. With Illustrations. London: Macmillan & Co. 1881.

De la Phtisie Pulmonaire et de sa Curabilité. Par Jean-Louis-Simon Joly, Docteur en Médecine. Paris: Librairie J. B. Baillière et Fils. 1881.

The Treatment of Certain Forms of Vocal Disability by the Application of the Principles of Voice Culture. By S. W. Langmaid, M. D. (Reprint.)

Original Articles.

CONNECTION OF CARDIAC AND RENAL DISEASE.¹

BY ROBERT T. EDES, M. D.

THE connection of cardiac and renal disease has almost from the beginning of the more accurate knowledge of the latter been a very interesting theme of speculation, and of late years has been the subject of some theories very important as to aetiology and diagnosis.

Some of these, which, although undoubtedly expressing much truth, have been pushed farther than the facts will warrant, I have ventured to criticise, partly in the light of literature and partly in that of my own experience and observation. Hypertrophy of the heart without valvular lesion was at a very early period recognized by Dr. Bright himself as a frequent accompaniment of the renal disease afterward known by his name. And not only this; he had already perceived that it was much the more common in that form now generally known as contracted, granular, or cirrhotic kidney, or interstitial nephritis, although he placed a different interpretation upon the coincidence from that now generally received. "It is observed," he says, "that hypertrophy of the heart seems in some degree to have kept pace with the advance of the disease in the kidneys; for in the majority of cases where the muscular power of the heart was increased the hardness and contraction of the kidneys bespoke the probability of a long continuance of the disease. Six cases are noted in which the heart was soft and flaccid, and four in which it was unusually small, and in most of these, though not in all, the disease of the kidneys had not proceeded to the stage of contraction and hardness."²

As knowledge of renal pathology increased it was perceived that this statement of Dr. Bright applied not to stages but to kinds of degeneration, and at present it is generally admitted that although we may occasionally find a hypertrophied heart associated with a "large white" kidney, or a contracted kidney with a heart not enlarged, yet the connection between the thickening of the heart muscle and the increase of connective tissue in the kidney is a very constant one.

Dr. Bright supposed the hypertrophy to be a sequence of the renal disease, and suggested two explanations. The first, which he favored himself, assumed, like one set of the more modern theories, an increased resistance to the passage of blood through the capillaries, and hence increased work for the heart and increase of its muscular power. The resistance to the blood was due to altered chemical relations with the capillary walls, brought about by a failure of the kidneys to remove excrementitious products. The second explanation was the directly irritant action of this same vitiated blood upon the heart itself.

The first theory, which certainly had much plausibility so long as the contracted kidney was regarded as the latest stage of the "large white," or mottled, falls of itself to the ground when we find that the hypertrophy is associated almost exclusively with a form of the disease which, so far as we can judge from the symptoms and the analysis of the urine, is attended with no more, and probably even less, difficulties in

the way of excretion than the other forms where no hypertrophy is found.

It has been clearly shown that in many cases contracting kidneys, although furnishing a urine in which the percentage of urea is decreased, fully make up the deficiency by an increased quantity.

On the other hand, those affections, such as simple atrophy or atrophy with dilatation (hydronephrosis), which arise from disease in the urinary passages rarely give rise to hypertrophy of the heart.

Experiments have recently been made³ in which a hypertrophy of the heart was observed to follow removal or functional destruction of one kidney. In young animals the remaining kidney usually increased in size and weight, so as to compensate for the loss; but where this failed to take place, the heart hypertrophied, in order, so the experimenters suppose, to drive the blood more rapidly through it, making up for loss of secreting surface by increased velocity.

We certainly have here some conditions of human pathology not very remotely counterfeited, and yet the experiments do not help us much in accounting for the connection we desire to trace.

The experiments most closely resemble those cases in which atrophy of one kidney is the result of partial or total occlusion of its ureter, in which, however, hypertrophy of the heart seldom occurs.

It is remarked by Senator⁴ that persons with renal calculi may be in good health, may eat enough to furnish an abundant supply of urea, and are beside liable to attacks of partial suppression of urine.

Consequently, he says that next to the forms of chronic nephritis, of all chronic urinary diseases, hypertrophy of the heart develops itself most rapidly in connection with stone in the kidney. After the loss of one kidney, if the nutrition is not interfered with, the development of hypertrophy depends solely upon whether the remaining kidney is able to perform the duties of both.

This compensation on the part of the healthy kidney is, however, usually very complete, as is shown, for instance, in Simon's cases of extirpation of one kidney. In many cases, at least, this is a functional compensation merely, not attended with hypertrophy of the other kidney or of the heart.

A case where nearly total destruction of one kidney was produced, not by a calculus but by constriction of its ureter in its passage through the base of the bladder, was reported here by the chairman some weeks ago. The remaining kidney was not noticeably enlarged, nor was the heart.

It might, however, be fairly objected that in this case the condition of the patient's nutrition was such as to forbid anything like hypertrophy.

A case which corresponds more nearly to the experimental conditions was the following:—

A middle-aged lady, nervous and peculiar for years, died of an acute, probably pyæmic, attack, originating in an inflamed ovary. The left ureter was impervious, and the left kidney, filled with a putty-like mass, had evidently been for a long time useless. The right kidney was rather large, with somewhat granular epithelium, but was not decidedly hypertrophied. The heart was not hypertrophied.

Both Grützner⁵ and Litten⁶ found injection of urea

³ Grawitz and Israel, Virchow's Archiv, vol. lxxvii, p. 315.

⁴ Virchow's Archiv, vol. lxxiii.

⁵ Pilger's Archiv, vol. xi.

⁶ Berl. klin. Woch., July 1, 1878.

¹ Read before the Boston Society for Medical Improvement, May 9, 1881.

² Guy's Hospital Reports, vol. i. p. 39.

into the blood to raise the pressure, but the latter was unable to produce any hypertrophy of the heart by a daily repetition of the process. In these experiments, however, the kidneys were intact, and it has been very properly remarked that the retention of so diffusible a substance as urea, when the kidneys are healthy and excreting a full amount of water, is highly improbable.

In parenchymatous nephritis, however, these conditions do not hold, and hence it is possible or even probable that in those few cases of this form of disease in which hypertrophy is observed it is traceable to the retention of urinary constituents, of which urea is the chief but perhaps not the only important one. Senator applies exactly the theory of Bright to a small minority of cases.

These observations, however, do not go far toward establishing this theory in *interstitial* nephritis, where the hypertrophy is the rule and not the exception; for although we have the two ends of the chain, hypertrophy of the heart and loss of secretive substance, the same or similar in the two sets of cases, the connecting link, accumulation from non-excretion of urea and other products, is not only not demonstrated, but can, in many cases, probably long after hypertrophy is developed, be proved to be absent.

Ewald,¹ indeed, who adopts the theory of Bright for all cases of hypertrophy, speaks of a higher percentage of urea being found in the blood in interstitial nephritis than in parenchymatous or in other diseases, but this can certainly have been true only in the later stages. Bartels has shown very clearly that the polyuria fully makes up for a deficient percentage of urea, and also speaks of many cases where it could not be obtained from the blood, although all of his analyses were made toward the last of the disease.

The theory of Traube was mechanical. He supposed that the resistance by which the tension, and consequently the work, of the heart was increased was due to a diminished capillary area in the kidneys. Aside from the improbability that obstruction of only two, and those not the largest, branches of the abdominal aorta would so permanently raise the pressure as to give rise to cardiac hypertrophy, it is doubtful if any great hindrance exists to the flow of blood even through a considerably contracted kidney. The greatly increased flow of light urine shows that the circulation must be going on without marked hindrance. Buhl² has shown the development of a collateral circulation, both in the kidney itself and in the capsule and surrounding tissues, to compensate for the atrophy gradually taking place in the interlobular arteries and Malpighian corpuscles. The explanation of Traube is generally recognized as insufficient.

Dr. Gull and Dr. Sutton put a new phase upon the question when they showed the existence of thickening in the arterioles, not of the kidney alone, but throughout the body. This thickening might undoubtedly be a sufficient cause for cardiac hypertrophy, but the proportion of cases in which the renal and cardiac disease coincide, without any disease of the arteries, is, although not very great, too large to be overlooked, and it is by no means certain that in many others the arterial disease precedes that of the heart.

Dr. George Johnson had previously called attention to the thickened muscular coat of the small arteries

in the kidneys, a hypertrophy which he referred to a stop-cock action on their part, checking the access of diseased blood to the tissues. He held the changes afterwards observed by Gull and Sutton to be the results of the method of preparation, but several observers have confirmed their views so far as the existence of a general arterial disease is concerned. Its intimate connection with interstitial nephritis, however, is not so generally admitted, and it is pointed out by Ewald that the disease found in the small vessels of the kidneys is not the same.

The change somewhat vaguely described by Gull and Sutton as arterio-capillary fibrosis is considered by later writers as endarteritis of the smallest arteries.

Somewhat connected with these observations, but having rather a clinical than a pathological interest, are the views of Mahomed. If correctly representing the facts they are of the highest practical importance, and even if somewhat exaggerated, as I think they are, they are deserving of careful study for purposes of prognosis or prophylaxis.

They consist chiefly in the recognition of the pulse of high tension, which has been long observed as a frequent concomitant, as the essential and earliest symptom in what he calls Bright's disease. The significance of the name, however, he greatly changes, both in the way of omission and addition; for while he excludes those forms of renal disease in which the epithelium is chiefly affected and shrinking has not taken place, forms which were certainly described and figured by Dr. Bright, on the other hand he talks of cases of *Bright's* disease in which the renal lesion does not exist. The propriety of such a very forced change in the generally accepted and, as it seems to me, natural application of the name, is more than doubtful.

What Dr. Bright described and figured ought to be Bright's disease. If Mahomed has been successful in establishing the existence of a well-marked clinical and pathological group, in which some cases of renal disease and some other cases in which renal disease does not exist are both included, it ought to be called by the name not of Bright, but of Mahomed, just as some of the Germans have already christened the arterio-capillary fibrosis, which may or may not be connected with nephritis, Gull-Sutton's disease.

According to Mahomed, this increased arterial tension, which is most easily and certainly recognized by the sphygmograph, is due to increased resistance to the passage of poisoned blood through the capillaries, the poison being generated by scarlatina, pregnancy, lead, alcohol, gout, and "other well-known causes of Bright's disease," among which he would probably include cold and dampness. Hence hypertrophy of the heart.

This view differs from that one of Dr. Bright's alternatives which we have already discussed in the sequence of phenomena. According to Bright it was — renal disease, poisoning of blood from imperfect depuration, increased resistance, hypertrophy of heart.

According to Mahomed we have *first* the blood poisoning and obstruction, and afterward increased tension, hypertrophy of the heart, and arterial and renal disease.

Another explanation is closely allied to the second alternative of Dr. Bright, though with a similar reversal of cause and effect.

It is that offered by Debove and Letalle in Paris, and Buhl in Munich.

According to this, a myocarditis coexisting with, but

¹ Virchow's Archiv, vol. lxxi.

² Mittheilungen aus dem Pathologischen Institut zu München, 1878.

not dependent directly upon, the renal lesion gives rise to the hypertrophy and finally to arterial changes.

Debove and Letulle speak of this interstitial myocarditis, the increase of connective tissue in the heart, as demonstrable chiefly in the papillary muscles, but frequently to be found in other parts of the heart by hardening and thin sections.

Buhl relies rather on marks of old endocarditis and pericarditis, not affecting the valvular integrity of the organ, to prove the probable former existence of muscular inflammation.

This leads in the first place to simple dilatation, but afterward, partly by the increased nutritive activity which usually follows inflammation, but still more by the disproportion which is thus made to exist between the capacity of the dilated ventricle and the diameter of the undilated aortic orifice, to the greater or less degree of hypertrophy. The labor of the ventricle, and consequently the tendency to hypertrophy, is increased, according to Buhl, though I confess I cannot see why, by the anæmia so constantly present.

The statements of Debove and Letulle as to the frequent occurrence of interstitial myocarditis have hardly excited as yet attention enough to be fully tested in the way which they demand. A mere naked-eye inspection of the heart without preparation is not sufficient to disprove the existence of this lesion, and the silence of autopsy records, even minute and careful ones, where myocarditis has not been specially looked for, can therefore count for but little as evidence.

It is fair to suppose, however, that a case reported in Paris during the year in which these observers published some of their results was subjected to sufficient scrutiny to make the statement of "no cirrhosis" of the heart of some value. Such a case was reported by Barrie and Du Castel, in the *Progrès médical* (1879, page 467). It was a typical case of interstitial nephritis, with the *bruit de galop*, uræmia, anæmia, and Cheyne-Stokes respiration, the granular kidneys weighing 115 and 150 grammes, with arteries thickened and stiff. The heart weighed 810 grammes (27 ounces), and it is expressly stated that there was no fatty degeneration or cirrhosis.

The view of Buhl, who seeks to prove myocarditis, not by a remaining hypertrophy of fibrous tissue, but by traces of superficial inflammation, cannot very easily be either accepted or rejected. He himself admits that even these traces are absent in twenty per cent. out of the ninety-two per cent. in which hypertrophy of the heart is found.

The very frequent occurrence of arterial and cardiac disease, beside hypertrophy, is a fact not generally overlooked, but possibly not estimated at its real importance. Of fifty-eight cases of interstitial nephritis of which I have notes, in forty-six hypertrophy of the heart was present, and of these twenty were noted as having some other cardiac or vascular lesion, — in the majority of cases atheroma.

I do not in the least believe that this last figure at all represents the actual number of cases in which slighter lesions were present, but were not noted. It seems to me a rare thing, though I cannot speak by the book, to find a case of cirrhotic kidney with hypertrophy of the heart in which no other lesion evident to the naked eye is present.

Buhl describes the hypertrophy of the heart as usually beginning in a definite attack of subacute carditis, which may last six or eight weeks, or even one fourth

or one half of a year. It is as impossible to deny that this may take place as to affirm that it always does. The symptoms of myocarditis are so obscure that if it occur uncomplicated with either peri- or endocarditis, it may perfectly well fail of recognition, or even of giving rise to a train of symptoms which the most minute inquiry afterward can show to be at all characteristic. Buhl does not intimate upon what clinical basis this statement is founded.

Another possible link between the two affections may be found in certain nervous lesions recently described.

Da Costa and Longstreth¹ have found in many cases of renal disease, and especially with the contracting kidney, that a fibroid thickening with atrophy of cells is present in the renal ganglia. Banti, without knowledge of Da Costa and Longstreth's observations, has fully confirmed their data.²

Thoma³ has pointed out alterations of the nervous ganglia in valvular disease of the heart: in slighter cases hyperæmia and "granulating" inflammation, in older ones interstitial inflammation and increase of connective tissue, with fatty and pigmentary degeneration of cells.

Mahomed admits that the increased tension which, according to his theory, is at the bottom of the cardiovascular changes, may in many cases be of nervous origin; and Dr. Clifford Allbutt has pointed out the frequency of mental strain and depression as a cause of granular atrophy. The existence of high tension in several nervous affections will be noted in several of the sphygmograms exhibited.

Pathological anatomy alone can hardly decide which of these theories, if any, most correctly explains the facts. The coincidence of renal, cardiac, and arterial disease in the later stages being admitted, much must depend upon the time at which they are severally developed, or rather at which they can be shown to exist; and this, except in the few accidental cases of death at early periods of the disease, is a matter for clinical observation.

Mahomed's theory depends largely upon his observations of the pulse by means of the sphygmograph; and I have ventured to compare with his conclusions, which have been very distinctly expressed and carefully recorded, some of my own observations upon the pulse of Bright's disease and that in some other affections, as well as variations of the presumably healthy pulse.

Dr. Mahomed says,⁴ "The pulse tracing of each individual in health possesses a constant form dependent chiefly upon the constitution and general habits; it may be hard or soft, large or small, good or bad tone, excitable or phlegmatic, and is as characteristic as the tone of voice or mode of carriage, but in disease the pulse loses this individual form, and varies with the general conditions."

This may be true within certain limits and in regard to certain points, but in regard to the tension, which is the point upon which he lays chief stress in the diagnosis of Bright's disease, it does not correspond with my observations, chiefly upon my own pulse. This varies greatly from time to time, for certain reasons, some of which only are known to me.

¹ Amer. Journ. Med. Sci., July 1880.

² N. Y. Med. Record, April 16, 1881. From *Lo Sperimentale*, December 9, 1880.

³ Virchow's Archiv., vol. lxxiv, p. 461.

⁴ Medical Times and Gazette, March 23, 1872.

SPHYGMOGRAPHIC TRACINGS.

1. C. H. W. Typical case of contracting kidney. Abundant urine; albumen; casts; hemiplegia; retinitis; hypertrophied heart; contracted kidney.¹

2. H. C. W. Acute gouty attack.

3. H. C. W. Urine 1010, double the normal quantity; no albumen; no casts.

4. W. C. Phthisis and parenchymatous nephritis. Hypertrophied right heart.¹

5. E. McD. Anæmia, vomiting. Urine 1006; albumen; casts.

6. F. H. Urine 1007; albumen; small quantity; casts.¹

7. J. C. Convulsions. Œdema. Urine 1009; albumen; granular and waxy casts.

8. J. R. Has had gout. Headache; no œdema; urine copious; small amount of albumen; a few hyaline casts.

9. M. S. Slight œdema, headache. Urine 1005; trace of albumen; no casts.

10. J. H. Debility, vomiting. Trace of albumen; Caö. Recovery.

11. M. F. W. Extreme debility, vomiting, anæmia. Urine 1020; possible trace of albumen; Caö. Recovery.

12. P. P. Abscess right frontal lobe. Urine 1020; albumen and casts.¹

13. P. W. Tumor (probably syphilitic) right temporal lobe. No hypertrophy of heart; much albumen; possible slight interstitial nephritis.¹

14. E. A. Neurasthenia.

15. June, 1879. Active professional man, apparently in excellent health.

16. Medical student.

17. Self. Cold after reading in bed.

18. Same. After cold bath.

19. Same. After breakfast same day.

20. E. H. Acute nephritis, œdema. Blood; albumen; casts.

21. Same. Urine 1023; some albumen and casts. Temperature somewhat raised.

22. Acute nephritis, much œdema. Urine 1010; albumen; blood casts.

23. Acute nephritis. Urine smoky; albumen; blood; casts.

¹ Autopsy.

Exercise produces a decided and great fall of tension. So does in a less degree a full meal. On the other hand, rest or quiet raises it; and the same is true, as has already been pointed out by Marey and others, of cold. In my own case, sitting at my writing-table for an hour or two in the evening, especially if the room becomes a little chilly, gives a tracing of high tension with tolerably strong action of the heart. I have found the same condition after reading in bed for an hour, especially, I recollect, on one occasion, when my feet did not get warm for the whole time. A cold bath sends the tension rapidly up, but if the reaction take place fully, this condition lasts but a short time. (See Nos. 17, 18, 19.)

I have sometimes thought that possibly a diurnal variation might be made out, the tension being lower during the forenoon and middle of the day, and higher in the evening, night, and early morning.

These periods would not be very far from corresponding with the diurnal periods of high and low body temperature,¹ but it would not be easy to separate such a fluctuation from the effects of exercise, food, and external temperature.

The two propositions of Mahomed, which are most strictly of a clinical character, most accessible to criticism, and in fact really constitute the foundation of his theory, are as follows:²—

“High tension may exist without renal disease, though rarely.

“Renal disease may exist without high tension, but also rarely.”

If it can be shown that these exceptions are very far from being rare, it seems to me that the practical importance of the frequent coincidence of high tension and renal disease is greatly diminished, whatever we may think of the importance of the new disease set up in place of the old.

It is obviously necessary to establish some sort of standard as to what shall be called high or too high tension, as indicated by the sphygmograph. Certain arbitrary rules as to the measurement of the tracing cannot be too strictly applied, and would often, without some allowance, lead to error; for the form varies more or less with the construction of the instrument, more especially the stiffness of the spring which receives the first impulse of the artery, and also with the pressure brought to bear. The tracings which I have taken mostly differ from Mahomed in their lesser height, but exhibit all the points usually brought out by any instrument. They resemble in their degree of amplification more those of Marey than of Mahomed. The prolongation of the tidal wave, the height of the aortic notch, and the development of diastolic can, however, all be studied upon them, and I think they can, with a little care, be very fairly compared with those of Mahomed. The pressure I have never taken the trouble to record, because, first, I have usually varied it enough to be sure that I was getting the best tracing; and secondly, because the pressure marked on Pond's instrument does not indicate the pressure brought to bear on the artery, but only on adjacent tissues, such as the tendon of the flexor carpi radialis and the radius itself, to say nothing of skin and fascia.

Tracings taken from presumably healthy persons vary within quite wide limits as to tension. In every group of such persons of whom I have tracings, I find

several with mark supposed to indicate a tension higher than the average or higher than normal. Some are not easily to be distinguished from those taken in chronic nephritis.

Among twenty medical students and ten or a dozen physicians of various ages, all presumably in good health, may be found quite a number of tracings with the prolongation of the summit, which is supposed to indicate the slower forcing of the blood into the arteries against a high pressure, and in some the elevation of the aortic notch and flattening of the diastolic wave, which indicate a tense condition of the arterial walls. (See No. 16.)

Of some twenty odd patients at the Adams Nervine Asylum, mostly young or middle-aged women, in none of whom was any renal disease detected, nearly every one showed similar characteristics. (See No. 14.) These I do not speak of as healthy, but simply as non-renal and non-cardiac.

Two professional men, aged about sixty and sixty-five, whose tracings, taken nearly two years ago, showed such marks of high tension, that, having formed my opinion rather from reading than from my own observation, I took special pains not to point out their characteristics, are still actively engaged in laborious practices, certainly retain unimpaired cheerfulness and excellent appetites, and, so far as one can judge without impertinent inquiries, are not in the least troubled with any symptoms of renal derangement. (See No. 15.) Of my own pulse I have already spoken.

An upholder of Mahomed's theory would probably remark upon these observations that what I have taken to be the pulse of high tension is not really so, or rather is not *high enough* to have diagnostic importance.

My reply would be: I am aware that in these cases we have not the marks of *extreme* high tension, but that it is fair to make use of them in criticising Mahomed's theory may be shown by a comparison of the tracings actually given by him as characteristic with those I shall exhibit. I think that upon the basis of his tracings as well as my own we may make four classes:—

(1.) Extreme high tension, found chiefly in acute nephritis, sometimes in chronic, in some doubtful cases. (In angina pectoris?)

(2.) Moderately high tension, found in chronic nephritis, in many nervous diseases, in pregnancy, often in health.

(3.) Moderately low tension, found in many diseases, but chiefly in health.

(4.) Very low tension, in debility, in fever, soon after vigorous exercise, after nitrite of amyl.

The tracings given by Mahomed³ are nearly all of a very moderate tension with the exception of those from acute cases. We frequently miss even in those selected to prove the correctness of his views, the prolongation of the tidal wave, as well as the high position of the aortic notch, and the more or less complete suppression of diastolic. It is of course higher in some than in others, but in none does it present the extreme characteristics observable in acute cases.

The tracings from cases of scarlatinal nephritis or, perhaps, scarlet fever, I can parallel from acute non-scarlatinal nephritis, and these are, undoubtedly, of high tension, the *pulsus tardus et durus*, but with the improvement in the symptoms, or rather as their acuteness progresses, either toward recovery or toward a

¹ Jürgensen, Die Körperwärme des gesunden Menschen.

² Lancet, August 18, 1879.

³ Med. Chir. Trans., 1874, and Guy's Hospital Report, 1879.

chronic stage, this high tension subsides, as is seen both in Mahomed's tracings and in those from E. H. (Nos. 20, 21) for instance.

In the chronic cases, even the most typical, of interstitial nephritis, those in which we should expect the most pronounced high pressure, we find it only to an extent which can easily be paralleled, not, as Mahomed says, "rarely," but in various nervous diseases, including simple neurasthenia (*sit venia verbo*), and often in what, unless symptoms are very latent and remain so for years, we cannot help calling excellent health. This, however, it is fair to say, is admitted by Mahomed himself.}

It is true that a pulse of somewhat high tension is exceedingly common in chronic renal inflammation, possibly almost constant, except when certain special conditions, notably great debility or marked fever are present, as we see in that very frequent combination of phthisis and nephritis (see No. 4), or, as will be noticed, in the sphygmograms from H. C. W. (Nos. 2, 3), in intercurrent gouty attacks, but the position of Mahomed, that the "signs of high tension or overfullness of the arteries are the *only pathognomonic signs of chronic Bright's disease*," is absolutely untenable. If he means *extreme* high tension, we find it chiefly in the *acute cases*, those in which the diagnosis is easiest and the prognosis most favorable; if *moderately* high tension we find it too often elsewhere to be pathognomonic of anything. Suspicious is the strongest word which can properly be applied to it.

This may, perhaps, be as well shown by the accompanying tracings as by any extended description. I have placed, first well-marked cases of nephritis, the basis of the diagnosis being in brief, and, next, a number of other cases in which nearly the same indications of high tension are found, and in which the disease was of an entirely different character.

I do not wish to deny to this symptom all value either in diagnosis or prognosis, but I think that Mahomed has been led to overestimate it by his too exclusive consideration of acute nephritis, in which the maximum of high tension is found, and its subsequent passage into the chronic stage, and that in tracing a necessary connection between various other conditions of ill health, in which a moderately but still too high tension is found, and the fully developed granular kidney, he is going far beyond a sound basis of clinical observation.

Of course, he can, if he chooses, define Bright's disease as that condition in which too high arterial tension is found, and we shall then have no difficulty in admitting that high tension is pathognomonic of it, but such a disease, whatever its name, would coincide only here and there, and not of necessity with the affection described by Dr. Bright, and recognized under this name as a well-marked clinical type by the profession generally.

Acute nephritis, beginning with high tension, may undoubtedly often be traced directly into subacute or chronic nephritis, but that all other affections, as, for instance, some of a dyspeptic character, which are attended by a similar condition of the pulse, must necessarily lead to the same result, is a very arbitrary assumption.

Mahomed allows so long a time for the development of the disease foreshadowed by the presence of high tension, that the disproof of his theory is as difficult as he admits the proof to be. If, however, the persistent

high tension is the cause of the cardio-vascular changes, of which hypertrophy of the heart is certainly one of the most common and most prominent, this hypertrophy *should be* developed at a very early period. But Mahomed admits that it requires years, often many years, to produce in the dyspeptic and suspicious or the apparently healthy cases, which, on account of their pulse, he supposes *will* develop into Bright's disease, a hypertrophy of the heart and disease of the vessels. And yet in cases where nephritis is present it develops much more rapidly than this.

Traube states that he has seen hypertrophy distinctly developed in four weeks after the beginning of an acute nephritis.¹ It would certainly seem then that a functional high tension, not originating in disease of the heart and vessels, cannot be either the connecting link between or the common cause of the renal and the cardiac disease.

It is easier to criticise than to construct, and I have no new theory to propose in place of those which seem to me insufficient.

We cannot help seeing, however, the facts to which it is the merit of Johnson, of Gull and Sutton, and of Mahomed to have drawn our attention, that the form of Bright's disease attended with interstitial nephritis is more than renal, and that the cardiac and vascular changes may occupy the foreground of the clinical picture. We must also observe how often organic disease, more or less marked, occurs in other regions than in the muscle of the heart and in the kidney, the peri and endo-carditis, the pleuritic adhesions, the endarteritis of large and small vessels, diminishing their elasticity, and thus demanding an increased expenditure of force to drive a given amount of blood, the usual coincidence of a similar interstitial hyperplasia in the ganglia connected with the kidney, and possibly its not infrequent occurrence in the nervous centres and their membranes.

We are brought by these facts to admit the existence of a fibro-hyperplastic diathesis, with perhaps no special tendency to particular organs except so far as influenced by their functional activity, but since the heart and vessels among the muscular organs, and the kidneys among the secreting are more constantly active than any others, most frequently making itself manifest in these, with effects which vary with the different structure of the organs.

TWO CASES OF TEMPORARY APHASIA.

"BRIGHT'S DIATHESIS."²

BY T. M. ROTCH, M. D.

THE following somewhat unusual cases, occurring in my practice within a few weeks of each other, present points of clinical importance which may make them interesting to members of this society, who I hope can throw such additional light upon them from the resources of their own experience as to elucidate certain questions of aetiology and resulting diagnosis which I fear my own efforts at investigation have left rather doubtful.

The first case I supposed to be a disturbance of circulation in the third left frontal cerebral convolution, by

¹ Ges. Beitrage, etc., vol. iii. p. 239.

² Read before the Society for Medical Improvement, May 9, 1881.

a minute embolus or blood clot being carried from the aortic orifice to one of the smaller branches of the left middle cerebral artery, producing complete aphasia, with the exception possibly of the word "yes," and apparently without disturbance of articulation or muscular paralysis of any kind, lasting about twenty-four hours, and resulting in complete recovery. The second case was one of partial aphasia without muscular paralysis, apparently arising from disturbance of the cerebral circulation by abnormal blood or a minute hemorrhage, lasting several days, and resulting in entire recovery so far as the cerebral symptoms were concerned.

CASE I. Mr. A., age fifty-nine, is of an exceedingly nervous temperament and has been a good deal broken down by business troubles during the last five years. He had articular rheumatism about fifteen years ago, but seemed to get entirely well, and since that time has had no symptoms referable to the sequelae of that disease, and has been strong and well excepting that for the last ten years he has suffered from headaches affecting the whole head, and not especially localized; at times these headaches have been accompanied by nausea, but this is not a constant symptom.

One year ago he had an acute attack of tonsillitis and pharyngitis, during which he was delirious for a number of days without any other apparent cause than general disturbance produced by the high temperature, which ranged from 39° to 40° C. The physician with whom I saw him in consultation at that time failed to detect, on repeated examination, anything abnormal in the urine or any cardiac complication; I myself did not make any physical examination.

Mr. A. recovered entirely from this attack, and has since been pretty well with the exception of occasional headaches, which have seemed to be connected with digestive disturbance. His bowels are usually constipated, and he has had hemorrhoids for the past two years. Since the attack of tonsillitis he has at times been troubled with twitching of the legs on sitting still for some time. He has never had syphilis, and is not in the habit of drinking liquors.

December 30, 1880. Mr. A. came into my office to ask a question at nine A. M., conversed naturally, looked well, and said that he felt in good condition. After speaking of the extreme cold (it being one of the most severe days of the winter) he returned to his home, a distance of a few hundred yards. On his arrival he is reported to have had difficulty in finding words to express himself, though his mind seemed perfectly clear. He complained of headache, which was somewhat relieved by the application of mustard to the back of the neck and to the feet; he also spoke of slight numbness of the back of the right hand lasting for a few minutes. I saw him an hour afterwards. He was then complaining of a slight pain in the front of the head; his mind was clear, and he spoke pretty well, with no difficulty in articulation; but every now and then he failed to obtain certain words in expressing himself, and he intelligently drew my attention to this phenomenon, asking me "if it was paralysis." The pulse was 65, regular and soft. The skin was normal to the touch. The tongue was protruded straight. There was no difference in the pupils, which contracted well. There was no numbness, paralysis, or disturbance of sensation.

I was obliged to leave Mr. A. for some hours and did not again see him until evening, when I met Dr.

Samuel Cabot in consultation, Dr. Cabot also having kindly consented to see the patient during my absence. Dr. Cabot reported that after I had left him in the morning, Mr. A. began to have more headache, which soon became intense, and in about an hour he entirely lost the power of speech; he passed at this time a large amount of light-colored urine, and at one time became very pale, being almost in a state of collapse, and ammonia was given to revive him.

At six P. M. he was actively delirious, attempting to get out of bed. He did not recognize any one, but seemed to hear, and answered "yes" to all questions. His face and head were flushed and hot. Pulse 120, bounding, full, but not particularly tense. Respirations regular, 24. The heart was beating regularly but forcibly. The cardiac dullness was slightly increased to the left, corresponding to the apex beat, which was in the mammary line and a little lower than normal. A loud souffle, drowning both heart sounds, was heard all over the cardiac region, and by Dr. Cabot also in the axillary line, but not accurately localized. The urine was passed involuntarily, and he groaned as if in great pain. No paralysis was apparent. The skin of the body and extremities was extremely sensitive, the slightest touch apparently annoying him.

Mr. A. continued in this state until ten P. M., when he went to sleep. Respirations 24, regular; temperature 38.8° C.; pulse 120, rhythmical, full, and rather tense. At 2.30 A. M. he sat up in bed and passed his water in a bed pan, but did not recognize any one, and soon went to sleep again, not appearing to suffer pain. He used his legs and arms well, and nothing abnormal was noticed about his face or eyes.

When asleep and lying on his back a slight catch was noticed in his breathing.

The heart was still found to be beating violently, and the souffle, now not so loud and more localized, was heard in the second intercostal space, close to the right parasternal line and with the first sound.

December 31st, seven A. M. He seemed to notice that there was a strange nurse in the room, but when spoken to he could only answer "yes." At nine A. M. the pulse was 120, and not so full and tense; the temperature was 37.2° C. He recognized his friends, spoke a few words, and was easily persuaded to go to sleep. The urine by estimate was rather lessened in amount, darker than normal, with a slight flocculent sediment; specific gravity 1030, reaction acid, no sugar, albumen in considerable amount; after standing for several hours the urine was found to contain a heavy precipitate of amorphous urates, urate of ammonia, oxalate of lime crystals, and numerous hyaline and granular casts.

At six P. M. Mr. A. was found to have recovered the use of words entirely, and was reported to have slept, with occasional intervals, all day.

January 1, 1881, nine A. M. He was reported to have had a good night and now takes milk and water, not having had, before this, anything to eat or drink for forty-eight hours. The bowels were moved by an enema.

January 3d. Since the last report Mr. A. has remained in bed, sleeping most of the time, but feeling well and having a good appetite, milk being given to him every two hours when awake.

He has at times complained of flashes of pain in the front and back part of his head, passing off, however, in a few minutes. Pulse 75, a little full, and, as estimated

by the finger, of rather higher tension than normal. The patient was very nervous and asked a great many questions about himself, so that it was deemed best not to examine him much, and for this reason a sphygmographic tracing could not be obtained. The albumen in the urine was found to be lessened, and the amount passed in twenty-four hours 556 cc. (about 519½).

January 4th. The pulse was 69 and not so full. Temperature 37.2° C. Amount of twenty-four hours' urine 624 cc. From this time there were no unpleasant symptoms, the patient rapidly recovering his strength, and the only points of interest in the case being the analysis of the urine and the examination of the heart.

January 5th. Urine, amount 619 cc. (about 522); color about normal; reaction acid; specific gravity 1022; albumen, a trace; uric acid in large amount; a few granular casts.

January 6th. Urine, amount 737 cc. (about 525½); albumen, none; uric acid less in amount; oxalate of lime crystals less numerous; oxalate of urea crystals, a small number; a few white corpuscles, a slight amount of epithelium from the bladder, and a few granular casts.

An examination of the heart showed the apex beat to be a little depressed and in the mammary line, and the area of absolute cardiac dullness slightly increased in the vertical diameter downwards, corresponding to the displaced apex.

The valvular sounds at the heart's apex were normal, as they were over the whole cardiac area, excepting that in the second right intercostal space close to the right parasternal line a soft murmur was heard replacing the first sound of the heart, the second sound being normal.

The pulse was 66, a little full, but soft and regular. The lungs were normal.

January 7th. Urine, amount, 1087+ cc. (about 537½).

January 8th. Urine, amount, 1116 cc. (about 539).

January 9th. Urine, amount, 1087 cc. (about 537).

The patient was walking about, and taking solid food.

January 10th. Urine, amount, 1087 cc. (about 537).

January 11th. Urine, amount, 1327 cc. (about 547).

January 12th. Urine, amount, 1175 cc., normal; specific gravity 1011; color rather lighter than normal; no albumen; no uric acid or any abnormal sediment; no casts.

Mr. A. on this day reported that he had at times had a little spasmodic headache, but that he felt perfectly well, and had been out and about as usual. He was looking well, and conversed with his usual command of language. I have seen him within a few days, and he has had no return of the headaches, which were so troublesome before his illness.

CASE II. Mr. B., age forty-five, has always since adult life been strong and well with the exception of an attack similar to that from which he is at present suffering, occurring three years ago, and of double pneumonia two years ago. When a boy he had something the matter with one of his knees, which swelled, became painful, discharged pieces of bone, and after incapacitating him from walking for over two years, finally recovered entirely without ankylosis. He has had other diseases of childhood, but no unfavorable sequelae. Mr. B.'s sister informed me by letter in regard to their father, as follows: "He had always been strong and well, showing remarkable mental

energy in a long professional career, until, when quite an old man (the exact age was not stated), he had an attack of paralysis, which affected his speech, but he was at all times able to make known his immediate wants; this attack was preceded by a "thumping" pain in the back of his head, but, with this exception, he was often heard to say that he never suffered from headache. After a time, he regained his speech, and continued his work. He never had anything the matter with his kidneys so far as was known, and finally, when in his usual health, had an attack of apoplexy, from which he died in a few days."

Mr. B. has never had syphilis, and has led a temperate life, excepting that the daily amount of liquor which he has for many years been accustomed to take is greater than would be considered within the limits of safety for health.

He is subject to rheumatic pains in various parts of the body, and at times in the feet, causing lameness and swelling without pitting. He has never had rheumatic fever, or a decided attack of gout. He has at times noticed a swelling of the glands on either side of his neck, and not accompanied with pain or enlargement of the tonsils. Three years ago, when in active business in New York, after working very hard, and undergoing great mental anxiety, he felt dull and uncomfortable for several days, and finally "fainted," as he expressed it; on coming to himself he found that he had lost the memory of words, and that his sight was affected, all colors looking very brilliant, and peripheral vision being impaired; a friend who came into his room looked as if he was surrounded with violet flames. This disturbance of the eyes passed off in a few days, and his aphasia soon disappeared, leaving him as well as ever until the present attack.

Mr. B. has been feeling very well, but during the absence of his partner he has had great responsibilities thrown upon him, and has had considerable mental strain.

February 21st, when called to see Mr. B., I found that he was unable to give a very clear account of what he had been doing on the previous day, and that although he had no paralysis of articulation he could not recall the words which he wished to use; he said, however, that he had passed a very restless night; had got up several times to pass his water, and was nauseated for a short time, but did not vomit. A clerk, who is employed by Mr. B., told me that he reached the office much later than usual February 21st, and said that he did not feel well; he was unable to tell his partner, who had just returned from New York, to whom he had given checks during his absence, and he entirely failed to give the accustomed combination of the safe; he seemed confused, and had to be sent home a few hours before I saw him. His partner, who came into the room during my visit, stated that he had noticed that for the last few months Mr. B. had been inexact in his interest computations, where before he had been remarkably clear-headed, and that while he usually was very good-natured, he had lately been peevish, and a little sullen. When I first saw Mr. B., February 21st, his face was flushed, and he had a hesitating, embarrassed manner, due, apparently, to his inability to express himself freely; he protruded his tongue, which was considerably coated, straight, and without tremulousness; the pharynx was reddened; the tonsils were not enlarged, but the lateral cervical glands were somewhat swollen. There was no paraly-

sis or disturbance of sensation; he could walk well with his eyes shut and without dizziness; the bowels were regular; he stated that so far as he knew he had never had any trouble with the bladder, but that he was accustomed to get up in the night to pass his water, and that for the past twenty-four hours he had been passing a greater quantity of urine than usual. The pulse was 90, full, and, as estimated by the finger, of increased tension; the temperature was 38° C.; respirations regular and quiet. He was perspiring quite freely, and complained of soreness in both temporal regions. The lungs were normal. The heart's apex was in the mammary line, a little below its normal position, and its dullness was somewhat increased, corresponding to the displaced apex. The mitral sounds were about normal, though the first sound had a tendency to reduplicate; the second aortic sound was slightly accentuated; no murmurs were heard. The

hearing was good; the eyesight was somewhat affected, objects not looking clear. On asking Mr. B. what he had had for breakfast, he said that he could not remember the name, though he plainly saw the object mentally; he also said that he thought it would be impossible for him to write or read, and that he did not wish to try.

February 22d. The patient reported that he had slept well, but that he had been up two or three times in the night to empty his bladder. The soreness complained of yesterday is now especially over the left temple. He talked rationally, but was still unable to get certain words. He referred to his inability to obtain the word representing his breakfast yesterday, but after thinking for about ten minutes he said it was "fish-balls." Pulse 90; temperature 37° C. He was unable to write clearly, as shown by Papers I. and II., a note which he attempted to write at my dictation, in which he was to say, Dear Sir, — I shall be down town to-morrow morning. Business is flourishing.

I. (First attempt) Dir Sir, — I shal be harn down star.

II. (Second attempt.) Dear Sir, — I shall be down stone to morion morning. Bisiniss is sforishing.

February 23d. An examination of the urine gave an acid reaction; specific gravity 1010; no sediment; considerable albumen; a few hyaline casts.

February 24th. Reported that he felt much better, and that at times he had no pain in his head, and that when it was present it was relieved in a short time by taking eight grains of acetate of potash in half a tumbler of water. His mind was much more clear and he wrote intelligibly, but with an effort, as seen in paper III.

He complained of pain in his shoulders and legs. The swelling of the cervical glands had disappeared, and the throat was less reddened.

February 25th. Mind perfectly clear; writing, according to his partner, about as legible and free as usual, as shown in paper IV.

Urine: amount passed in twenty four hours 1504 cc., about 551; color lighter than normal; specific gravity 1010; reaction acid; albumen in slight amount; no sediment to the eye. Complained of pain in left instep, causing lameness. No swelling detected.

I.

Dear Sir

Dir sir

I shal be

harn down star.

II.

Dear Sir

I shall be

down stone to morion

morning - Business
is sforishing - Yours
truly

III.

Dear Sir

I am coming down
town tommorn - Business
is flourishing & I am feeling
much better

February 26th. Dr. Wadsworth saw the patient in consultation, and reported that there was nothing found in the eyes which pointed to cerebral disease, but that the veins were rather large, and there was an evident pulsation in one of the arteries coming from the disc similar to that which is seen in aortic regurgitation.

One of the arterial branches also gave an appearance of obliteration for a short distance. Dr. James J. Putnam, who saw the patient in consultation, took a sphygmographic tracing of the pulse, which is represented in diagrams 2 and 3, diagram 1 representing the normal pulse.

IV.

My Dear Doctor;
As you are at present somewhat interested in my productions, I herewith send you two of them - this note & the contents of a certain bottle - which contents I trust have been made in the highest style of art I cannot say so of this note.
Very Respectfully

February 28th. Dr. William B. Hills made the following report of the urine: amount in twenty-four

DIAGRAM 1.

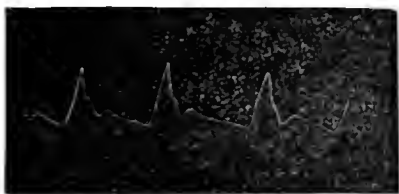


DIAGRAM 2.

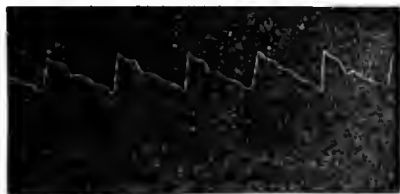


DIAGRAM 3.



hours 1845 cc., that is, increased; color normal; reaction acid; specific gravity 1012½; albumen a trace; bile pigments and sugar absent; sediment, quite nu-

merous round cells (pus), occasional renal epithelium, a few hyaline casts; urea 30.5 grammes, that is, practically normal. Dr. Hills remarked that the fact that

DIAGRAM 4.



the urea was about normal led him to think that if an interstitial nephritis was present it was in a very early stage, but from the large amount of the urine in connection with the general symptoms he did not think that there was much doubt but that an interstitial nephritis existed, though possibly this patient might normally pass a large amount of urine, and the casts might be due to a congested kidney.

April 17th. The patient, having in the mean time given up alcoholic drinks, lived simply, and undergone a mild purgative treatment for two weeks, reported that he had been very well, and had been working as usual. Dr. Putnam took another sphygmographic tracing, which resulted as shown in diagram 4.

April 22d. The patient having begun to take a tonic of iron and nux vomica, some doubt was thrown on the correctness of the deductions which had been made from the analysis of the urine, from Mr. B.'s remarking that he might in measuring the urine have preserved more than the actual twenty-

four hours' amount, and another careful examination was made by Dr. Hills. Urine: total amount 1370 cc.; color normal; specific gravity 1013; reaction acid; amount of sediment slight; chlorides normal; total amount of urea 26.7 grammes; albumen a trace, but a little larger in amount than at previous examination.

Under the microscope were seen numerous round cells (pus), a small amount of renal epithelium. Hyaline casts more numerous than at previous examination.

Dr. Hills writes as follows concerning the case:—

This examination following the history of the case as given to me by Dr. Rotch strengthens me in my opinion that this is a case of chronic Bright's disease (probably interstitial) rather than a case of congestion merely. I base my opinion on the amount of urea, which is one fifth to one fourth below the average normal amount, which would not be expected in a person up and about every day, unless there was some structural disease of the kidneys. The amount of urine, 1370 cc., cannot be considered much, if any, diminished, unless we know that his average normal quantity is above this, as it quite often is the case that the normal amount of urine is as low as this. I do not know that I should be justified, from my analyses thus far, in giving an opinion which would be considered of any value as regards the stage of the disease. I should be inclined, however, to consider the disease to be in a comparatively early stage rather than late.

(To be continued.)

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

MAY 9, 1881, DR. T. B. CURTIS presided.

DR. T. M. ROTCH read a paper, entitled

TWO CASES OF TEMPORARY APHASIA; BRIGHT'S DIATHESIS.¹

DR. WADSWORTH said in regard to the case which he had examined, that the throbbing of an artery in the fundus of the eye, especially where there is a curve in its course, as was the case in this one, was a phenomenon which he had seen quite frequently where there was no heart trouble, and as to the obliteration of the artery it was probably only where it dipped into the surrounding tissue, and could hardly point to an embolus.

DR. R. T. EDES read a paper on

THE CONNECTION OF CARDIAC HYPERTROPHY AND RENAL DISEASE.²

DR. J. J. PUTNAM said the normal pulses which he had examined had never shown evidence of high tension to such a degree as Dr. Edes had spoken of. In the cases of high tension pulse which he had met with, he almost always found those general symptoms spoken of by Mahomed, though the urine did not by any means always show evidence of renal disease. The cases of lead poisoning examined at the Massachusetts General Hospital showed a high tension pulse. Dr. Putnam then reported the case of a woman with slight hemiplegia and difficulty in articulation, with slight aphasia, such as might have come from a clot in the process of absorption, but the pulse suggested an examination of the urine, which showed renal disease.

In Dr. Rotch's case the power of overcoming pressure was so great (about 300 grammes) that it would enhance the value of the communication for the gentlemen to feel the power needed to overcome the spring of the sphygmograph used in taking the tracing.

DR. FITZ thought that the value of the observations and criticisms presented by Dr. Edes was all the greater since they were corroborated by the experiments of Grawitz and Israel referred by to Dr. Rotch. These observers found that no increased arterial tension resulted from experiments producing granular atrophy of the kidney and hypertrophy of the heart. They also record that the resulting hypertrophy of the heart gave rise to dilatation of the arterial system where the walls of the arteries were in a normal condition. Since the typical forms of chronic interstitial nephritis are more common in people beyond middle life, and as the alterations of the larger arteries, in consequence of which they become thickened and rigid, are more common and extreme at the same period, it might be considered as not unlikely that increased arterial tension in cases of chronic interstitial nephritis is rather attributable to concurrent disease of the larger vessels than to alterations of the kidney or doubtful changes of the arterioles and capillaries in general.

DR. MINOT said that he had experimented on one patient with the solution of nitro-glycerine mentioned by Dr. Rotch, and that a drop of water seemed to produce about the same effect as the solution.

DR. DENNY spoke as follows: I have not infrequently noticed aphasia in epilepsy mitior and in hysterio-epilepsy, lasting from a few moments to several hours, in which cases a general neurosis, without local lesion, interrupts temporarily the functions of the cortical centres presiding over speech. Again, I have met with similar attacks in the general paralysis of the insane, in which epileptiform phenomena occur, but where in addition there is *diffuse* peri-encephalitis; also in epilepsy complicating syphilis, and lead poisoning, in which cases a *general* ischemia existed. It is an interesting question as to how a general neurosis, or a toxæmia, can thus centralize their action without local lesion. An explanation is suggested by Dr. William O'Neill,³ who cites a case of transitory aphasia, connected with convulsion, limited to the right side of the face, and right arm, which occurred in a man previously free from epilepsy and cerebral disease, after a protracted period of excessive drinking. He assumed that the alcohol rendered the blood incapable of absorbing oxygen, thus poisoning the nerve-centres, which toxic action was confined to so circumscribed a portion of the left frontal lobe because the man had been a great singer and speaker, and had thus developed an unusual blood supply in this part.

In another case in which transitory aphasia occurred several times, and once, after excitement in dispute, the post mortem failed to find anything abnormal in the brain.⁴

The same toxæmic action, in effect, which produces aphasia in lead poisoning and in alcoholism may likewise operate in Bright's disease.

In one case of Bright's disease in which epileptiform seizures at very rare intervals occurred, I found a total loss of the memory of words, as signs of ideas (aphasia amnesia), to the following extent:—

The patient, a man forty years of age, of Ger-

¹ Vide page 462 of the JOURNAL.

² Vide page 457 of the JOURNAL.

³ Lancet, vol. ii. No. 9, 1879.

⁴ Ibid.

man birth, many years resident in America, usually talked English; he had an epileptiform seizure, and thereafter he talked exclusively in German, when one morning, several months after, he suddenly began conversation again in English. The urine was reduced to 800 cc., the urea much below the lowest health limit, and blood, pus, and albumen were noted in the analyses of Professor Wood.

The pulse, taken by myself, and subsequently repeated for some months by another physician, after the epileptiform attack was 40; it became about 80 after a month. This *pulsus tardus* is sometimes found when toxic agencies depress and retard the cardiac action.¹ The sphygmograph showed a tricrotic pulse of low tension.

In Bright's disease, and in ischæmic diseases, where, as in lead poisoning, an epileptiform neurosis may concur with toxæmia, even in a marked form, it may be assumed that transitory aphasia is not always at least dependent upon local lesions within the brain.

DR. A. T. CABOT said that some observations of Neilson² are of interest in connection with the fact noticed by Dr. Edes that in old persons a high tension at times exists in the arteries without cardiac or renal lesion. Neilson examined the capillaries in seventy-nine brains of persons dead from a variety of causes, and in fifty of these he found a change resembling that described by Gull and Sutton. Their walls were thickened and transparent for short stretches, particularly at points where they branched. This change he found almost invariably in the brains of old persons. Such a change of the finer vessels, assisted by the stiff condition of the larger vessels common in the old, might well account for the high tension noticed.

DR. THOMAS DWIGHT showed some

FROZEN SECTIONS OF HEADS

which he had made at the Harvard Medical School during the past winter. They were imbedded in plaster of Paris and kept under alcohol.

Dr. Dwight said that he would allude merely to some points in a median section of a head of a child. The third or pharyngeal tonsil was well shown. The uvula, lying on the back of the tongue, was within a quarter of an inch of the epiglottis. The tongue, being relaxed, had fallen backward, carrying the epiglottis with it, and consequently was in the position it may assume in profound anaesthesia, completely closing the air-passages. Dr. Dwight stated that he had made many other frozen sections during the past winter.

DR. A. T. CABOT showed

A CASE OF POSTERIOR TORTICOLLIS.

The patient, a child of six years, began to have a stiff neck about four years ago.

The head was gradually drawn over to the left shoulder upon which it rested for two years previous to last September when she entered the Children's Hospital.

The head at this time rested upon the left acromion, and this shoulder was raised somewhat as if to meet it. The parents state that at one time the head bent almost backwards, but later resumed its position towards the left side. The sterno-mastoids were not tense, but the nuchæ and other muscles of the nuchæ upon the affected side were contracted and resisted attempts at reposition. Under ether the head was brought into posi-

tion in the manner recommended by Delore, without the exercise of very great force; a plaster bandage was then applied over the shoulders and head, keeping it fixed in its proper position. This was kept on a month and then replaced by a simple wire frame, which, resting upon the shoulders, held the head up and resisted rotation. The child, who was much emaciated before the operation, and so weak that she could walk but a few steps without fatigue, rapidly gained flesh and strength, and early in January left the hospital still wearing the wire frame alluded to. This was continued on account of a feeling of weakness when without it. M. Delore,³ from whose description this method of treatment was adopted, says that in cases of torticollis dependent upon contraction of the posterior muscles of the neck the reposition under ether is always comparatively easy, the muscles offering but little resistance.

DR. BRADFORD said that he had seen the case reported by Dr. Cabot and could bear witness to the success of the treatment.

DR. TARBELL said "that he thought, from the history of the case and appearances this evening, there was something more than a simple torticollis. The child dislikes to have the apparatus removed, the muscles on both sides of the neck are equally rigid, the child will not rotate the head, and carries herself in a very careful manner, as if desiring to avoid any jar when the apparatus is taken off. There is also an apparently abnormal prominence of the spinous process of sixth or seventh cervical vertebra. All of which symptoms point strongly toward cervical caries. Moreover it is very unusual to have a torticollis of purely spasmodic origin without more or less affection of the sterno-cleido-mastoid muscle, and it was also very unusual to overcome the ordinary torticollis under ether so readily as Dr. Cabot states it was done in this case."

DR. CABOT afterwards stated that the child's dislike to having the apparatus removed was a new symptom, and that he had not seen the patient for some time previous to this evening.

He then said that "the slight prominence in the cervical region which seems to-night somewhat more marked than a month ago, when I last examined the patient, and when we thoroughly canvassed the question of cervical caries, together with the decided increase of the stiffness of the cervical muscles, makes the existence of disease of the vertebrae in this case more probable than we were then inclined to regard it."

DR. H. I. BOWDITCH reported for the committee on Dr. Jackson's portrait. The report will be published in the JOURNAL of next week.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

RICHMOND, May 4, 1881.

H. DISEASES OF CHILDREN.⁴—Chairman, Dr. A. Jacobi, of New York; secretary, Dr. T. M. Rotch, of Boston. Dr. H. I. Bowditch, of Boston, presented a paper entitled,

THE RELATIONS BETWEEN GROWTH AND DISEASE, of which the following is an abstract:—

After discussing the various influences which must be taken into consideration in approaching this impor-

¹ *Arch. der Heilk.*, vol. xvi., 1876, p. 100. ² *Arch. der Heilk.*, vol. xvi., 1876, p. 100.

³ *Gaz. Hôpitalaire*, March 15, 1878.

⁴ Specially reported for the JOURNAL.

tant subject, such as climate, race, social condition, occupation, and sex, Dr. Bowditch directed the attention of the medical profession to carrying out more extended observations on this subject, especially in the West, where the emigrant class, coming from different countries, presents especial advantages for this kind of investigation. He also spoke of the intention of the Massachusetts State Board of Health, Lunacy, and Charity, to distribute blank cards and circulars of instruction to aid in this work, and stated that it was probable that the National Board of Health would soon undertake a similar work on a larger scale. Dr. Bowditch said that it seemed probable that the accurate determination of the normal rate of growth in children would not only throw light upon the nature of the diseases to which childhood is subject, but would also guide us in the application of therapeutic measures. The statistics of growth, taken in connection with those of disease, might very possibly reveal unexpected relations between periods of slow and rapid growth, and the ages at which certain diseases most frequently occur.

He referred to Dr. Percy Boulton's expression of "danger signal" in his paper on the weighing of children. Dr. Bowditch then exhibited a chart representing the case of a child, between two and three years old, where careful and systematic weekly weighing showed, first, the approach, by some weeks, of a chronic disturbance of nutrition, represented by enlarged cervical glands and clay-colored stools, and second, after recovery, the approach of an attack of measles, the "danger signal" of progressive loss of weight preceding the eruption by at least a week.

Dr. Billings spoke of the value of Dr. Bowditch's paper, and presented to the section the statistical cards intended for circulation by the National Board of Health.

Dr. Lee, of Baltimore, remarked that he had paid especial attention to this subject, and that he had noticed that a female child could lose more in proportion to its weight, without detriment to its health, than the male child of the same age. He also said that if the loss of weight preceding the eruptive disease was excessive, the case was so much the more grave in its prognosis, and that this loss of weight preceded the eruption by from four to five days.

Dr. Buscy, of Washington, read a paper entitled *The Relation of Meteorological Conditions to the Diarrhoeal Diseases of Children*.

INFANTILE ECZEMA.

Dr. White, of Boston, presented a paper entitled *Some of the Causes of Infantile Eczema, and the Importance of Mechanical Restraint in its Treatment*.

He first described the many and varied external influences which immediately affect the delicate skin of the new-born, as being a common cause of eczema, and laid especial stress on the fact that heat was the more usual cause of the disease than cold. He said, however, that these external influences furnish but a small proportion of all the cases of the disease which occurred at this period of life, although by far the greater part of those concerning the aetiology of which we have any positive knowledge. During the last twelve years he had treated at the Massachusetts General Hospital 5,000 cases of eczema, of which 1770 occurred in children of ten years of age and under, and of which the largest proportion, namely, 569 cases, was in the first year of life. He said, eliminating the operation of the causes directly acting upon the skin from without,

above mentioned, and a few other extraneous agencies, the parasitic chiefly, that he did not hesitate to say that he knew nothing whatever of the causes of the disease in the remainder; also, that as far as his experience went, eczema affected all classes of society alike, occurred at all seasons of the year, came in children of all degrees of health, in the perfectly sound as frequently as in the feeble; that it had no necessary connection with any other disease of childhood; that it showed itself in an equal proportion in bottle babies and those reared at the breast, and was independent of diet; also, that if there were other assigned causes, he would here say that his observation gave him no justification for believing any of them.

He stated that there was no more necessity for a supposed sympathy with or dependence upon the state of the blood, or the condition of some other organ, when the skin is affected with eczema, than when the lung, kidney, etc., is affected. He then, after speaking of the extreme suffering which the little patients undergo, said that the prime factor of the treatment was the prevention of scratching, and he described what he considered to be the proper method of controlling the child's movements, namely, a system of swathing in a pillow-case, by which the same chances of success in the therapeutics of infantile eczema was given, as existed in the adult.

He finally said that when the strait-jacket treatment is carried out, the child soon becomes used to the confinement, and a wonderful improvement takes place, not only in the disease itself, but in the *morale* of the family, which always becomes painfully disorganized during the existence of the disease; and he mentioned, as an important factor in the success of the treatment, that a grandmother (if present) in every case of infantile eczema, is the first evil to be eliminated. In conclusion, he considered that the simple mechanical means found in every household included all that was important in the treatment of one of the most distressing and rebellious diseases of infancy.

Dr. L. Duncan Bulkley, of New York, regretted criticising the paper as he felt obliged to do, in the absence of his friend Dr. White, but the views presented differed so radically from those which he had formed from experience that he could not help so doing, because he felt that the subject demanded it. For those who did not know of his acquaintance with the disease, he would state that he had recently made analyses of 2500 personal cases of eczema, and of these nearly 700 had occurred at an age which classed them as infantile eczema; he therefore believed that he could speak with authority on the subject. Dr. White had, it is true, treated of only one feature in the management of the disease, namely, physical restraint, but he believed criticism to be called for because of the principles which underlie, or which call for this element of treatment; the premises being wrong, what follows must of necessity be wrong.

The speaker believed that Dr. White here, as elsewhere, laid far too great stress upon local causes of eczema, and ignored entirely the influence of internal, general, dietary, and hygienic causes; if these are not recognized and managed, the results of local treatment are imperfect and uncertain. He did not believe that the children with infantile eczema were really in perfect health, but that always the evidences of imperfect assimilation could be discovered; the evacuations from the bowels were faulty, the urine constantly presented

evidences of mal-assimilation, and searching investigation would always demonstrate imperfect health in the child. In nursing children, the mother should always receive very careful attention, as very commonly she would exhibit dyspepsia, or constipation, or perhaps was taking ale, beer, much tea, etc., which disagree and cause trouble in the child; or perhaps she was very much debilitated, etc.

This subject could not be fully entered into here; the speaker expected to read a paper, on Diet and Hygiene of Eczema, before another section at the present meeting. He was, however, absolutely convinced of the importance of this matter, and that if attention was thoroughly paid to it much less would be required locally, and what was used would be more rapidly and completely successful.

Internal treatment to a certain degree was also absolutely necessary, and without it, physical restraint, as any local treatment, would be comparatively ineffective. This could not be discussed here, but he would only mention in illustration the internal use of small purgative doses of calomel, every other day, and a mild alkali, as acetate of potassa in the liquor ammoniac acetatis, with a little nitre and perhaps aconite. Individual cases required very different management.

In regard to the method of restraint proposed in the paper, he would say that he had never employed such restraint, simply because he had never found it necessary. If the itching was relieved, the restraint was not required, because the habit of scratching was soon overcome when the infant found that a proper application gave relief. If the itching is not relieved, such confinement was torture beyond any description, judging from the statements of older patients, who cannot abstain from it by any force of will, and who assert that they would scratch even if they died from it. The agony of little ones mechanically restrained was fearful to see.

In the paper the writer had mentioned the use of diachylon ointment. This the speaker very rarely employed in infantile eczema, as he believed it very inefficient in arresting itching. Tar in some form was far more efficacious; indeed, the speaker said that he had little to desire in the way of an application to infantile eczema beyond the following ointment: Recipe, unguenti picis, one ounce; zinc oxid, two drachms; unguenti alicis rose, three ounces. Mix. This should be very carefully prepared and very thoroughly and abundantly applied. If it appears stimulating, less of the tar ointment may be used. He laid great stress upon employing the rose ointment and not simple cerate, or lard, or vaseline, or petroleum. The ointment should be made of a consistency to spread easily and yet not to all melt away after application.

The writer had spoken of removing the restraining bands in order to wash the surface. The speaker was very positive in the directions given in regard to the use of water to eczematous surfaces in children; they were only to be washed according to direction, and that very rarely, often only at intervals of several days; moreover, it was all important that the protective ointment should be replaced *immediately* after the surface is dried, and renewed sufficiently often to keep the parts completely protected, even twenty or more times the first day. On covered parts the ointment may be thickly spread on the woolly side of sheet lint and bound on. Among hundreds of cases the speaker had never covered the face with a mask, and had rarely been obliged to return the infant much after the first day

or so. The only restraint he had ever practised was putting on muslin mittens, tied around the wrist, and then tapes from these passed behind the back or beneath one leg.

Under the management thus briefly indicated, if every point could be carried out, there was but one result, arrest of the eruption, and if dietary and hygienic elements were persisted in, a cure of the disease. The attention to the mothers of nursing children he considered most important.

Dr. Ulrich, of Pennsylvania, in discussing the paper, said that he fully agreed with Dr. Bulkley, and that he entirely opposed Dr. White's treatment. In a long professional career he had never used a system of restraint in these cases, and that he would prefer to knock the little patient on the head at once rather than submit it to the tortures of Dr. White's strait-jacket.

Dr. Jacobi said, in regard to the discussion on eczema, that there did not appear to him to be such a great difference between Dr. White's and Dr. Bulkley's views concerning restraint. For Dr. Bulkley admitted that the tying of the wrists was sometimes necessary. He (Dr. J.) had sometimes resorted to it, and also to the use of the mask. The local treatment of chronic cases consisted, first, in the removal of the scabs. Poulitice, oil, soap sufficed in mild cases; bad ones required the application, two to four times a day, of one part of liquor of caustic potash in eight to twelve parts of olive or cod-liver oil. In a few days the scabs can then be removed. Second, the soaking up of the oozing serum. Third, the use of astringents. The best of these is Hebra's diachylon ointment. Water is to be avoided, according to Hebra. Constitutional treatment directed against the eczema proper he knows none, except arsenic in protracted cases sometimes. Ill health has its own general indications.

THUMB-SUCKING.

Dr. D. H. Goodwillie, of New York, read a paper on Thumb-sucking, which he illustrated by the report of a case and exhibition of a wax model. The treatment consisted in breaking up the habit by applying a leather pad to the elbow, preventing the hand from coming to the mouth.

His conclusions were as follows:—

(1.) Thumb sucking is more disastrous to the health of the child than the sucking of the other fingers, for the thumb once in the mouth, it more readily remains there during sleep.

(2.) It interferes with the child's proper rest, which should be continuous, and undisturbed, and so becomes a source of nervous irritation and exhaustion.

(3.) It interferes with the natural respiration through the nose, and sets up abnormal conditions.

(4.) It malforms the anterior part of the mouth and affects proper mastication.

DIPHTHERIA.

MAY 5th. Dr. R. J. Nunn, of Savannah, presented a paper entitled Suggestions Touching the Treatment of Diphtheria. Dr. Nunn said that the disease had raged in Savannah with very fatal effects, and a letter from a friend elsewhere said that after treating 600 or 700 cases his faith in the efficacy of drugs was very feeble. The causes will probably remain speculative for a long time. Is the disease the same always and everywhere? The causative influences are probably not the same in

all cases. Medicines which cure the disease in Germany fail in this country, and the discussions as to the identity of croup, diphtheria, and scarlet fever are strong arguments in favor of this belief, and all treatment based upon one cause must fail to relieve all cases. Dr. Nunn quoted Dr. Jacobi as saying: "The entrance of the diphtheritic poison into the system is not the same in all cases. . . . There are cases in which the origin of the disease is decidedly local. . . . There are others in which the poisoning of the blood through inhalation is the first step in the development of the disease." A powder used by Dr. J. B. Read is as follows: Sulphur sub., grs. xlvij.; acid tannic, grs. xij.; acid salicylic, gr. i.; pulv. potass. chlor., grs. xij. Precaution must be used in compounding this prescription. A little of this powder is put on the back of the tongue every hour or two, and a small piece of ice given afterwards. It will be seen that this prescription is a combination of antiseptics principally.

In another case treated by Dr. Nunn, the following formula was used with good effect: Sulphur, grs. viij.; acid boric, grs. iv.; acid tannic, gr. i.; acid salicylic, gr. i.; resorcin, gr. i. Another formula is: Sulphur sub., grs. viij.; acid boric, grs. iv.; acid benzoic, gr. i.; acid salicylic, gr. i.; acid tannic, gr. i.; acid tartaric, grs. iv.; sodii chlorid., grs. iv.; resorcin, gr. i.

Dr. Lathrop, of New Hampshire, said he had experimented with chloroform largely, and found it a highly useful agent. He used it in diphtheria and other throat affections on a piece of cotton attached to a tube or pen-holder. The cases usually required visiting no longer than four days, but the cases were not so malignant as had been reported in other localities.

Dr. Lathrop stated that no unpleasant effects had ever followed this plan of treatment, and that the child, in true diphtheria, would not complain of *smarting* from the application of chloroform.

In regard to treatment Dr. Jacobi spoke as follows:—

Another remedy warmly recommended for diphtheria in the course of the last six months is pilocarpin muriate. Its prophet is G. Guttman. It is perhaps interesting to know that this is the first time his name comes before the professional public. It is equally interesting to learn that pilocarpin muriate, as recommended by him, is certain, very active, a quick remedy, superior to every other by which it has been preceded, and very probably also superior to every future remedy, and it is a specific. It is also important to know that this writer claims to have treated eighty-one cases of diphtheria in the course of a few months, all in the same manner; that twenty-two of these were very severe, and exhibited the most threatening and serious symptoms,—without, however, stating which they were,—and that he finally claims to have cured them in from one to five days, only two cases requiring nine and eleven days, and that there was *no failure*. The prescription for children was:—

R̄	Pilocarpin muriate	2 to 4 centigrammes.	
	Pepsine	60 to 80 "	
	Acid. muriat. dil.	gtts. ij.	
	Aque	80 grammes.	M.

S. A teaspoonful every hour day and night.

For adults he writes:—

R̄	Pilocarpin muriate.	3 to 5 centigrammes.	
	Pepsine	2 grammes.	
	Acid. muriat. dil.	gtts. ij.	
	Aque	240 grammes.	M.

S. A tablespoonful every hour day and night.

A tablespoonful for adults and a teaspoonful for children of Hungarian wine was given after each dose. Cold applications were made to the throat every eight hours. Warm milk, coffee, or soup were given every two hours. Plenty of cold water or small pieces of ice were allowed.

Without regard to this plan of treatment, I wish to add that before Guttman, Lehweiss, in St. Petersburg, reported several favorable results obtained in diphtheria by the subcutaneous injection of pilocarpin muriate. The following remark may not be out of place. The manner in which the remedy is proclaimed by Guttman, as an infallible specific, the invariably good results which have been reported to have taken place reminds us of nothing more nor less than the verbose and reckless manner in which professional quacks advertise their nostrums. The action of pilocarpin is well known. It increases the secretion from all the integuments, skin as well as mucous membrane. The effect claimed for the remedy is that by increasing the secretion it will remove the macerated membranes, and thus relieve the diseased surface. Now, diphtheritic membranes are of two kinds. They are either deposited upon the mucous membrane or they are imbedded in the mucous membrane and submucous tissue. It is easily understood how a mucous membrane may throw off a diphtheritic membrane which has been deposited *upon* it, but it is not so readily understood how a membrane embedded *in* the mucous membrane and submucous tissue can be easily macerated, and cast off in the same manner. Those cases in which there are only membranes deposited upon the surface are apt to recover under the influence of any treatment. In fact, a number of them will do quite well without treatment. But those severe cases in which the mucous membrane and the submucous tissue are the seat of a necrotic process, are of a different character. They are generally of a septic nature, and are not so apt to heal by simply removing the diphtheritic deposit.

The efficacy of a new remedy must be tried, not in moderate but in severe cases, and for that very reason I have personally used pilocarpin muriate in severe cases, in cases of nasal diphtheria, and in the septic form of pharyngeal diphtheria, with or without glandular swelling. In not a single case have I seen the slightest favorable effect, but, on the contrary, I feel sure, from two or three observations, that the fatal termination was certainly accelerated by the influence of the remedy. So far as we know to this day pilocarpin, either directly or indirectly (by producing vomiting), debilitates the heart's action to a great extent, and where the pulse is frequent and small, the action of the heart feeble, and the tendency to collapse prevalent, as in many cases of serious diphtheritic affection, pilocarpin muriate can do no good. For this reason the few cases published by a few writers in our own midst prove, in my opinion, absolutely nothing. There is not a single one of all the vast number of antidiphtheritic remedies during the administration of which patients would not get well. A number of European writers, for instance, Hensch, Neumeister, R. Weiss, have published a number of cases in which the remedy administered conscientiously proved to be either useless or injurious.

CLUB-FOOT.

Dr. E. H. Bradford presented a paper entitled Resection of the Tarsus in Severe Cases of Club-Foot, of which the following is a summary:—

Dr. Bradford first reviewed the literature of the subject, and then reported two cases on which he had operated.

The first case was a girl eleven years old, with severe equino varus, the axes of the foot being at right angles with that of the leg.

Tenotomy and mechanical treatment were tried for a month with but slight benefit. Dr. Bradford removed a wedge-shaped section of bone from the tarsus with a metacarpal saw, and, with antiseptic precautions, there were no constitutional symptoms after the operation, excepting that the temperature rose once to 101° F., being otherwise normal during the recovery. The wound healed under the blood clot as occurs with a thorough antiseptic dressing, and in five weeks the patient was able to walk without a cane. She remained in the hospital for some time under observation, and was discharged with the foot nearly in a normal position.

The second case was a boy, thirteen years old, with double congenital club-foot of aggravated type. The first foot was operated on November 9th, and was sufficiently well to bear his weight by December 12th, and was entirely healed by January 19th. The second operation was performed January 9th, and by February 14th he was allowed to walk on both feet. He remained under observation until April 24, when he could walk a mile without apparatus and wearing ordinary shoes. The temperature rose to 102° F. on the second day of the first operation, but fell to the normal on the next day, and remained so. After the second operation, on the third day the temperature rose to 101° F., but fell after removing the drainage tube, which was stopped, and there was no subsequent rise. The plaster-of-Paris bandage was made use of after the operation. Dr. Bradford then described minutely the after-treatment in this case, and stated that there remained, after recovery, about thirty degrees of motion, and that the boy could stand on either foot, or raise himself on his toes.

In regard to the antiseptic precautions, Dr. Bradford thought that they offered the best safeguard, and that it must be admitted that a study of the reported cases justifies the impression that the danger is not so great as has been supposed.

The temperature charts, the photograph, a tracing of the left foot, and a cast of the right foot before and after operation of the second case were exhibited.

Dr. Jacobi remarked that Dr. Bradford's cases were exceedingly interesting and instructive, and said that, as shown by the casts, they could not have been successfully treated without just such a procedure as Dr. Bradford had adopted.

MIDDLE-EAR DISEASE IN ACUTE EXANTHEMATA.

MAY 6th. Dr. C. J. Blake, of Boston, presented a paper entitled Middle Ear Disease in Children in the Course of the Acute Exanthemata.

Dr. Blake first spoke of the frequency of the disease, as shown by the facts that 35.70 of all the cases of purulent inflammation of the middle ear occurring at the Massachusetts Charitable Eye and Ear Infirmary followed measles and scarlet fever, and of deaf-mutes examined by the writer, 27.70 lost their hearing as the result of scarlet fever.

In both exanthemata the inflammation affects the mucous membrane lining the middle ear, occurs during the acute stages of the primary disease, and runs its

course quickly; hence its importance to those having to deal with diseases of children.

Dr. Blake then said that much might be done in the early stages to diminish the severity and shorten the duration of the inflammatory process, which in children, owing to the greater vascularity of the mucous membrane, and the readier solution of continuity of the tissues, favoring ulceration, is usually more rapid than in adults.

In scarlet fever, the aural complication may occur at any time; usually runs its course rapidly, and furnishes in a short time a well-marked acute purulent inflammation of the middle ear.

In measles there are two types, one occurring early and corresponding to the acute catarrhal inflammations following "head-colds;" the other originating primarily in the membrana tympani, and accompanying the appearance of the facial eruption. The symptoms in that form occurring during scarlet fever, are rise in temperature, pain at first occasionally, then constant, in very young children, shown by moaning, unrest, and a desire to press the affected ear against the pillow. These symptoms are of course due to increased pressure within the tympanic cavity from serous exudation, as is shown by the relief afforded by the use of the Politzer and douche, permitting the escape of a part of the fluid. The continuous pain later is often not similarly relieved, either because of serous effusion of the membrane itself, or more complete closure of the Eustachian tube.

Nature usually relieves the pressure by a spontaneous opening, but only after prolonged suffering and prostration on the part of the patient, or possibly serious injury to the transmitting structure of the middle ear. The opiate treatment is superficial. In the early stages, frequent gargling, and if pain is complained of, the air douche should be used frequently. Instillations of warm oils and poultices are objectionable, as they interfere with subsequent operative interference; if necessary glycerine and warm water, two or three parts to one, and a dry cloth over the ear are better.

In a later stage, if pus is present, the evident remedy is puncture of the membrane at its most prominent portion with a lance, suture needle, or saddler's needle.

Dr. Blake then spoke of measles. In the first form the remedies referred to in the early stages of scarlet fever are equally applicable here; if they fail, acupuncture and drainage are preferable to paracentesis, which may be done with a needle, and then a wick inserted, which serves the double purpose of withdrawing the serous fluid, and keeping the lining of the canal dry. Syringing should only be resorted to when the discharge becomes muco-purulent.

The second rare form is characterized primarily by a congestion of the membrana tympani, without congestion of the tympanic mucous membrane, and is not relieved by the use of the air douche. It is due probably to inhibition of the vaso-motor nerves controlling the tympanic branch of the carotid artery.

These cases either resolve spontaneously, or the conditions described in the first type of inflammation of the middle ear becomes established. Instillation, dry warmth and acupuncture, may be resorted to with good effect. For general treatment the bromides are especially indicated.

Dr. Jacobi remarked that closing the mouths of infants and children, and simply blowing into the nose, is often a very valuable method of relieving severe earache, and that in a number of cases he had obtained

most excellent results from this procedure, the cause of the trouble probably being a catarrhal affection of the Eustachian tube.

PROGRESS IN THE KNOWLEDGE OF THE ACUTE CONTAGIOUS DISEASES AND INFECTIONS.

Dr. Jacobi remarked that his paper should have been read before the general session, but that on account of the crowding of business on the last day he would read the paper to the section. He said that the Children's Section was a new one; that he was anxious to see it a prosperous and interesting one, and that the sympathy and coöperation of the gentlemen were necessary to its success. He then spoke as follows:—

"The limited time at my disposal precludes my going over much ground. The remarks I shall give will, therefore, be confined to the progress made in our knowledge of the acute contagious constitutional diseases (rubeola, scarlatina, variola, and typhoid fever), and the acute contagious infections of the mucous membranes, such as dysentery and diphtheria."

The literature of the subject during the past year was given, embracing text-books, atlases, and monographs, which were exhibited before the section.

The concluding words of Dr. Jacobi on rubeola are as follows: "Evidently the latest contributions to our knowledge of rubeola give weight to its classification amongst the acute contagious constitutional affections." . . . "The description of the symptoms varies a good deal with the authors. These differences are best explained by the fact that mild cases of either measles or scarlatina may not present all their usual symptoms, and by the other fact that during the prevalence of an epidemic of rubeola there is, as a rule, a contemporaneous epidemic of measles and scarlatina, and also diphtheria."

In such times cases of common nasal, pharyngeal, and laryngo-tracheal catarrh are very frequent indeed; thus there have been but very few infants and children in our large northern cities but were affected in this manner. Thus it happens that there are many symptoms belonging to the mucous membrane of the digestive and respiratory tract which invariably complicate the slightest other affections. Thus it is, also, that many authors have looked upon these accidental complications as if they were genuine symptoms. The very best authors, — for instance, Gerhardt, — when they mean to describe rubeola depict mild or sometimes even single cases of measles. Nasal catarrh, conjunctivitis, facial œdema, glandular swellings belong to this class of symptoms, which, while they often occur in rubeola, do not belong to it by any means. The disease is very contagious. Its incubation lasts from two to three weeks, and is not attended with any fever. Now and then there are, during a period from twelve hours to two or three days, prodromata, a mild increase of temperature, sometimes a catarrh of the mouth. The tongue is apt to show a few red marks along the margin, mainly in its anterior portion. The eruption, according to what I have seen, does not — contrary to Gerhardt's observations — begin in the face, but on the trunk or more frequently on the extremities, mostly on the thighs and knees. Head and feet are not often affected. It looks very much like that of measles, sometimes not rising above the level of the skin, sometimes, however, rising above it in the manner of an urticaria. It seldom lasts longer than three days, but relapses on the fourth or fifth day are frequent. Desquamation begins early,

now and then on the third or fourth day. Relapses may take place while desquamation is undisturbed in some localities. The temperature seldom exceeds 102° or 103° F.; becomes normal about the fourth day. The prognosis is absolutely good, and the treatment either none at all, or expectant. The diagnosis, however, may be very difficult, and even impossible in an individual case, inasmuch as scarlatina, and particularly measles, are apt to be rife at the very periods of the rubeola epidemic, and their symptoms are complications too mild to be estimated at their full value. This fact, however, does not militate against the independent nature of rubeola, for it has never been claimed that either measles or scarlatina can and must be recognized in every instance."

Speaking of *diphtheria*, Dr. Jacobi said: "In this connection I desire to say a final word in regard to large doses of chlorate of potassium, often recommended in diphtheria. My warning in regard to this drug has at last been heeded. Extracts from my writings on this subject have been extensively published, and experiments on animals made in Europe by Marchand and others have proved my clinical observation of the frequent occurrence of nephritis, and fatal nephritis, resulting from the incautious use of the potassium chlorate. A number of fatal cases have been described, and it may be that much carelessness on the part of the public and many accidents will be avoided in future."

In the article on *typhoid fever* the same writer says: "With reference to the effect of the bathing in typhoid fever he appears to have made the same observations detailed by myself some years ago in a lecture on typhoid fever published in the *Medical Record* of 1879. Whenever circulation is deficient, particularly when the patients have been anæmic at the onset of the disease, whenever, after the cool bathing, the feet do not get warm as quickly as the rest of the body, the end for which the bath was given is not attained. In order to reduce the temperature of the body permanently it is necessary that the circulation of the skin be restored very soon, and uniformly. If such be not the case no radiation from the external surface of the body can take place, and an undue amount of heat is retained within the body. It may then occur that the surface is quite cool while the temperature in the rectum is very high. In such cases, in order to reduce the temperature, I have had to plunge the patient into hot water for the purpose of restoring the cutaneous circulation. When, in such patients, cold water is to be used, the only proper mode of applying it is by packing or sponging. In these cases care must be taken that only the trunk and the head are made the subject of local treatment."

Dr. Leigh, of Petersburg, reported two fatal cases of poisoning from chlorate of potash. The first was the case of a child three years of age with diphtheria. The mother gave the child one-half ounce of chlorate of potash, and the child died within 24 hours.

The second case was a child five years of age with croup. It took 6 drachms of chlorate of potash in 24 hours; cyanosis appeared in six hours; hæmaturia and death in 48 hours.

Dr. Potter remarked that in quite a large number of cases in his practice he had met rubeola and diphtheria occurring together.

Dr. Jacobi said that he had no doubt but that a number of deaths had occurred from chlorate of potash. When the blood is examined the corpuscles are

broken up and irregular, and there is a conglomeration of hæmatin scattered about. There is no positive poisonous dose: $3\frac{1}{2}$ drachms given for 5 or 6 days killed a robust boy of 14 years. Dr. Jacobi had taken himself half an ounce, and this dose was followed by frequent micturition.

Dr. Fontaine, a friend of his, however, took one ounce with fatal result.

In answer to a question as to whether measles ever occurred twice in the same person, Dr. Rotch stated that during the epidemic which had lately been prevailing in Boston the disease (measles) had been observed to occur not only twice, but three times in the same person.

Dr. Selden, of Norfolk, in a long professional career, had never seen measles occur twice.

Dr. Lee, of Baltimore, expressed surprise at Dr. Rotch's statement, and said that in his opinion true measles never occurred twice, and that where a second attack was apparently present, close investigation showed that it was the diagnosis which was at fault, and that the eruption, although simulating that of measles, was really that of the roseola spoken of by Dr. Jacobi in his paper; he also inquired of Dr. Rotch whether he could distinguish the eruption of measles from that of roseola, and from the eruption which apparently followed certain articles of diet, as crabs?

Dr. Rotch answered that he would first say, in order that there should be no confusion of terms, that there was a true measles and a rubella (the röteln of the German writers), as stated by Dr. Jacobi, and that so far as the eruption was concerned it was often impossible to make a distinction between the two; second, that roseola had nothing to do with the other diseases, and that in the great majority of cases the eruption caused by eating crabs was that of urticaria, which of course was easily distinguished from the eruption of measles; third, that he would again state that undoubted cases of a second attack of true measles had been observed in Boston, where the disease rubella is well-recognized and differentiated from measles.

In the recurrent cases to which he referred, Dr. Rotch said that reliance was not placed on the eruption alone, but on the general course of the disease, namely, a regular prodromal stage with coryza, conjunctivitis, and bronchial catarrh followed by a characteristic eruption and a stage of desquamation, and that as these cases had been met with and reported by competent observers, there was no more reason why they should not be called a second attack of measles than when the same symptoms occurred in a patient for the first time.

Dr. Atkinson, of Baltimore, said he had undoubtedly seen numerous cases of recurrent measles.

Dr. Stiles, of New York, had seen cases where true measles had attacked the same children twice.

Dr. McDonald considered that the cases spoken of by Dr. Stiles were merely relapses of the original disease.

Dr. Jacobi agreed with Dr. Rotch that the term rubella should be used for this disease, which simulates measles, roseola being something different, as in typhoid fever.

He then said that he had frequently seen cases where what he considered the symptoms of true measles had occurred, and an exact recurrence of these symptoms years afterwards, and that he called the second attack true measles, and considered that measles could occur two, three, or four times; and he would beg leave to

repeat the old story: "It eats like a toad, it looks like a toad, it creeps like a toad, hence why not call it a toad."

Dr. Adams, in referring to Dr. Jacobi's remarks regarding the great contagiousness of measles, described the admirable method of isolation employed in these cases in the Children's Hospital in Washington.

V. OBSTETRICS AND DISEASES OF WOMEN.—Chairman, Dr. James R. Chadwick, of Boston; Secretary, Dr. Joseph T. Johnson, District of Columbia.

Dr. Paul F. Mundé, of New York, read a résumé of rules for the use of pessaries, summing up under twenty headings a recapitulation of the rules which should govern their introduction and supervision.

Dr. R. Beverly Cole, of California, spoke after Dr. Mundé. He said the Hodge pessary was the first one invented which showed any knowledge of the anatomy of the female organs. No two pessaries were exactly alike. Dr. Albert H. Smith, of Philadelphia, had constructed one which had the peculiarity of Simpson's (also Hodge's) hard rubber instrument. He then exhibited his pessary with the important modification of a spring support for retroversion. The great advantage claimed by Dr. Cole for this modification over others for this class of cases (retroversion) is that there is no risk of inflammation from the uterus having to impinge, during the various movements of the person, upon a rigid, unyielding point.

Dr. Chadwick next made the discussion general, and called upon Dr. Smith, of Philadelphia, who said that, in his opinion, pessaries were too much used, as they were often hurtful if not used judiciously. He said his pessary was only intended for retroversion and prolapsus. Anteversion, antelexion, and retroversion he had frequently relieved by means of the intra-uterine stem pessary, but he did not believe in the galvanic action. He thought it simply mechanical.

Dr. H. P. C. Wilson, of Baltimore, Md., agreed with Dr. Mundé, of New York, as regards the importance of ascertaining whether the uterus can be lifted up before introducing any pessary. He said he was often compelled to use a dozen or more before he could get one to fit with comfort. He remarked that he had once succeeded in relieving a case of antelexion by introducing Hodge's horse-shoe pessary. Dr. Wilson did not approve of stem pessaries. He said he had the best results in antelexion from splitting the cervix backwards and the os internum backwards and forwards.

Dr. Maughs, of St. Louis, discussed the ligamentous supports of the uterus, and dilated upon the importance of the vaginal walls and perineum as supports. He said that, in his opinion, stem pessaries had killed hundreds of women. He said anterior displacements were the rule in virgins, posterior in multipara.

Dr. Quimby, of Jersey City, said he had never derived any satisfaction from the use of stem pessaries, and that he is more and more inclined to avoid the use of all pessaries as he grows older.

Dr. Mundé was requested by the chair (Dr. Chadwick, of Boston) to close the discussion, and rose to make some explanations, and was followed by Dr. R. Beverly Cole in a few closing remarks.

—A death certificate received at the Chicago Health Commissioner's office gave "colera" as a cause of death in a child.

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THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE late meeting of the American Medical Association at Richmond was, it seems to be generally agreed, from a social point of view, eminently successful.

The proverbial southern hospitality, a hospitality which in former times was nowhere more profuse and kindly than in old Virginia, was fully equal to the occasion, and, although the number of members attending, between five and six hundred, — of whom Massachusetts contributed about forty, — was not so large as had been anticipated, and especially less large from certain States which had been expected to send full delegations, still there were quite enough to put the friendly offices of the citizens of Richmond to a good test, and if the hosts experienced any disappointment as to the severity of the test, this must have been amply offset by the genuine and hearty appreciation of the kindnesses and civilities extended.

From a scientific point of view the best that can be said of the meeting is that it was certainly not superior to the average of its predecessors. As a rule the discussions in the sections were tolerably trivial, and their value and interest is in no way increased by the reëxhibition of apparatus, such as the plaster-of-Paris jacket, already pretty generally known, and of various new-fangled or newly modified instruments, most of which probably never will be known outside of the inventor's practice. We had certainly hoped that no new pessary would make its appearance. The addresses were on a much higher level than the discussions, and several of them, notably those of the president, of Dr. Pepper in the Medical and of Dr. Chadwick in the Obstetrical and Gynecological sections deserve careful perusal. If any of the sections are to be excepted from the previous remarks, those for the Diseases of Children and for the Practice of Medicine might be. An energetic chairman and an active secretary can do much, unquestionably, toward adding interest to the proceedings of the section under their care.

The question of admitting homœopathic students to the courses at regular schools, which has been a burning one for several years, was finally disposed of by a compromise. The homœopath is to be allowed an education but not a diploma. This conclusion was not arrived at without affording an opportunity for some very animated and eloquent debate, in which the rhetorical honors were somewhat evenly divided, though

we have been assured by one of the audience, not long back from France, that the oratorical prowess of the persuasive professor from Chicago he had never seen matched unless by the efforts of Gambetta.

The question suggested last year by Dr. Sayre, of the Association's starting its own journal, in which the papers submitted might receive prompt publication, was again brought up and referred to a committee of five, to which the secretary and treasurer were subsequently added. It seems probable that by another year this proposition will take some definite shape. The name of an editor is already suggested. The advantages to the Association of such a publication are obvious. Prompt publication will secure better papers, and better papers will incite to more interesting discussions. The choice of Dr. Woodward for President of the Association, gave great and general satisfaction.

The Association is to meet next year at St. Paul, Minnesota, and it is said that Boston is mentioned as a proper place for an early meeting.

MEDICAL NOTES.

— The Massachusetts Senate refused by a vote of nine to fifteen to reconsider the vote by which the bill to establish boards of visiting physicians for the state lunatic hospitals was refused a third reading.

— A case of small-pox has been discovered in Cambridge, the origin of which could not be traced.

— New York reports 822 deaths for the week ending May 14th, the largest number yet. Of these 19 were from small-pox, and 9 from typhus fever.

— Surgeon John S. Billings, United States Army, has been detailed to proceed to London as a delegate to the International Medical Congress next August.

— The students of Trinity College, Hartford, have been dismissed for three weeks on account of a case of varioloid.

— Another serious outbreak of scarlatina at Halifax has been traced to a polluted milk-supply. Of eighty-two families supplied by a particular milkman, forty-five were attacked by the epidemic. It was subsequently ascertained that the man had five children ill of scarlatina at the time he was supplying these families, and he was thus spreading disease and death broadcast amongst his customers. If conduct of this description is not criminal, and punishable accordingly, ought not the legislature to step in at once to protect the public by imposing some severe penalty for offenses of such a nature?

— The ham fair annually held at Paris, in the neighborhood of the Bastille, has lately closed. The examination of the hams and sausages offered for sale during the fair is most reassuring for the Parisian public, and a convincing proof of the efficacy of the measures adopted to prevent trichinosed ham from becoming an article of commerce among the Parisian pork-butchers. In the 266,100 pounds of ham sold at the fair, not one joint was seized. Moreover, not a single sausage was condemned. Trichinosis was conspicuous by its absence; but 4500 pounds of meat was destroyed, being unfit for human food.

—Malarial affections in Connecticut are reported to the State Board of Health as maintaining about the same position as of late years. In some places they are stated to be increasing in frequency, and the severer types becoming more frequent or appearing for the first time. No new regions are reported, although some of the physicians in several towns in Windham County consider the symptoms that appear very like those elsewhere ascribed to malaria, and find quinine unusually effectual.

NEW YORK.

—At the last meeting of the Medico-Legal Society, May 4th, which, it was announced, was to be devoted to a discussion of Dr. Hammond's paper on the medico-legal relations of Syggnoscism, or Hypnotism, read at the April meeting, Dr. Beard delivered a long address, in which he repeated much of what he said in his recent paper on Mesmeric Trance before the Academy of Sciences. He contended, however, that Dr. Hammond's theory of suspension of function in the superior and median tracts of the brain was as erroneous as the German idea that the function of one hemisphere was suspended in hypnotism. As to the medico-legal relations of trance, he stated that he did not believe it to be at all necessary to change the criminal law on account of this psychological peculiarity; but he did anticipate that, in the light of present and future developments concerning the subject, the law of evidence would have to be reconstructed. During the course of his remarks he made some interesting experiments with subjects, which were of the same general character as those of Dr. Hammond at the preceding meeting.

—The city is passing through its annual excitement in regard to the healthfulness of Croton water. At this season there is very apt to be a little unpleasant taste in the water, and this year it happens to be somewhat more pronounced than usual, although there is a great difference in this respect in the water in different sections of the city. There is no doubt that measures will before long have to be taken to increase the supply of Croton; but in the meanwhile the officials in charge of the water department are using every possible precaution to keep the water pure, and there is every reason to believe that the slight disagreeable taste which it has is only a temporary condition, and one which has not the slightest deleterious effect upon the public health. Professor Chandler, the president of the Board of Health, who for the past twenty years has made the subject of water-supply a special study, and for sixteen years has paid particular attention to the quality of Croton water, officially asserts that there is no reason whatever to apprehend any injury to health from drinking the water in its present condition. He deprecates the sensational statements that are being made in regard to it as giving rise to unnecessary alarm, and points out that the water is drawn from an area of 340 square miles as free from all sources of pollution as any such area can be; hundreds of analyses, made from time to time, having shown that the Croton water is equal in purity

to the water-supply of any other large city in the world.

—As there have been of late a number of cases of vitriol throwing reported to the police of the various cities of the State, and the penalty for this vile offense has been heretofore altogether too light, the legislature has unanimously passed a special act making it a felony to throw vitriol or any corrosive substance, the punishment for which shall in the future be imprisonment for not less than two and not more than ten years.

—The death of a lady twenty-four years of age from lead-poisoning, the result of the immoderate use of cosmetics has just been reported.

—The first arrest under the new law relating to the registry of physicians took place on the 4th of May, the accused being Abraham E. Cox, who is charged with perjury in swearing that he graduated and received a diploma from the University of Castleton, Vermont. When arraigned in court he pleaded not guilty to the charge of perjury, and also accused an official in the county clerk's office of corruption, stating that he had paid the latter one hundred dollars to allow his name to be registered. There seems to be no ground whatever to suppose this charge to be true, since in order to register it is simply necessary to answer certain questions which, with the signature, are recorded in a book kept for the purpose. The law is designed to protect the public from impostors, and if the present energetic efforts of the County Medical Society to have it thoroughly enforced are crowned with success, the community will soon have the assurance that whenever a physician's sign is displayed it means that the practitioner has gone through a regular course of study in a reputable medical college.

—The profession has lost a valuable member in Dr. Salvatore Caro, who died on the 30th of April from cerebro-spinal meningitis. For a considerable time previous he had been suffering from severe nervous prostration, and it is said that this was induced by the worryment of mind incident to a long course of litigation which he had with the Elevated Railroad company on account of damage by the latter to some property of his in Fifty-Third Street, through which the road passes. He was born in Italy, and received his degree from the University of Palermo. For a number of years he had resided in New York, where he acquired a large practice, and where he was an active worker in all the principal medical societies.

—A certain New York physician who, having changed his office on the 1st of May, left a sign stating that he had removed to such a number in such a street, was somewhat startled to find that under the latter had been painted the words, "For which we are truly thankful." It seems that the landlord had not been on very good terms with his tenant, and had taken this singular means to revenge himself. The upshot of the matter was that the doctor had the landlord arrested, though the prisoner was soon discharged on condition that he would remove the obnoxious words.

—At a stated meeting of the Academy of Medicine, held May 5th, Dr. J. Lewis Smith, clinical professor of diseases of children in the Bellevue Medical College, read a paper on Pleurisy in Children.

—During the passage of the steamer *Assyrian Monarch*, which left London April 15th and arrived at New York April 28th, small-pox broke out among the steerage passengers, who were chiefly Polish and East German peasants, and of uncleanly habits. There were five persons ill with it (of whom one, a child fifteen months old, died in three days after being attacked), and by order of the captain they were separated from the rest of the passengers, and placed in a small compartment in the forward part of the vessel, where they were well cared for. As soon as the ship reached New York harbor Health Officer Smith sent the sick to the hospital on Blackwell's Island, and vaccinated the rest of the passengers, numbering about five hundred. A considerable number of the crew, however, refused to submit to vaccination, and by way of precaution were sent off to Hoffman's Island, to remain till all danger of infection should be passed. Not long before the steamer *Victoria* had also arrived from England with small-pox on board.

—A floating reception hospital for typhus-fever patients has been anchored in the East River off Bellevue Hospital, about one hundred feet from the shore. It is built on a scow, and contains two apartments, one for men and the other for women. The Board of Health provides a nurse to attend the patients while they remain, and the hospital steamer calls twice a day to remove patients to Blackwell's Island. The "Shiloh" lodging-house, in which the first cases of typhus appeared in New York, has been permanently closed by order of the Board of Health.

—A fatal case of what was reported by the physician in attendance to be relapsing fever has proved, on investigation by the health authorities, to be one of cerebro-spinal meningitis. It would not be surprising, however, if relapsing fever should make its appearance in the city, as this affection is very apt to be prevalent in connection with typhus fever. The latter has materially decreased within the last fortnight.

—The police commissioners, who for some time past have been on trial upon charges preferred by the mayor for neglect and fraud in cleaning the streets, have now been indicted by the grand jury, but the streets remain for the most part as filthy as ever.

PHILADELPHIA.

—The American Laryngological Association held its third annual meeting in this city on May 9th, 10th, and 11th. The papers, according to programme, were as follows: Annual Address by Dr. J. Solis Cohen, president of the Association; Lupus of the Pharynx and Larynx, by Dr. Asch; On Tubercular Ulceration of the Mouth, with a report of cases, Dr. Bosworth; The Relation of Hay Asthma and Nasal Catarrh, Dr. Daly; A Contribution to the Histology of the Thyroid Cartilage, by Dr. Elsberg; On the Operation for Deviation of the Nasal Septum, Dr. Glasgow; Lupus

Laryngis, Dr. Knight; The Question of Hæmorrhage after Tonsilotomy, Dr. Letterts; The Prognosis of Laryngeal Phthisis, Dr. Porter; The Laryngeal Affections of Pulmonary Phthisis; The Comparative Value of Atomized Fluids in the Treatment of Diseases of the Larynx, Dr. Roe; Paralysis of the Vocal Cords due to Lead Poisoning, Dr. Sajons; The Effect of the Condition of the Nasal Cavities upon Articulate Speech, Dr. Seiler; Certain Neuroses of the Throat, Dr. Smith; and one upon the question, Is the Brush, Sponge, etc., the most Rational Method of making Local Applications to the Mucous Membrane of the Superior part of the Respiratory Tract? Dr. Rumbold. A number of papers were also presented by candidates for membership upon allied topics, and referred to the committee. A special excursion to Atlantic City, and a reception by the Philadelphia Laryngological Society constituted the entertainments. The meetings were held in the hall of the College of Physicians, which had been kindly offered to the Association for the purpose.

—The Pennsylvania State Medical Society also held its annual session last week, meeting at Lancaster on Wednesday, May 11th, and continuing in session three days. A special report of this meeting will be found in an early issue of the *JOURNAL*.

—The Philadelphia County Medical Society is now in a thriving condition. Owing to the energy of its board of directors its bi-weekly meetings are well supplied with interesting material, and very often two papers are submitted for discussion upon the same evening, in addition to reports of cases, presentation of specimens, etc. At the last meeting, April 27th, the subject of Alcohol, by special resolution of the Society, was presented for discussion. Dr. Roberts Bartholow opened with a paper on the Therapeutics of Alcohol used Internally and Externally, followed by Dr. H. Lettman on the Medical Relations of the Commercial Adulterations of Wines and Liquors, and by Dr. H. C. Wood on the question, Is Alcohol a Food? When should Malt Liquors be preferred to Wines and Spirits in the Treatment of Disease? These topics were generally discussed subsequently by the members present, and, judging from the interest shown and the large attendance, this plan was a decided success. At the next meeting the discussion will be concluded by two papers, on The Use of Alcohol in Disease, by Dr. Wm. Pepper, and one on The Treatment of Alcoholism, by Dr. Jas. Hutchinson.

—The Episcopal Hospital has received for the establishment of a children's ward an endowment fund of seventy thousand dollars, and the work is being rapidly pushed forward; the new ward is expected to contain twenty-four beds, at least it is so stated in the public press.

—The Society for the Prevention of Cruelty to Children has presented a formal complaint against our almshouse, where it is asserted that there has been a mortality in the children's department of one hundred per cent.! No child left in the kind, maternal care of this model institution was ever known to grow up within its walls, the only chance of survival offered

was that of adoption by some charitably disposed person, and removal from the place. The grand jury, after investigating the case, found the facts to be as stated, which they attribute partly to the poor stock of babies sent to the hospital, which are mostly foundlings, secondly to the fact that the nursery is adjoining the surgical ward, and is badly ventilated, and thirdly to the neglect and incompetency of the pauper nurses employed to look after the children. The first-named society having offered to take care of the children, the court ordered their transfer accordingly, and all future foundlings will be placed in its care.

—The same grand jury also stated in their report that the continuous employment of conductors and drivers upon the street-cars for seventeen to eighteen hours a day, as they are at present required to work, was injurious to the public welfare, and condemned the car companies for their inhumanity.

—Among the interesting cases of recent occurrence may be mentioned two under the care of Dr. Thos. G. Morton. One was a successful removal of a large (three fourths pound) uric acid calculus from an old lady, seventy-nine years of age, by colpocystotomy, with a successful result, the other was a case of a young man suffering from old paralysis with atrophy of the legs, infantile in its origin, which completely prevented locomotion, and consigned the man to the poor-house. Dr. Morton, finding motion preserved in the thighs, strapped the legs to the thighs, and put on a pair of artificial legs, and the man was able to walk or run almost as well as any one, "he can run like a deer," as Dr. Morton said. These cases will probably be presented at the next meeting of the Academy of Surgery.

—At Jefferson College some important alterations have been authorized by the board of trustees. The front of the main hall is to be torn down, and the rooms enlarged, special attention being paid to ventilation. The dissecting-room is to be vacated, and converted into a laboratory, and a new dissecting-room built above the old one. Some minor changes in other departments will also be made, more especially will a room be devoted to therapeutical and physiological investigations under the direction of Professor Bartholow.

—A medical club was started at the first of the year in this city with a membership limited to one hundred; it has secured a very convenient house in the centre of the city, and promises to be very popular, especially among the younger members of the profession.

—A new medical society was organized here last month under the title of the West Philadelphia Medical Society, which is chiefly social in its objects.

—The medical profession of Philadelphia recently held a meeting under the auspices of the County Medical Society in favor of the establishment of a state Board of Health, and passed a series of resolutions, which were transmitted to the State Legislature. By the time this is received it is to be hoped that the bill now before the legislature for this purpose may become a law. Certainly the various medical societies have done all in their power to favor its adoption.

Miscellany.

LETTER FROM VIENNA.

EXTIRPATION OF THE STOMACH.

MR. EDITOR.—Since the publication of my letter to the JOURNAL describing the first successful extirpation of the pylorus, Professor Billroth has operated on two other cases in like manner, both with fatal results. Both patients were women of about forty years of age, with a history of disease of four and six months. In the first case the tumor was firmly adherent to the anterior abdominal wall and diaphragm, and the stomach was much dilated. After the removal of the tumor the gastric wound was united as in the first case, until an opening of sufficient size was left at the lesser curvature, and into this the duodenum was stitched. The result, as regards the shape of the stomach, was not as good as in the first case, there being a deep, angular pocket formed below the point of attachment of the duodenum. The operation lasted two hours and a half.

On the days following the operation the small amount of liquid nourishment given was all vomited, a symptom never present in the first case. This continued until the sixth day, when, the patient being greatly exhausted, Professor Billroth decided to reopen the abdomen, in the hope of relieving the obstruction to the passage of food that was believed to have formed. The stomach was found to be fixed to the old points of adhesion on the anterior abdominal wall and diaphragm, and to be folded on itself in such a manner as to close the opening into the duodenum. There was no peritonitis, and the gastric wound was entirely healed. The gastro-duodenal wound was partially reopened, and the edges stitched to the abdominal opening, in the hope of establishing a fistula, by means of which the patient might be fed. She never rallied, and died in thirty hours, of exhaustion.

The next patient was much emaciated and very weak, but the symptoms of pyloric obstruction were so severe that it was decided to operate. The tumor was adherent to the pancreas, and was separated with great difficulty. The operation lasted over two hours, and the patient never recovered from the shock, dying in ten hours.

In this case the duodenum was united to the stomach at the greater curvature, the resulting stomach being much better in shape than the first two.

It is readily seen that these two fatal cases were not as favorable for operation as the first one. Through the kindness of Dr. Mikulicz I was able to visit and examine this patient at her home about a week ago. I found her able to eat any kind of solid food, walking about the house, and entirely free from pain. At that time there were no symptoms of recurrence.

Since the above was written Dr. Wüller, assistant of Professor Billroth, has operated in another case, removing a malignant tumor of the pylorus. The stomach and duodenum were united as in Professor Billroth's third case. It is now six days since the operation; there have been no unfavorable symptoms, no vomiting or nausea, and the external wound has entirely healed. The intense pain present before the operation has entirely disappeared, and the patient takes all kinds of liquid food, oranges, etc., without discomfort, and sits up in bed.

SAMUEL J. MIXTER, M. D.

VIENNA, April 15, 1881.

THE Editor of the *Journal of Comparative Medicine* desires to secure as complete a list as possible of all persons practicing veterinary medicine in this country. No veterinary medical register now exists. It would tend to unite members of the veterinary profession, and benefit them in many ways, and would be a convenience to many others, if such a register were published.

All veterinarians are urgently requested to forward, by postal, their names, titles, and addresses. All such will receive a copy of the final list at cost rates. Address: Editor of *Journal of Comparative Medicine*, care W. L. Hyde & Co., 22 Union Square, New York City, N. Y.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 7, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Cerebro-Spinal Meningitis.
New York.....	1,206,590	770	309	29.09	17.27	10.00	6.23	3.25
Philadelphia.....	846,984	382	122	21.73	7.07	3.93	3.66	—
Brooklyn.....	566,689	267	110	29.21	15.73	13.86	7.87	.75
Chicago.....	503,304	300	184	30.33	13.67	6.00	1.67	3.00
Boston.....	362,535	172	56	16.86	11.05	12.21	1.10	—
St. Louis.....	350,522	124	38	27.42	6.45	2.42	.81	15.32
Baltimore.....	332,190	149	61	13.42	10.07	3.36	1.34	—
Cincinnati.....	255,708	100	37	20.00	8.00	3.00	1.00	3.00
New Orleans.....	216,140	137	53	26.28	7.30	1.46	8.76	—
District of Columbia.....	177,638	75	26	10.67	16.00	4.00	—	1.33
Pittsburgh.....	156,381	83	40	40.96	9.64	7.23	7.23	12.05
Buffalo.....	155,137	49	15	16.33	16.33	2.04	4.08	2.04
Milwaukee.....	115,578	64	37	28.12	7.81	4.69	9.37	6.25
Providence.....	104,855	53	15	16.98	7.55	5.66	1.89	—
New Haven.....	62,882	14	5	7.14	14.29	7.14	—	—
Charleston.....	49,999	25	6	44.00	8.00	—	32.00	—
Nashville.....	43,461	13	5	30.77	7.69	—	—	—
Lowell.....	59,485	28	10	21.43	7.14	3.57	—	—
Worcester.....	58,295	19	8	21.05	31.60	5.26	—	10.52
Cambridge.....	52,740	28	10	17.86	14.29	10.71	—	3.57
Fall River.....	49,006	14	5	7.14	7.14	—	—	—
Lawrence.....	39,178	15	4	26.67	—	6.67	—	6.67
Lynn.....	38,284	17	2	35.30	17.65	5.88	5.88	5.88
Springfield.....	33,340	10	5	—	20.00	—	—	—
Salem.....	27,598	9	4	—	—	—	—	—
New Bedford.....	26,875	5	2	20.00	20.00	—	—	—
Somerville.....	24,985	7	5	28.57	14.28	14.28	14.28	—
Holyoke.....	21,851	7	3	28.57	—	—	—	—
Chelsea.....	21,785	3	1	33.33	—	33.33	—	—
Taunton.....	21,213	11	1	9.09	9.09	—	9.09	—
Gloucester.....	19,329	8	3	—	12.50	—	—	—
Haverhill.....	18,475	6	2	16.67	33.33	—	—	—
Newton.....	16,995	5	—	60.00	—	20.00	—	20.00
Newburyport.....	13,537	3	1	—	—	—	—	—
Fitchburg.....	12,405	9	1	11.11	—	11.11	—	11.11
Twenty-two Massachusetts towns.....	170,328	62	8	9.68	19.35	3.23	1.61	1.61

Deaths reported 3043; 1194 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 752, consumption 435, lung diseases 382, diphtheria and croup 211, scarlet fever 133, diarrhoeal diseases 85, cerebro-spinal meningitis 81, small-pox 62, typhoid fever 51, measles 40, malarial fevers 34, whooping-cough 18, puerperal fever 17, erysipelas 13, typhus fever seven. From *diarrhoeal diseases*, Chicago 36, New Orleans 16, New York 12, Philadelphia and Baltimore four, Brooklyn and District of Columbia three, Boston and Pittsburgh two, Providence, Lawrence, and New Bedford one. From *small-pox*, Philadelphia 35, New York and Chicago 12, Pittsburgh three. From *typhoid fever*, Philadelphia 11, New York eight, Cincinnati and Lowell four, Providence three, Chicago, Boston, Pittsburgh, and Buffalo two, Brooklyn, St. Louis, Baltimore, New Orleans, Charleston, Nashville, Fall River, Lawrence, Lynn, Holyoke, Newton, Milford, and Brookline one. From *measles*, New York 10, Baltimore seven, Cincinnati six, Chicago and Nashville three, St. Louis and Milwaukee two, New Orleans, Pittsburgh, Buffalo, Providence, Worcester, Cambridge, and Haverhill one. From *malarial fevers*, New York 14, Brooklyn seven, St. Louis six, New Orleans three, Cincinnati two, Baltimore and District of Columbia one. From *whooping-cough*, New York and Chicago five, Philadelphia, Brooklyn, and Pittsburgh two, St. Louis and Cincinnati one. From *puerperal fever*, Milwaukee three, Philadelphia, Brooklyn, Boston, Pittsburgh, and Lynn two, St. Louis, New Orleans, Lowell, and Holyoke one. From *erysipelas*, New York seven, Brooklyn three, Charleston two, Chicago one. From *typhus fever*, New York six, Buffalo one. The mortality from cerebro-spinal meningitis has increased from 60 for the week ending April 30th to 81.

Seven cases of small-pox were reported in Brooklyn, 32 in Chicago, one in Boston, three in Cincinnati, five in Pittsburgh, one in Springfield; diphtheria 51, scarlet fever 16, in Boston; scarlet fever 36, diphtheria 11, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,088,239 (population of the State 1,783,086), the total death-rate for the week was 20.99, against 22.39 and 21.26 for the previous two weeks.

For the week ending April 16th, in 149 German cities and towns, with an estimated population of 7,783,192, the death-rate was 27.1. Deaths reported 4053; under five 1809; pulmonary consumption 621, acute diseases of the respiratory organs 450, diphtheria and croup 164, diarrhoeal diseases 104, scarlet fever 76, typhoid fever 64, whooping-cough 47, measles and röteln 24, small-pox (Königsberg five, Lübeck, Benthien, Munich, two, Berlin four, Leipzig, Aachen six) 20, typhus fever (Königsberg two, Thorn three, Tilsit two, Greifswald) eight. The death-rates ranged from 16.4 in Essen to 40.8 in Augsburg; Königsberg 32.8; Breslau 26.9; Munich 36.9; Dresden 31.9; Berlin 23.9; Leipzig 18.5; Hamburg 26.2; Hanover 18.7; Bremen 24.6; Cologne 28; Frankfurt 20.5; Strasburg 35.8.

For the week ending April 23d, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 22. Deaths reported 3211: acute diseases of the respiratory organs (London) 338, small-pox (London 84) 85, whooping-cough 84, measles 71, scarlet fever 63, fever 31, diarrhoea 26, diphtheria 22. The death-rates ranged from 17.1 in Hull to 29.9 in Newcastle-on-Tyne; Bristol 19.7; Birmingham 19.9; Leeds 20; Manchester 21.5; Sheffield 21.5; London 23.5; Liverpool 27.3. In Edinburgh 22.3; Glasgow 23; Dublin 32.6.

The meteorological record for the week in Boston was as follows:—

Date.		Barom-eter.		Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
May, 1881.																					
Sun.,	1	30.321	50	64	36	51	14	40	35	W	W	SW	1	8	16	C	C	F	—	—	
Mon.,	2	30.019	56	64	44	90	69	36	65	SW	SW	NW	12	12	12	R	R	C	—	—	
Tues.,	3	30.343	49	57	40	48	36	52	45	NW	SE	SW	15	6	7	F	F	C	—	—	
Wed.,	4	30.452	48	54	37	47	42	49	46	E	E	SW	3	7	5	C	F	C	—	—	
Thurs.,	5	30.331	51	63	38	65	49	30	48	W	E	S	3	11	10	C	F	F	—	—	
Fri.,	6	30.051	44	51	42	84	95	100	93	SE	NE	NE	9	14	10	R	R	R	—	—	
Sat.,	7	30.081	48	57	43	92	80	70	81	N	E	Calm.	2	8	0	O	F	O	—	—	
Week.		30.299	50	64	36				59											20.55	.56

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OBITUARY.

DR. GEORGE W. GARLAND.

DR. GEORGE WATERHOUSE GARLAND died at his residence in Lawrence, May 5th, after a comparatively short illness, at the age of sixty-eight. He was born in Barnstead, N. H., in 1813. His early education was received in the academies of Gilmanton and Hopkinton, N. H., and afterwards for three years he taught school to obtain the funds necessary for the pursuit of his chosen profession. His medical studies were commenced under Dr. Dixie Crosby, and further pursued in the medical school of Dartmouth College and at Harvard. While at the latter place he acted as surgical assistant in the Massachusetts General Hospital, and in 1837 he received his degree of M. D. from Bowdoin College. He returned to his native town, where he practiced his profession for eight years, when he removed to Meredith, now Laconia, N. H., and in 1851 he settled in Lawrence, with whose early history his name is closely identified. As a practitioner he was widely known and universally respected. He has been president of the Essex North District Medical Society, and a councillor of the state society, and in 1879 he delivered the annual oration before the Massachusetts Medical Society. He has contributed many articles on medical subjects to various journals, which have marked him as a man of unusual resources and fertility of invention. The paper on Obstetrics, read before the state society several years ago, and printed in its Transactions, contained several new and useful suggestions.

His only son, George M., is already well known as a practitioner in this city.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 7, 1881, TO MAY 13, 1881.

KING, WILLIAM S., colonel and surgeon. His extension of leave of absence on account of sickness, granted him November 9, 1881, from A. G. O., still further extended six months, on account of sickness. S. O. 105, A. G. O., May 7, 1881.

McPARRIN, T. A. His promotion to assistant medical purveyor, with the rank of lieutenant-colonel, — vice Cooper, deceased, — confirmed by the senate May 10, 1881.

BACHE, D., major and surgeon. Relieved from duty in Department of California, to proceed to Philadelphia, Pa., and report by letter, on arrival, to the surgeon-general. S. O. 104, C. S., A. G. O.

McFELLEN, ELY, major and surgeon. To report to the medical director of the department to duty until further orders. S. O. 56, Department of the Columbia, April 26, 1881.

HARRIS, A., major and surgeon. Relieved from duty in Department of the East, to take effect June 1, 1881; then to report in person to commanding general, Department of the Missouri, for assignment to duty. S. O. 104, A. G. O., May 6, 1881.

MIDDLETON, J. D. V., major and surgeon. Relieved from duty in Department of the East, to take effect June 1, 1881; then to report to commanding general, Department of the Missouri, for assignment to duty. S. O. 104, C. S., A. G. O.

BROWN, J. M. His promotion to surgeon, with the rank of major, — vice McParrin, promoted, — confirmed by the senate, May 10, 1881.

BROWN, J. M., captain and assistant surgeon. Relieved from duty at Fort Garland, Colo., and assigned to duty at Fort Lewis, Colo. S. O. 86, Department of the Missouri, May 3, 1881.

HUBBARD, VAN BUREN, captain and assistant surgeon. Relieved from duty in Department of California, to proceed to New York city, and on arrival report by letter to surgeon-general. S. O. 104, C. S., A. G. O.

GARDNER, W. H., captain and assistant surgeon. Relieved from duty in Department of the South, to proceed to Washington, D. C., and report in person to the surgeon-general. S. O. 104, C. S., A. G. O.

KOEPFER, E. A., captain and assistant surgeon. Relieved from duty in Department of the Platte, to proceed to Philadelphia, Pa., and, on arrival, to report by letter to the surgeon-general. S. O. 104, C. S., A. G. O.

KING, W. H., captain and assistant surgeon. Relieved from duty in Department of Dakota, and, on expiration of his present sick leave of absence, to report by letter to the surgeon-general. S. O. 104, C. S., A. G. O.

DEWITT, C., captain and assistant surgeon. Relieved from duty in Department of the Platte, to proceed to Philadelphia, Pa., and, on arrival report by letter to the surgeon-general. S. O. 104, C. S., A. G. O.

CONNECTICUT MEDICAL SOCIETY. — The annual meeting of the President and Fellows will be held at the City Hall, Common Council Room, Hartford, at three p. m., Wednesday, May 25, 1881. The following is the usual order of exercises, after the credentials of the Fellows have been decided: Address to Fellows, by the president. Announcement of committees. Recess for election of nominating committee. Report of committee on unfinished business. Reports of special committees: on medical experts, G. W. Russell, M. D.; on sale of poisons, R. Baker, M. D.; on vital statistics, M. White, M. D.; on lunacy commission, A. M. Shew, M. D. Introduction of new business: report of treasurer, Dr. Edgerton; report of committee on county resolves; report of nominating committee and election of officers; report of committee on business; report of standing committees; report of committee on honorary members; report of auditing committee. The Fellows are requested to register name and address upon entering the hall. The annual convention (mass meeting) will be held at City Hall, Thursday, May 26th, commencing at nine a. m. The following is the usual order of exercises: report of secretary, C. W. Chamberlain, M. D., Hartford; report of committee on matters of professional interest, W. A. M. Wainwright, M. D., Hartford, chairman; The Early Recognition of Epilepsy, E. C. Seguin, M. D., New York; reception of delegates from other societies; reports of delegates to other societies; introduction of business, cases of interest, and discussion. Essays: Sympathetic Ophthalmia, S. B. St. John, M. D., Hartford; Non-Pharmacological Therapeutics, Henry Fleischer, M. D., New Haven; The Influence of Sudden Alterations of Temperature and Humidity upon the Respiratory System, C. B. Newton, M. D., Stafford Springs; Medical Progress and Changes, William Woodruff, M. D., Thomaston; Treatment of the Third Stage of Abortion, J. H. Grannis, M. D., Saybrook; Treatment of Lacerations of the Cervix, M. D. Mann, M. D., Hartford; Transmission of Bovine Tuberculosis from Infected Milk, Noah Cressy, M. D., V. S., Hartford. Voluntary communications.

Original Articles.

TWO CASES OF TEMPORARY APHASIA.¹

"BRIGHT'S DIATHESIS."

BY T. M. ROTCH, M. D.

Ferrier² defines aphasia as follows: "The subject of aphasia is deprived of the faculty of articulate speech, and also very generally of the faculty of expressing his thoughts in writing, while he continues intelligently to comprehend the meaning of words spoken to him, or it may be to appreciate the meaning of written language. An aphasic individual knows perfectly well, as exhibited by his gestures, if a thing is called by its right name or not, but he cannot utter the word himself or write it when it is suggested to him. In his attempts, only an automatic or interjectional expression, or some unintelligible jargon escapes his lips, or unmeaning scrawls are set down on paper as writing. This affection is usually, at first at least, associated with a greater or less degree of right hemiplegia, but the motor affection of the right side, chiefly of the right arm, is often slight and transient, or may be wanting from the first, the only indication of motor paralysis being a paretic or weak condition of the oral muscles of the right side. The inability to speak is not due to paralysis of the muscles of articulation, for these are set in motion and employed for purposes of mastication and deglutition by the aphasic individual. The cause of this affection was shown by Broca (and his observations have been confirmed by thousands of cases) to be associated with disease in the region of the posterior extremity of the third left frontal convolution, where it abuts on the fissure of Sylvius and overlaps the island of Reil." "One of the most common causes of the affection is softening of this region, consequent on sudden stoppage of the circulation by embolic plugging of the arterial channels which convey its blood supply, by which the functional activity of the part is temporarily or permanently suspended." "The rapid recovery which so frequently occurs in cases of aphasia, especially of the kind due to embolic plugging of the nutrient arteries of the left centres, is not so much to be regarded as an indication of the education of the right centres, but rather of the reëstablishment of the circulation and nutrition in parts only temporarily rendered functionless." Ferrier, in speaking of the unilateral development of a bilateral function, mentions the interesting observations of Lépine,³ Russell,⁴ and others who have recorded cases showing that aphasia with left-sided hemiplegia occurs in left-handed people, and states also that there are other cases which seem to show that recovery of speech may take place after a lesion which has caused complete and permanent destruction of the left speech centre, quoting in support of this view the case reported by Drs. Batty Tuke and Fraser⁵ as follows: "A female patient was rendered unconscious by the occurrence of cerebral hemorrhage. On her recovery she was found to be totally speechless, and she remained so for an indefinite period. In process of time, however, the faculty of speech was restored in great measure, though never quite perfectly. Towards the end of her life she had difficulty in

recalling the commonest terms, but she never hesitated to articulate the word when she heard it. Death occurred fifteen years after the seizure, and there was found a total destruction and loss of substance in the cortical region in the left hemisphere corresponding with the position of the centres of articulation. This seemed to be one of the clearest cases of re-acquisition of the faculty of speech by education of the articulating centres of the right side."

In Mr. A's case, where there were no antecedent symptoms of cerebral disease, the cause of the aphasia appeared to be either a minute hemorrhage or an embolus, the embolic origin of the attack seeming to be more probable from the existence of an aortic heart murmur in a patient who had had articular rheumatism, and from the absence of any other symptoms which would be of aid in the diagnosis of hemorrhage, such as vomiting, infrequent pulse, stertor, changes in the pupils, convulsions, etc., which, according to Professor Austin Flint,⁶ suffice for a highly probable differential diagnosis though they do not warrant a positive opinion.

Professor Flint mentions the case of a young man who, having ridden all day in an open wagon, the weather being cold, after eating a hearty supper, was suddenly unable to utter a word. He went to bed, and slept perfectly well, but on awakening was still unable to speak. In the course of the day he began to use some words, often the wrong words, and in a few days recovered his speech, although he has ever since had some difficulty in selecting right words. He had an aortic regurgitant and a mitral direct murmur, with considerable enlargement of the heart. A year after the attack nothing had occurred to denote cerebral disease, excepting that he was conscious of an uneasy sensation in the left side of the head, and the case was considered to be of embolic origin.

The salient points of interest which immediately attract our attention in the case of Mr. B. are the evidence of a slightly hypertrophied heart without valvular lesion, in combination with a condition of the urine which might well indicate an early stage of interstitial nephritis, and an arterial pulse both in the fundus of the eye and at the wrist, supposed to show increased arterial tension.

This combination of physical signs has long been recognized, and the literature of the subject during the last five or six years has been extensive, different authors in succession reviewing the vexed question of the etiology and pathology of the disease, and criticising the theories of their predecessors, but it is interesting to note that although the mechanical theory of Traube and Johnson held such a prominent position among the earlier writers, yet that the later investigations, both physiological and pathological, tend to support the original view of Bright, suggested half a century ago, that it is an altered quality of the blood which causes disease of the heart, vascular system, and kidneys with their respective train of symptoms; Bright, however, seems to have considered that this change in the blood originated in the kidneys, while Mahomed,⁷ Saunby,⁸ Broadbent,⁹ and others hold that the altered blood is the primary condition which produces congestion of the excretory organs, especially the kidneys, thus leading to renal disease, and that this same poi-

¹ Concluded from page 462.² Functions of the Brain, page 272.³ Thèse Mongié, Paris, 1866.⁴ Medical Times and Gazette, July 11, October 24, 1874.⁵ Journal of Mental Science, April, 1872.⁶ Practice of Medicine, p. 660.⁷ Guy's Hospital Report, 1879.⁸ Birmingham Medical Review, 1878.⁹ Lancet, December 25, 1875.

soned condition of the blood also produces impeded capillary circulation, and the resulting cardio-vascular changes. Mahomed draws especial attention also to the value of the high tension pulse as the earliest physical sign by which we can not only foresee but in certain cases entirely obviate, or at least delay, the approach of chronic Bright's disease. Sanby considers that this disturbance is primarily in the digestive organs, and results in the imperfect oxidation of nitrogenous material, a function which Murchison¹ has shown to be chiefly located in the liver. This imperfectly oxidized material circulating in the blood directly stimulates the kidneys, according to Heidenhain, maintaining in them a constant state of functional hyperemia, and by increasing the general capillary resistance raises the systemic blood pressure so as to keep up a permanent strain on the organs of circulation, which results in dyspepsia, constipation, lassitude, muscular pains, coldness of extremities, later cardiac dilatation and hypertrophy, gastric and bronchial catarrh, etc., and still later, rupture of a small vessel, producing various symptoms, such as paralysis, aphasia, etc., according to its locality.

The extended and careful experiments of Grawitz² and Israel on dogs, in which they were able to produce this combination of hypertrophied heart and interstitial nephritis by the introduction of small amounts of urea into the blood showed that in no case was the arterial tension increased, and they therefore concluded that the impeded kidney secretion caused the heart hypertrophy, and that this hypertrophy did not depend on an increased arterial tension, but was caused by the small amount of urea, which, being retained in the blood, excited the heart to greater activity, and thus to hypertrophy. Finally, they admit that with our present means for diagnosis the difficulty of determining the exact time when the disease of the kidney or heart begins is so great that it is impossible to say which begins first, but they consider as proved that under none of the conditions as yet brought forward by investigators is the blood tension increased, and they hold that the impaired renal secretion causing irritation and hypertrophy of the heart with increased velocity of the circulation produces dilatation of the vessels throughout the body.

These experiments of Grawitz and Israel should receive especial attention, for besides being evidently performed with the most faithful regard to detail, and in the most evident spirit of fairness, they had the advantage of coming after such prominent investigators as Senator,³ Ewald,⁴ Grützner, Buhl,⁵ and Ustimowitsch,⁶ all of whose experiments they have carefully repeated and analyzed.

In regard to the pathology of the disease represented by the "Bright's diathesis" the literature is as extended and the opinions as diverse as has been the case in the discussion concerning the primary cause of the disease. The principal theories, however, which at present divide the opinions of the especial investigators of this subject, are those brought forward by Dr. Johnson, and by Drs. Gull and Sutton, the former at first maintaining that the pathology was mainly a hypertrophy of the muscular coat of the renal arterioles,

causing a continued contraction of their lumen, and later imagining a tonic spasm of all the systemic arterioles; while the latter believed that the disease was primarily a degeneration of the vascular system at large, the affection of the kidney and heart being a secondary manifestation; and they also considered that what Johnson supposed to be a hypertrophy was in reality a peculiar hyaline fibroid substance deposited in the muscular coat of the arterioles, and they therefore designated the disease arterio-capillary-fibrosis; and one of the chief merits of this theory (as observed by Dr. Ball⁷ in his review of the subject) is that it directs attention to the systemic changes, which from a diagnostic point of view are frequently more important than the purely renal symptoms. Dr. Thoma,⁸ who has made a most extended study of the subject, has failed to discover the muscular hypertrophy upon which so much stress is laid by Dr. George Johnson and his followers, and his views coincide very closely with those advanced by Sir William Gull and Dr. Sutton, so far, at least, as the renal process is concerned, and where he has noticed any changes in the muscular arterial coat they were rather in the direction of atrophy from stretching and compression by the proliferated connective tissue. On the other hand Bamberger⁹ was of the opinion that the hyaline-fibroid degeneration of Gull and Sutton was a product of microscopical preparation, though this cannot be said to have been clearly proved, as shown by Dickinson's¹⁰ experiments.

Dr. Bryan C. Waller¹¹ has lately given us the results of his investigations of forty-five cases where interstitial changes had occurred in the kidney, which afford but little support to the theory of arterio-capillary-fibrosis, and are decidedly in favor of Dr. Johnson's theory of hypertrophy of the middle coat. The following is a summary of Dr. Waller's work which extended over a period of five years:—

(1.) Certain changes in the vascular system are found in connection with chronic interstitial Bright's disease.

(2.) These changes consist principally of thickening of the middle and inner coats.

(3.) In the case of the systemic arteries the outer coat does not undergo any change which can be connected with the state of the kidneys themselves; it is sometimes secondarily blended with the surrounding increased perivascular connective tissue.

(4.) The hypertrophy of the heart is compensatory and secondary to obstructive causes. It seems to bear a definite relation to the degree of obliterative thickening in the tunica intima of the systemic arterioles. There will, however, be no hypertrophy if the general nutritive conditions of the system are markedly bad.

(5.) The changes in the arterial coats are in all likelihood due to the same primary cause as the alterations in the kidney stroma, namely, the circulation of poisoned blood, though the affection of the vessels is generally subsequent in point of time, owing to the more differentiated and therefore more stable nature of the vascular tissues and the non-occurrence of cell emigration into the arterial tunics as into the kidney stroma.

(6.) Interstitial changes may occur in the kidney apart from any alterations in the arteries, if the renal disease prove fatal before the latter have time to develop.

¹ *Functional Diseases of Liver*.

² *Virchow's Archiv*, 1879, lxxviii, 445.

³ *Virchow's Archiv*, v. lxxviii, s. 314, 1878.

⁴ *Virchow's Archiv*, lxxi, 466, 1877.

⁵ *Archiv für Medizin*, 1878, 34.

⁶ *Ustimowitsch Beiträge zur Theorie der Harnkrankh.*, 1877, 198.

⁷ *Zoossens's Supplement*, 1881.

⁸ *Virchow's Archiv*, 1877, lxxi, 42, 227.

⁹ *Monthly Abstract*, 1880.

¹⁰ *British Medical Journal*, April 15, 1876.

¹¹ *Lancet*, February 12 and 15, 1881.

This is seen in cases of glomerulo-nephritis, where death generally occurs rapidly, with symptoms of suppression of urine, uræmia, and acute dropsy.

(7.) The general sequence of the various items in the morbid process appears to be (a) blood poisoning; (b) renal changes; (c) vascular changes; (d) cardiac hypertrophy.

Dr. Broadbent's cases illustrating clinically the symptoms of the "Bright's diathesis" and showing the great benefit that can be derived from treatment, I have not time or space to describe, but they are well worth the careful perusal of the physician in every-day practice, and can be found on page 202 of the *Lancet* for December 25, 1875.

In addition to the usual purgative treatment adopted in cases where this condition of high tension is found, it may be well to experiment with the one per cent. solution of nitro-glycerine used in a series of cases by A. W. Mayo Robson¹ with apparently good effect. One of these cases, a woman fifty-two years of age, consulted Dr. Robson in June, 1880, for attacks of dizziness; two days before seeing him she had an unusually severe seizure which had left her right side weak and had rendered her speech indistinct. The right side of the face and the right arm were found to be slightly paralyzed, and the right leg numb and decidedly weak. Her pulse was hard and corded, and all her vessels indicated increase of tension. The urine was normal in quantity, but had a specific gravity of 1006 and showed a trace of albumen.

Milk diet, aperient medicine, and rest were ordered, and the paralysis gradually passed off, but the vascular tension remained. In August she began to take the nitro-glycerine solution in minim doses, thrice daily, as the attacks of dizziness were returning; the vascular tension was at once reduced and the pulse became softer and apparently fuller; the urine, which just before the nitro-glycerine treatment had a specific gravity of 1008, increased afterward to 1012, and became slightly more abundant. Her dizziness was relieved, and when an attack was threatened, a dose of the remedy always prevented it.

Dr. Robson suggests that it would be advisable to give a dose of this remedy when called to a case of apoplexy, to prevent further hæmorrhage by reducing the pressure in the vessels.

I have given this short and imperfect review of what will probably in the future be called the "Bright's diathesis," thinking that Mr. B.'s case might come under this class, and that the two aphasic attacks from which he has already suffered may be the forerunners of serious disease which may possibly be obviated by a change of life. The tracings, judged by the rule laid down by Mahomed in his exhaustive article on this subject, that "no part of the tracing should rise above a line drawn from the apex of the up stroke to the notch preceding the dicrotic wave," show such a rise to be present, and this, according to Dr. James Putnam, who has made extended observations on normal pulses, does not occur unless the tension is abnormally high.

The examination of the urine in Mr. B.'s case is instructive and recalls the statement of Bartels,² who says that though the amount of urine falls, the specific gravity does not rise to the normal, as was seen in the analyses made by Dr. Hills, also that the urea is diminished, but is often masked for years by the polyuria.

APHASIA COMPLICATED WITH INSANITY.

BY C. P. BANCROFT, M. D., BOSTON.

J. G., a farmer, aged sixty, entered the New Hampshire Asylum for the Insane August 21, 1876, with the following history: Had always been perfectly healthy. No hereditary insanity. On December 6, 1872, worked hard all day in a severe snow storm, thereby getting wet and chilled. On the evening of this day he had an attack of loss of vision, and his entire right side was numb, though not completely paralyzed. Head was cold and covered with clammy sweat. Did not lose consciousness. Recovered in about a week. No mental derangement. Soon after this began to have most violent and distressing palpitation of the heart, and sensations of fullness and pain about the epigastrium. Aside from these symptoms he was as well as usual. On May 30, 1876, he suddenly became restless in the night, and seemed to be in distress. When asked what was the trouble, he seemed cross and irritable, complaining that his wife was always fault finding. It was noticed that his articulation was indistinct, and that he spoke with difficulty. He replied to questions asked that it seemed as though a string was pulling at his left eye; the pupil of that eye was widely dilated. There was no other paralysis aside from the left iris and tongue. Recovered in five days, although he remained for some time after in a state of complete physical prostration. On the 7th of June, 1876, he drove a spirited horse six miles, returning about midday much exhausted. Soon after returning he was seized, while sitting in his chair, with loss of speech, marked mental confusion, and apparently a temporary loss of vision. There was no paralysis. His eyes were rolled up, he groped his way about the room evidently seeking a door. He soon recovered the power of vocalization, but not of speech. For four days he knew no one, not even his own family. His mind was filled with all sorts of insane fancies. He would milk the cows three or four times a day, and then chain them to the stalls. At nightfall would nail the windows and doors. When admitted to the asylum in August, 1876, he partly understood the meaning of gestures, but attached no meaning to speech. Heart was regular and intermittent, but no murmur could be detected. He coined words of his own, but did not understand a word that was said to him. By September he had made slight improvement, as the record indicates. "On the whole has gained in the faculty of expression and in the matter of understanding signs and words. His sentences are more perfect and connected, and though he comprehends little of what is said to him, he does not look so utterly unconscious when addressed. Looks at the speaker as though he would like to get at his meaning if he could. In response to the written question, "Do you know where you are?" he said, "Well, I'll do the best I can. Yes, I'll promise if you'll let me go down-stairs." A piece of paper was handed him with the words written thereon, "Write on this paper," and he read it thus: "On — this — promise." Seemed to think the doctor was demanding money either as payment for his board or compensation for his release. Said he would have "to go home and sell something to raise the money." Finally wrote on the paper these words, "Gone as soon Thursday," pretty evidently meaning go home as soon as Thursday. At first wrote "Thursday" without an

¹ British Medical Journal, November 20, 1880.

² Ziemssen's Cyclopædia, volume xv.

h, but seeing the want of that letter took the pencil and made the correction.

The following is a stenographic report of the patient's conversation, and is a fair sample of his present method of expression: "I want to go home; yes, let me go home, won't you? I hain't said a word. What do they propose to do? Let me know right away. But I don't understand—Yes—No—I don't—No—I can't—if I did I would. No, I can't. I don't understand, and that." (At this point a piece of paper with writing on it was handed him.) "No, I can't read it; why, really, I can't read it. Now, if I could I would, but I can't—well, I can't—no, I don't. If they won't I suppose these old men were here." Always talks with the air of a man studying to make himself understood, and seems to think he is successful.

September 20, 1876. Wrote a letter to his wife, which is not only unintelligible, but is very illegible. Scarcely any of the words are correct; most of them are coined; even his own name is incorrectly written.

October 23d. Was induced to play at dominoes, and after his mind was centred on the game he could understand what was said relative to it.

November 2d. Had the following conversation today in regard to his method of moving and taking up trees: "You to take and cut a piece out, and with old axes, and then dig down under it, and take it out. You must be careful of the boshies so as not to injure them. I take out old boshies that way. Yes, you take an Irishman, and let him cut the ros right off, and you can take the brush out easy. Take and cut the ros right off, and brash the team right back, and then you can draw it right out. I always clean my broshies right off in the spring. You can't prow with brash just where you want to; you are liable to clash over on the smaller and hurt, and then you want to put a chain or rope, I don't know which he means; browse each way so you can light it as you please. Some climb up, and cut off part of brush, so that it will proll where they want it. You want to be careful and not streak it and gar it so as to spoil it when it falls." While speaking this patient seems to have no idea that he is not speaking correctly or that he cannot be understood. The words "brosh," "boshie" are very commonly used by him. In fact, these were the words that he first coined at the very beginning of his sickness, and his relatives say that he was continually using them for some time before he was sent to the hospital.

March 15, 1877. For the last few months has been gradually improving, though he has by no means recovered a perfect use of his faculties. The use of wrong words is not so marked as it was. (From this time until his death his ability to talk correctly slowly increased, but he could not understand language addressed to him.) His heart has been examined, but no organic lesion detected.

May 18th. It is doubtful if he has the faculty of reading intelligently, although he spends much of his time in apparently reading the newspaper. This morning brought a letter from home to the physician, but did not seem to understand its purport. Seemed to think there was something about doves in a passage which contained not the remotest allusion to them. May 31st. It was thought best to make a trial of sending him home, and he was discharged, improved.

On June 18, 1877, he was readmitted. Had no sooner arrived at home than he began to develop all manner

of eccentricities. At once became arbitrary and very unreasonable in all his wishes and demands. He did not in the least recognize his inability to speak correctly or to understand others, and was greatly incensed because his wife did not understand and do as he wished. Would not tolerate any restraint, and insisted on driving alone and doing in all things as he chose. Finally he even used threats, and his family were obliged to return him to the hospital. During his short stay at home the strain of being thrown upon his own responsibility wore upon him physically, and his expression became somewhat haggard.

On July 9th he was reported as much more hearty and robust than at time of readmission. On first coming back he was much excited and insisted on returning home, but later became perfectly reconciled. Whenever his wife called, however, he became quite angry with her, evidently thinking that she was the author of his detention.

From this time until the fall of 1878 there was little or no change. He would often talk for two or three minutes correctly, but he seemed wholly unable to comprehend what was said to him. At about this time he began to present the first marked physical symptoms of valvular disease of the heart. Had slight oedema of feet and ankles, and dyspnoea on exertion. Heart again examined when the following very marked changes were noted:—

"Heart's action very irregular; and the organ itself considerably enlarged; apex beat detected an inch to the left of mammillary line. Over sternum at junction of fourth rib is heard a systolic murmur propagated upwards toward the right; also a mild diastolic murmur. Over apex is heard a soft presystolic murmur." From the moment this examination was made the case became pathologically clear. The diagnosis of embolism was made. The embolus probably affecting the circulation in the anterior lobes of the cerebrum. Hitherto, as no positive heart murmurs could be detected, the case was somewhat obscure.

Mr. G.'s subsequent history was the usual one of valvular cardiac disease. Oedema, dyspnoea, cyanosis, palpitation, and pain; temporary relief with digitalis only to be followed by the ten-fold greater agony when this drug had reached its stimulating limit. Death occurred suddenly, while patient was sitting in his chair, on May 1, 1879.

Autopsy. Heart weighed twenty-seven ounces; wall of left ventricle one inch in thickness. Aortic valves ossified, very rigid and incompetent, and presenting three large spots of ulcerative endocarditis. Mitral valve ossified, rigid, but presenting no ulceration. Lungs very oedematous. Brain weighed forty-one and one half ounces. Dura mater quite firmly adherent in places. Dr. W. F. Whitney made the following report on the brain: "The branch of the middle cerebral artery, right hemisphere, supplying the anterior portion of the middle lobe, is entirely obliterated, and that portion of the brain representing a piece three to four centimetres in diameter is completely destroyed, simply a thickened mass of fibrous tissue covered it, enclosed in which the artery was found. The island of Reil is only superficially affected.

The anterior convolutions are untouched. On the left side nearly the same lesion occurred only very much smaller, and the anterior convolution was unaffected.

The case presents the following peculiarities: (1.)

At the beginning of his attack, and for a long time afterward, the patient seemed unconscious of any infirmity of speech. He thought he spoke correctly, and, unlike aphasic patients generally, was not disturbed by the fact that he was using the wrong word. He was even angry with his relatives because they did not understand him, and do as he bade them. It was undoubtedly here that his insanity played a prominent part, and prevented him from appreciating his own mental and physical condition. He seemed to have positive ideas; and to his own consciousness they were sufficiently reasonable. He milked the cows several times a day, chained them to their stalls, and nailed the windows, with the air of a man who understood perfectly well what he was doing, and recognized the importance and necessity of so doing. In the same determined manner he spoke and ordered his family to do this and that, never in any way indicating that he did not understand what he was about. It was only after a long residence among strangers that he seemed to discover that he was not understood.

(2.) He gradually recovered the power of speech, and was able to express his own ideas quite easily. The strange words that he at first used gradually disappeared from his vocabulary and he once more used the right word in the right place. But notwithstanding this he was wholly unable to understand language addressed to him. Many times have I endeavored to converse with him, but he never seemed able to understand and would invariably reply on some wholly irrelevant subject. For the last few months of his sickness he seemed conscious of this inability to comprehend remarks addressed him, and his expression was that of a foreigner who does not understand your language. At the same time his hearing was perfect; he understood gestures very readily, and played a good game of dominoes or checkers. Not only this, he could read understandingly. In short, he could comprehend ideas communicated by gestures or by writing and printing; but spoken language was wholly incomprehensible to him. On one occasion he received a local newspaper from his native place. There was an account therein of a runaway, in which an old friend of his was thrown out of his carriage and injured. He seemed to understand the account and read it aloud correctly to the physician, making some comments on it.

(3.) The lesion was peculiar. Ordinarily the third anterior convolution on the left side is destroyed or encroached upon in aphasia; if not in the left it is generally in the right hemisphere. In the present case this convolution was sound on both sides. This probably affords an explanation of the patient's recovery of speech to a certain extent. If the anterior convolutions on both sides had been diseased his aphasia would have been permanent in all probability. The probable sequence of pathological events in the case seems to me to be somewhat as follows. An embolus from the heart was swept into the left middle cerebral artery. This caused the numbness of the right side and the loss of vision, but the speech centre was not affected at this time. At the second attack undoubtedly another embolus was swept into the middle cerebral artery on one or the other side, it seems to me impossible to say which, causing the mental confusion and prostration. In the third attack still another embolus was carried into the circulation and probably this time the right side was affected as well as the left. The centre of co-ordination of language was not actually affected struc-

urally; but the disturbance of the circulation in that centre was so great that its function was entirely destroyed at the time. At the same time the general disturbance to the cortical portion of the brain, involving of course the centres of ideation, was so great that mental confusion resulted. Gradually, through the restoration of the circulation by collateral channels in the anterior convolutions, the power of co-ordinating language slowly but imperfectly returned, although a healthy state was never again reached.

The question arises, How can the fact be accounted for that he could understand ideas communicated in writing or printing or when expressed in gestures, while the very same ideas, expressed in spoken words, no matter how slowly they were uttered, were totally incomprehensible to him? The most probable explanation would seem to be that the nerve fibres conducting ideas from the auditory apparatus to the higher cerebral centres were actually interfered with and destroyed by disease. Whereas the nerve fibres conducting ideas from the visual organs were unimpaired. His hearing was perfect; the slightest sounds were heard by him. A spoken word, however, seemed merely to fall upon his tympanum and go no further.

The mental alienation made the case more blind, for the patient did not generally seem to think that he was laboring under any cerebral trouble. He considered himself well and strong and in full possession of his faculties; he always attributed the fault to others, not to himself. Hence it was impossible to carry on any intelligent conversation with him about himself.

TWO CASES OF SUBSCAPULAR ABSCESS; ONE OF THEM ATTENDED BY PERFORATION OF THE LUNG.¹

BY F. H. HOOPER, M. D.

THE first case of subscapular abscess which I shall report is one which presents some points of unusual clinical interest, and came under my observation last summer while conducting the service of Dr. Rotch at the Boston Dispensary. For the second I am indebted to the courtesy of Dr. E. H. Bradford and Dr. F. C. Shattuck, and to the records of the Massachusetts General Hospital. A careful search in medical literature has failed to find a single case identical, in all particulars, with the first, and only one which bears any resemblance to the second.

CASE I. C. D., a little girl two years and eight months old, was brought to the Dispensary on Tuesday, the 17th of August last, with the following history: Born in this country of healthy Irish parents, she has always enjoyed good health, never having had even the ordinary complaints of infancy. One week ago she began to show less life and ardor in her play, but there was no one symptom in particular calculated to excite the anxiety of the mother, unless it was that she noticed the child seemed to favor—to "nurse," as she expressed it—her left arm, and to carry it away from her side. On Saturday, that is, three days before her visit to the Dispensary, a small swelling, about the size of a pigeon's egg, was seen in the left axillary region at the border of the scapula. This increased rapidly in volume, the child becoming very peevish and restless, but there were no complaints of

¹ Read before the Suffolk District Medical Society.

pain. In the night between Monday and Tuesday the swelling burst (according to the mother) "inside." The child immediately began to cough and retch, and brought up two cupfuls of purulent matter of such fetid quality as to produce vomiting in the mother, who, I may add parenthetically, was six months pregnant. It was noticed that simultaneously with the evacuation of pus from the mouth the swelling diminished in size. Has coughed much since, and from time to time expectorated a little pus. When seen the following morning at the Dispensary, the child was very pale and feeble, with a short cough, but no expectoration. On examining the back the left scapula was found projecting from the side, being pushed outwards and backwards by a soft fluctuating tumor extending beyond the axillary edge of the bone and below the inferior angle. The skin covering the tumor was healthy. The swelling was unaffected by the respirations, which were quick and short. No fetor of the breath. A small abscess of the sculp was found on the top of the head. On auscultating the upper left back loud gurgling and metallic râles were audible over the spine of the scapula at a point situated about the middle of the spinous process, and covering an area as large as a silver dollar. Owing to the feeble condition of the little patient a more thorough examination was not attempted at that time. In the afternoon, however, I visited her at her home, and found, in addition to the auscultatory signs already enumerated, numerous fine, moist râles occupying the lower lobe of the left lung. Percussion normal at the base, but as it caused so much disturbance to the child the whole chest was not percussed. Right lung healthy. The expectoration had been saved, as directed: small in quantity, thick, of a yellowish color, and odorless. A microscopic examination showed it to be pus unmixed with blood or any lung tissue. Child very feverish.

The next day, August 18th. Has slept well. Has short cough, but no expectoration. Abscess appears to be smaller. The *gorgonillement* over spine of scapula has disappeared. Bronchial respiration and bronchophony in the same spot strongly marked. The stethoscopic signs in other respects unchanged. Temperature 101° F.; pulse over 150.

August 19th. Seen at 8.30 a. m. Slept well yesterday, but was kept awake in the night by the distressing short cough. Sputa scanty, but purulent. Temperature 101° F.; pulse about 160.

Four p. m. Vomits the milk and brandy, and refuses nourishment. Sherry wine substituted for the brandy.

August 20th. When seen in the morning the child was very uneasy and restless, having been kept awake since one o'clock by the cough and difficulty of breathing. The tumor has increased in size. The râles in lower left chest less numerous and coarser. Temperature 103° F.; pulse very rapid.

Returned at noon and attempted to aspirate. Although the abscess was punctured at two different points, and the largest trocar which accompanies the Potain aspirator was used, the result was negative. The point of the canula could be felt moving freely underneath the skin. The aspirator was proved to be in perfect working order.

August 21st. Slept well yesterday after the puncture. Not much cough. Skin over abscess normal, and not hot, but the scapula stands out more prominently even than yesterday, and appears to be float-

ing, as it were, on a bag of pus. As soon as possible, I returned, accompanied by Dr. Elliot, who kindly lent me his aid, and a free incision was made immediately below and to the inside of the inferior angle of the scapula. The incision was followed by a sudden explosion of air from the wound, and the discharge of about an ounce of thick pus. There was not complete collapse of the tumor after the operation, but by slight pressure the scapula could be forced down to its normal position. Air escaped with much noise from the opening with each cough or cry of the infant. A drainage tube was inserted, and a tight bandage applied to the chest.

August 22d. Much dyspnoea and cough, with purulent expectoration, but the pus is less thick. Has taken milk freely, and slept well. On the whole, condition no worse. As there were no signs of any discharge on the bandage it was not removed. Temperature 103.6° F.; pulse over 150.

August 23d. No particular change. Temperature 103° F.; pulse over 150.

August 24th. Cough, paroxysmal and severe, but not so frequent. When the child coughs, a loud, hissing noise, produced by the air passing out of the wound, can be distinctly heard through the bandage. The abscess has discharged a good deal. Bandage removed. There is still some bulging of the scapula, and considerable oozing of thin, sweet pus from the opening. Upper part of left chest, front and back, tympanitic on percussion. Respiration over spine of scapula in the region where the coarse, bubbling râles were heard strongly amphoric. At the base percussion normal, and the fine râles have been replaced by a few coarse, dry râles and roughened respiration. Child very weak and emaciated. Bandage reapplied. Temperature 102° F.; pulse 144. Saw the case again in the afternoon in company with Dr. F. C. Shattuck. Condition unchanged.

August 25th. Drs. Cabot and Bradford visited the child with me in the morning, and verified the auscultatory phenomena above mentioned. Coughs less. No expectoration. Much discharge of thin, but not fetid, pus from the abscess, which was dressed, and bandage reapplied. In the afternoon there was a marked change for the worse. Cough very distressing and frequent, and much shortness of breath. Temperature 101° F.; pulse over 160.

August 26th. Seems a little more comfortable. No expectoration excepting mucus. The scapula now lies flat against the chest wall, and the stretched and loosened skin upon and around it has the appearance of a large empty sac, the flaccid walls of which move in and out with each inspiration and expiration. The flow of pus the same as on the previous days. Temperature 99° F.; pulse 128.

Dr. Shattuck again examined the case in the afternoon, and furnished me with much useful counsel in regard to it.

August 27th. In the morning temperature 98.5° F.; pulse 120. Notwithstanding this marked decline of the temperature and of the rapidity of the pulse, the extreme pallor of the child, the increasing feebleness and loss of flesh, threatened an unfavorable termination. In the evening temperature 103° F.; pulse 152.

August 28th. At both visits I found the little girl very restless and irritable, very weak from loss of sleep. Morning temperature 102.5° F.; pulse 146. Evening temperature 101° F.; pulse about 160.

August 29th. Condition about the same. In the morning temperature 103.5° F.; pulse over 150. In the evening a little worse. Temperature 104° F.; impossible to count the pulse on account of its rapidity and the fretfulness of the child.

August 30th. Increased dyspnoea, but coughs less frequently. Respiration at the base of lung slightly roughened, but no râles. The loud amphoric sound at the top remains the same. Discharge diminishing in quantity and much thinner. From the first, as already stated, the pus has not been fetid. Temperature 104° F.; pulse exceedingly rapid and small.

August 31st. Coughs very little. Respiration rapid, short and labored. Appearance pale and waxy. Sleeps a little from time to time, propped up in bed, for she will not lie down, as she has been able to do heretofore. Temperature 103° F.; pulse about 160.

September 1st. Child died.

Every effort was exerted to obtain a post mortem examination, but all my arguments were met by that superstitious ignorance which so besets the path of the dispensary physician, and an autopsy was obstinately refused. In the absence, therefore, of a scientific examination, the explanation of the clinical facts must be left to theory and conjecture. Impossible as it is to determine with absolute certainty the exact nature and point of departure of the disease, we can, I think, by elimination come pretty near a rational solution of the problem. There are a few important features in the case which I wish to emphasize, and these are, that there was no evidence of any previous disease or injury of any kind; prominent constitutional symptoms were absent; there was merely general malaise for a week before the sudden evacuation of pus from the mouth; then, it was on the outside of the chest that the swelling first showed itself, and for some days continued to expand, before any noteworthy symptom appeared. The physical exploration made it evident that there was a cavity at the top of the left lung, connecting by a fistulous tract with another cavity situated beneath the scapula, from which pus was discharged as well as from the mouth. The inquiry naturally is, In what organ or tissue are we to locate the source of the pus, and by what mechanism was this condition of things brought about? The history of the case makes it very improbable that the primary trouble was either in the lung or pleura. An inflammatory abscess of the lung, arising independently of tuberculous disease, pneumonia, or of any other ascertainable cause, may, as we know from the examples recorded by Graves, Stokes, Trousseau, and others, occur. But, pus once collected in the lung, it is extremely unlikely that it would work its way out through the resisting chest wall, instead of emptying itself into the pleural chamber or through the bronchial tubes, where the resistance would be reduced to a minimum. We had no signs of fluid or air in the pleural cavity. Moreover, the quantity of pus discharged was larger than we could expect from a pulmonary abscess. It must also be remembered that it was external to the thoracic wall that the swelling first made its appearance, and, growing larger and larger, its final collapse, or partial collapse, was coincident with the evacuation of the purulent matter from the mouth.

Could it have been a case of circumscribed empyema, in which the pus penetrated the costal pleura and worked its way down beneath the scapula? I think

not. The position and shape of the swelling and the absence of adema are against "empyema necessitatis," which is commonly seen in the anterior portion of the thorax. Besides, there is no reason, the pus once having broken through the intercostal muscles, why there should be rupture of the pleura pulmonalis, as the pressure at that point would be slight. It might occur, however, from necrosis of the membrane, but the absence of all fetor in this case excludes any such cause. In spite of the rapidity with which disease travels in infancy, I cannot believe that an empyema could form in so short a time, and without giving rise to any more constitutional disturbance than was observed in this little patient. The character of the pus also was not that of empyema. For these reasons, in addition to some of those mentioned for doubting the origin of the affection in the lung, I shall exclude the pleura also from having been the seat of the primary trouble.

We come now to the cellular tissue between the costal pleura and the chest wall, and consider the identity or non-identity of this case with a rare form of disease described by Wunderlich¹ in 1861, and named by him peripleuritis. According to Wunderlich, peripleuritis is an inflammation of the subserous connective tissue of the pleura costalis, originating independently of traumatism, or of previous inflammation of the pleura. Wunderlich reported two cases, which were followed in the same year by two more from Billroth.² Still later, in 1874, Bartel³ presented three cases in the *Deutsches Archiv*; then Riegel⁴ added another in 1876. I shall not review in detail these cases, but merely recall to your memories the chief features of peripleuritic abscess, in order to determine if this case can be placed in the same category. Of the eight cases reported seven were adults, and one was a child ten years old. The disease was ushered in by severe constitutional symptoms, and in the majority of the cases the health of the patient had been impaired by previous disease. But when we come to the physical signs, our difficulties are increased, for the chief points given for arriving at the diagnosis of peripleuritic abscess could not have been applied in my case on account of the anatomical situation of the tumor. Riegel, in a careful summing-up of the subject, gives the following signs as characteristic of the disease: a circumscribed, fluctuating swelling of an intercostal space, the space above narrowed in consequence of the rib being pushed up; percussion flat over the tumor, which is not altered by changing the position of the patient; good respiration beneath the area of dullness; no displacement, or very little, of neighboring organs; the swelling becoming flaccid on inspiration, followed by increased tension on expiration; finally, the character of the pus.

I cannot say that this condition of things did not exist in my little patient at the commencement of her disease, but certainly, when first examined at the Dispensary, the picture was quite different.

Wunderlich lays great weight upon the fact that in peripleuritic abscess the pus is localized, and has no tendency to burrow into the pleural cavity. In only one of the cases reported did such an accident occur. In the others it was prevented from so doing by the adhesion and thickening of the serous membrane; in the

¹ *Archiv der Heilkunde*, ii. Jahrgang, 1 Heft.

² *Archiv für klinische Chirurgie*, ii. Band, 1 and 2 Heft.

³ *Deutsches Archiv*, Band xiii.

⁴ *Deutsches Archiv*, Band xix.

one, however, although there was no adhesion of the pleural layers, the pus did not offer to work its way into the pleural sac. In the case under consideration the pus was not only *not* localized, but burst through the pleural membrane, and the pulmonary tissue also. Although the phenomena observed in my case are at variance with many of those which are symptomatic of a peripleuritic abscess, I do not think that the possibility of the trouble having had its origin in the subpleural cellular tissue can be positively excluded. A very short experience has been sufficient to prove to me how seldom nature pays any attention to the descriptions which the books give of her diseases, and although a peripleuritic abscess never yet has shown a tendency to rupture into the lung, I can easily imagine that if the disease occurs in early life, when all the influences which govern morbid processes are so altered, an abscess forming in this situation would be as likely to work its way in one direction as in another. But notwithstanding this possibility, the clinical picture of this case differs so entirely from that of the cases described by the German writers that I hesitate about placing it in the same frame. I hesitate also because I think we can find an explanation nearer at hand, which, although I anticipate some contradiction, appears to me much more plausible.

Stokes,¹ in a very interesting chapter on Perforating Abscess of the Lung, details a singular case of an "abscess of the abdominal parietes resting on the convex surface of the liver, opening externally and also perforating the diaphragm and forming a fistulous communication with the bronchial tubes." The same principles for forming a diagnosis would be applicable, I suppose, in whatever portion of the thorax the abscess happened to be. The grounds he lays down are "the occurrence of new and extraordinary symptoms, coincident with the subsidence of the hepatic distention." In our case we had a "new and extraordinary symptom" in the shape of a sudden and copious expulsion of pus from the mouth, "coincident with the subsidence of the" subscapular distention.

Now I know no reason why inflammation should not take place and pus collect beneath the shoulder blade as well as in other parts of the body. And I hold it is not improbable that the beginning of the complications in this case may have been an inflammation of some tissue, muscular or cellular, either in the substance of an intercostal muscle or external to it, which, leading to suppuration, and spreading to the pleural membrane glued the two surfaces together; so that when the pus was discharged from the abscess it was prevented from emptying itself into the pleural cavity by this pathological bridge, over which it passed to the lung, to be evacuated by the bronchial tubes. The severe unilateral bronchitis is of course easily explained, and death finally resulted owing to the exhaustion of the vital forces.

I offer the next case as evidence, as far as it goes, in favor of this view. Owing to a strange coincidence, which, in fact, is so constant that it may almost be considered some occult law, namely, that when an unusual case presents itself it is sure to be followed by a similar one, so, a few days after the death of this little girl, another infant was brought to the Dispensary, who presented, externally, appearances almost identical.

CASE II. September 10th. Bennett Burke, seven-

¹ Diseases of Chest.

teen months old. Always a healthy baby till last July, when he began to be troubled with boils on his head, which his mother attributed, of course, to his teeth. About the 1st of September she noticed a swelling under the child's scapula, which, as it continued to increase in size, determined her to seek advice. Dr. Bradford kindly called me into his room to see the child, and I found under the left scapula a fluctuating tumor, extending about an inch below the inferior angle and beyond the spinal edge for the same distance, and reaching as high up as the spinous process. The scapula was forced outwards and inwards towards the axilla, and projected from the chest wall in the same wing-like manner as was noticed in the preceding case. The skin covering the swelling healthy. Instead of returning the next day, as directed, the child was carried to the Massachusetts General Hospital, where he was promptly operated upon by Dr. Beach. A pint of pus was removed, and in a week he was permitted to leave the hospital. This little fellow has remained in good health up to four days ago, and at present moment he has a slight bronchitis.

The resemblance of these two cases, before the occurrence of the vomit of pus in the first case, is very marked. Both of the infants had had collections of pus in other parts of the body, and neither of them had any symptoms other than those which usually attend the formation of a furuncle. The debilitating, oppressively hot weather last summer was certainly conducive to and prepared good ground for furunculi to flourish, as was sufficiently shown by the large number of children who applied at the Dispensary to be relieved of these unpleasant visitors. I am inclined to place these two cases in the same class, but of course further observations are necessary before any definite conclusions can be arrived at. In looking up the subject but one case was brought to light, reported by Dr. Kwasnickiego,¹ of Warsaw, and of which the following is a *résumé*: A woman, thirty-six years of age, strong and vigorous, who had never had any serious disease, came to the hospital complaining of great pain in the left side, loss of appetite, sleeplessness, and general malaise. She stated that a week previously she had carried a heavy bundle all day, and in the night first felt the pain, which has steadily increased. Physical examination showed some swelling of the left shoulder and complete immobility of the arm on account of the pain. The scapula, displaced from its normal position, was pushed outwards and backwards, thereby dragging the shoulder and arm downwards. The anterior border of the scapula very prominent. Skin over this region stretched; otherwise normal. No fluctuation; but on pressing the scapula downwards, the sensation is like that of pressing on a spring mattress. A free and deep incision was made; half a glassful of pus evacuated, which was followed by immediate relief to the patient, and in two weeks her recovery was complete.

The dearth of information on the subject of subscapular abscess can perhaps be accounted for by supposing that the physicians into whose hands such cases have fallen have not deemed them of sufficient importance to be recorded. But, assuming that these cases belong to the same category, the first case shows us how the pus, from its proximity to a vital organ, may burrow

¹ Gazeta Lekarska, Warszawa, S. 28, Styczeń, 1867. Ropień Podłopatkowy (Abscessus Subscapularis), Dr. Kwasnickiego.

into it and destroy life, while the last two are of value as demonstrating the efficacy of proper treatment. And I feel, that had the subject of the first case received timely surgical interference her recovery also would have been a rapid and a happy one.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY E. G. CUTLER, M. D.

THE HISTOLOGICAL CHANGES IN CHRONIC PASSIVE CONGESTION OF THE SPLEEN.

NIKOLAIDES,¹ contributes an interesting paper on this subject. Such spleens feel dense and hard, and on their cut surface the pulp, at least in spleens the subject of old passive congestion, appears to be traversed by a very abundant thickened white network. When examined carefully, a thick white layer around the vessels may be detected with the unaided eye. It is a striking fact that such spleens do not present the dark-red color which we might expect, and such as is seen in kidneys and liver long exposed to passive congestion, but are often bright-red. Before proceeding to the changes observed, it might be well to briefly sketch the connection between the trabeculae and sheaths of the vessels, as well as that between the latter and the proper reticulum of the pulp, in order to understand the relation of the changes. It is well known that the capsule of the spleen, which surrounds the organ like a dense sack, is folded in at the hilus, at the point of entrance of the vessels and nerves, and thus becomes the sheath of the vessels. It accompanies the branching of the vascular system, being more strongly and voluminously developed around the arteries than around the veins, to their finest subdivisions. Besides the sheaths of the vessels and connected with them is another continuation of the fibrous splenic capsule directed inwards, namely, the trabecular system. The trabeculae penetrate the spleen in all directions with manifold divisions, and represent a very complex framework. They become firmly attached to the vessels, or run into them, especially the veins. Now with regard to the reticulum of the pulp, we know that it runs into the sheaths and adventitia of the vessels and forms around the cavernous veins a net of circular fine fibres, anastomosing at acute angles and forming a boundary to the blood current. Finally, the pulp-reticulum joins the trabeculae. From this the relation and interdependence of all these tissues is readily seen. Pathological histology shows that when a general irritation is present in the spleen, all these parts, on account of the continuity and similarity of the tissue, are productively aroused. This is the case in passive congestion of the spleen under consideration. Here, on account of the increased pressure within, all these parts are irritated and there results, as we see, that extensive thickening of the trabeculae and sheaths of the vessels.

To study the finer details of all these changes the spleen should be hardened first in Müller's fluid and then in alcohol. Sections examined under the microscope show the vessels, chiefly the arteries, to be enormously thickened, from increase of the adventitia and the sheaths which are closely connected with them. This thickening of the latter parts of the vessels forms a very broad zone of connective tissue, which runs over

into the adjacent reticulum of the pulp. Sometimes, particularly in very old spleens, tolerably broad connective-tissue bands are found running out from the sheaths of the vessels into the pulp, and between the fibres of the same fragments of cells. These bands of connective tissue are obviously nothing else than partial thickenings of the reticulum of the pulp continuous with the sheaths of the vessels, the pulp cells having subsequently disappeared, as is the case with the hepatic cells in the periphery of the acini in granular atrophy of the liver. The trabeculae are greatly thickened, especially where they join the wall of the vessels. Connective-tissue bands also run from the trabeculae towards the pulp.

These thickenings of the trabeculae, sheaths of the vessels, and adventitia are found more or less developed in all passive congested spleens, and the density of the latter depends on the degree of these thickenings. Naturally, we must not expect to find all these changes in those spleens in which the passive congestion has suddenly arisen, but only in those where the primary lesion causing the congestion has been slowly developed.

The above are the essential changes, but besides them there are others, namely, of the intima of the vessels, especially the arteries, and when the congestion has lasted a long time, of the veins also. The sort of change of the intima of the arteries is in so far different from that of the veins that in the veins of the parenchyma only a superficial fatty ulceration is to be observed, while the intima of the arteries shows an exquisite growth of all the connective-tissue layers, that is, a true endarteritis. Virchow has observed similar changes of the veins in other organs.² In valvular diseases of the heart he has seen in the intima of the pulmonary vein growths analogous to those in endarteritis, also in the portal vein in old passive congestion of the liver.

Nikolaides considers that there is also a thickening of the muscular coat of the arteries, above all of the circular fibres. The Malpighian follicles appear to take no part in the disease only in old congested spleens their border zone appears to be somewhat thickened. But primary changes of the follicles are not observed; we say primary, for the follicles may suffer secondarily in consequence of the thickening of the trabeculae and vessels.

To recapitulate:—

(1.) The essence of the passive congested spleen, or as it might, perhaps, be better termed, indurated spleen, is a thickening of the trabeculae and of the sheaths of the vessels and adventitia in connection with them.

(2.) The intima of the vessels, especially that of the arteries, suffers a very early induration, while that of the veins comes on after the congestion has lasted a long time, and has exerted a considerable internal pressure on the wall.

(3.) The reason of the slight hyperæmia of the spleen is to be found in the increase of the muscular coat of the vessels.

TUMOR OF THE TRICUSPID VALVE.

M. Garel³ relates a case of pulmonary disease in which jugular pulsation was accompanied by accentuation of the second sound. No other stethoscopic signs

² *Gesammelte Abhandlungen*, pp. 506, 507.

³ *Revue Mens. de Méd. et de Chir.*, November, 1880.

¹ Virchow's *Archiv*, Band 82, page 455.

were present. After death the tricuspid valve was found to be the seat of vegetations, and on that segment nearest the pulmonary artery there was a small tumor of cauliflower shape. Microscopic examination showed that it was an extravasation of blood into the tissue of the valve which had undergone fibrous transformation, and become in part calcified. Dr. Gibson¹ has also described a small tumor on the auricular surface of the inferior tricuspid valve, very near its attachment to the muscular wall of the heart of a sheep. The tumor was oval in outline, and measured four lines in length, and two and a half in breadth; it was of a deep purple color, with a smooth and glistening surface, the endocardium being everywhere perfectly healthy. After hardening, sections examined under the microscope showed the tumor to consist of blood clot undergoing organization near the proper tissue of the valve, the tumor being composed almost entirely of connective tissue, while the centre was composed of brown granular matter, the remains of broken-down blood corpuscles.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.²

T. M. ROTCH, M. D., SECRETARY.

Boston, May 7, 1881.

THE committee appointed by the Society for Medical Improvement to procure a portrait of Dr. J. B. S. Jackson, regret that so long a delay has necessarily occurred before making a report. We rejoice that we are able finally to present a well-painted and true portrait of our deceased associate. That now before you is a very exact copy of one painted by the late William M. Hunt, which has always been deemed remarkable, not only for giving the physical features of Dr. Jackson, but because it conveys to the beholder so much of the moral and intellectual qualities of our friend. It is a noble illustration of what high art, in the hands of a great artist, one capable of appreciating the finer traits of his sitter, can accomplish towards representing the best mental and moral qualities of the man before him.

This copy of Hunt's painting, which will hereafter belong to the Society, was made by Miss Rose Lamb, of this city. This lady was for many years an enthusiastic pupil of Mr. Hunt, and she seems to have drawn inspiration from her strong desire to exactly reproduce the portrait made by her master. The result is that we have now a most perfect likeness of our associate, who, "take him for all in all," was one of the most unique and excellent men our profession has produced during the past half century. We believe that the members of the Society will coincide with us as to the exactness of the likeness. It is hoped that it will hereafter silently speak to every one who looks at it, and stimulate all to be as true in their respective spheres of labor as he was in his department of medical science. That department which he so brought from nothing, as it were, in the university, up to that grand position in which he left it, namely, as a foundation for the modern science of the youths of the present day to build upon. How bright and genial, as well

as wise, are all the features which by this canvas will, we trust, be transmitted to physicians yet unborn! To gain this end, and that hereafter no such doubts may arise in the mind of any one as trouble those who study the portrait of what is called Ambrose Paré, now in our possession, we determined to fasten firmly upon the frame an inscription that will forever tell its tale. The inscription is in Latin. Some may doubt the expediency,—a so-called dead language, instead of English. We chose Latin for the following reasons: Because, besides giving a certain dignity to the subject, we can express more tersely than by English what we wish to say of Dr. Jackson, and of the reason for always keeping him and his example in remembrance. Moreover we deemed it not inappropriate to use a language honored and used by the learned of many past centuries, and which is daily, nay almost hourly, used to a limited extent at least by the medical profession of the present day throughout the civilized world. The inscription runs as follows:—

JOHANNIS B. S. JACKSON, M. D.
Anatomici Pathologici Prae-stantes: Anatomia Pathologica,
Profes. Harv.: Musci Pathologici Conditoris Societatis
pro Medicina Progressu Constituta, decoris et
praesidii, Haec tabulam Sodales ejus grate in
Memoriam dedicant
A. D. MDCCCLXXXI.

Can any one doubt that Dr. Jackson was a remarkable pathological anatomist? Was he not for more than forty years *facile princeps* in that department amongst us? Was not he known on both sides of the Atlantic for his great zeal in this line of work? How modestly yet unhesitatingly did he take that position of chief, and how willingly was it yielded to him by all of us! The microscope, chemistry, and all the more modern methods of studying pathological anatomy may carry forward his work far beyond the point to which he would have progressed by old routes, but they can never set aside the immense value of his labors.

He founded the museum now belonging to Harvard University, and which bears his name.

The words "decoris et praesidii," used by Horace in his Ode to Maecenas,³ and which we have chosen as suggestive of his relations to our Society seemed to us most appropriate. Will any deny that for years he was the honor and presiding genius of our Society. His fame has reflected honor upon us, and surely no one of us who remembers how often, evening after evening, he was the sole speaker and inspirer of our meetings can hesitate as to the propriety of the epithet "presidium," as applied in his relations to the Society, he was indeed for years our "presiding genius."

In conclusion we congratulate the Society that the painting has been paid for with the hearty coöperation of every one of our members. Not a few regretted that they were called upon for so small a sum as was required, when the cost of the painting was borne by so large a number.

We append three resolutions, which we hope the Society will adopt for the future care of the portrait.

HENRY I. BOWDITCH, }
CHARLES D. HOMANS, } Committee.
CHARLES P. PUTNAM, }

First. *Resolved*, That the Boston Society for Medical Improvement hereby requests the officers of the Boston Medical Library Association to take charge of

¹ Journal of Anatomy, vol. xiv.
² C. C. Arch. 1 from p. 120, 168.

³ Ode 1. Ad Maecenatem.

Dr. J. B. S. Jackson's portrait, on the condition that it shall be forever preserved in one of the public halls of the Association, or until otherwise ordered by this Society.

Second. *Resolved*, That a committee to make arrangements for the formal presentation of the portrait into the charge of Dr. O. W. Holmes, president of the Library Association, said presentation to be made at the next meeting of this Society.

Third. *Resolved*, That the members of the Library Association are hereby cordially invited to be present at that meeting, and that the secretary be and hereby is directed to send a printed notice to each member of the two associations giving information as to the object of the united gathering.

It was moved and carried that the same committee that had drawn up the resolutions should be the committee for presentation.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.¹

SECOND DAY. GENERAL SESSION.

The session opened with some lively and eloquent debate, in which Dr. N. S. Davis, of Chicago, and Dr. Dunster of the University of Michigan, figured prominently, the one in favor of and the other in opposition to an amendment to Article I, Paragraph 1st of the Code of Ethics. The amendment in question was as follows:—

Action on amendment to Code of Ethics, Article I, Paragraph 1st, add "and hence it is considered derogatory to the interests of the public and honor of the profession for any physician or teacher to aid in any way the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

Dr. Dunster considered the amendment illogical in form, there being no connection between the paragraph to be amended and the amendment as offered; it was, he thought, moreover, narrow and mistaken in spirit. Medicine being a liberal profession we should do all in our power to extend the bounds of its usefulness, but this amendment would make the profession a most illiberal and proscriptive one.

The honor of a teacher does not depend upon those whom he teaches, but upon himself.

Another objection is that the amendment must always be inoperative even if adopted. There is no power to enforce this amendment either by legal, moral, or social measures. The enforcement of this statute would close every public clinic in America, because we are forbid to aid in any manner certain classes. There is also an objection because it is based upon the most fallacious assumptions. Now, if we teach the truth and the sciences as we believe, we know that no harm can result; if we adopt the amendment we concede that the dissemination of science leads to error.

Are you ready to say that no man shall teach the truth to all classes? Truth is the antidote of error, and sooner or later must conquer it. So far from denying truth to the unbeliever, we should do all in our power to extend its dominion.

On motion of Dr. Davis this amendment was made the special order after the addresses the next day.

Dr. John H. Packard, from the committee on journalizing transactions, presented a report, which recommended the establishment of a weekly journal as the organ of the Association.

The report closed with the following resolution:—

Resolved, That the president be authorized to appoint a committee of five to digest and report in detail as soon as practicable upon the time, place, and terms of the publication of such a journal, to elect an editor, fix his salary, and to arrange all other necessary details.

The report was discussed by Drs. Davis and Toner. Dr. Davis moved to strike out so much of the resolution as related to the election of an editor. Adopted.

Dr. J. M. Toner read the report of the committee on necrology.

SECTIONS.

I. STATE MEDICINE.—Dr. J. S. Billings, chairman *pro tem.*; Dr. R. G. Jennings, secretary.

Dr. J. L. Cabell, of Virginia, read a paper on The National Board of Health and the International Sanitary Conference of 1881. Dr. Cabell alluded to the illiberal action of the National Congress in reference to the National Board of Health, and spoke of the success that had attended the efforts of the New York physicians for the establishment of a State Board of Health. He also gave a history of the establishment of the National Board, and the reasons why it had not secured sanitary regulations in States which had not established State boards, and stated the reasons which impelled the calling of an international sanitary conference. Dr. Cabell proceeded to give an interesting account of the proceedings of that conference and the good work accomplished by it. After dwelling for some time upon the work prepared at the conference, Dr. Cabell concluded as follows:—

"There is, therefore, good reason for hoping that an international agreement may be arrived at between the states most frequently threatened with epidemic invasions. And, aside from this, the degree of attention which, as a result of the deliberations of the conference, has been given to the subject of maritime sanitary police, cannot be without fruit in securing greater cleanliness, better ventilation of ships sailing on the high seas, and, in general, an improved sanitary condition of these important instruments of commerce, which become so often the carriers of the most deadly contagion, from the failure to use such precautions as sanitary license suggests, and as it is hoped will now be enforced among the maritime powers of the world."

Dr. C. F. Folsom, of Boston, read a paper on the Relation of the State to the Insane, which will be published in full in these columns.

II. SURGERY AND ANATOMY.—Dr. Charles F. Stillman, of New York city, read a paper upon A New System of Surgical Mechanics, illustrated by numerous drawings and instruments.

The system demonstrated by Dr. Stillman is based upon the principle of *local extension* as opposed to *general extension* developed by all other systems, which local extension is produced by the use of the sector splint in the various forms shown by him as adapted to the several joints. Having given a cursory mention of Buck's extension, various modifications of the long splints, Hutchinson's method, and Thomas's plan,

¹ Continued from page 474. Our Reporter wishes to acknowledge his indebtedness to the Virginia Medical Monthly.

of Liverpool, he summed up the advantage of his system as follows:—

- (1.) Extension at any angle with motion.
- (2.) Extension at any angle with luxation.
- (3.) Fixation.
- (4.) Motion complete or limited, constant or occasional.

(5.) Exposure of surface about the joint, admitting compression, elastic or otherwise, hot and cold applications, blisters, dressings, and easy inspection.

This was followed by an exhibition of splints for the spine, hip-joint, knee-joint, ankle-joint, and elbow. Also an instrument for reducing cases of talipes in various forms and of long standing, by which instrument the surfaces of the tarsal bones are separated before the foot is made to assume a normal position.

Dr. Kinlough, of South Carolina, thought too much advantage was claimed for such contrivances, and was sorry he could not share the enthusiasm of Dr. Stillman, but had failed to secure as good results.

Dr. Quimby, of Jersey City, N. J., indorsed fully Dr. Kinlough's remarks. He thought mechanical instruments were sometimes useful, but were also capable of great abuse, and thought that they did not control muscular contraction.

Dr. Alfred C. Post, of New York, read a paper on Plastic Operations on the Face. He reported two cases upon which he had operated; in the first case after removal of an epithelioma involving the left side of the face, in the second case the plastic operation sought to repair the absence of the upper lip.

Dr. D. H. Goodwillie, of New York city, read a paper on Treatment of Arthritis of the Temporo-Maxillary Articulation, and reported cases treated.

Dr. B. A. Watson, of Jersey City, N. J., read a paper, the title of which was An Experimental and Clinical Inquiry into the Etiology and Distinctive Peculiarities of Traumatic Fever.

IV. PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.—Dr. Pepper, chairman of the section, delivered a very acceptable address. Instead of attempting a general and unnecessarily hasty review of the advances or discoveries in his department during the past year, he judiciously confined himself to a few practical remarks on some of the medical topics which have of late attracted most attention. In regard to one of the most prominent of these topics, the specific fevers or zymotic diseases, Dr. Pepper, though acknowledging the fascinating interest of the theories propounded to explain their genesis, and of the ingenious and plausible methods of treatment based thereon, thought it well that the wide difference between the amount of fluent writing and talking about septic processes and zymoses, and the amount of positive and demonstrable knowledge as yet acquired about them should be kept in mind. The subject of blood-poisoning having rapidly become one of the fashionable topics of the day, the terms and hypotheses devised by investigators have become the common property not only of general practitioners, but of the public at large, of the sanitary engineer, and of the sanitary plumber. The too-ready adoption of the popular theory of blood-poisoning will lead to mere scientific expectancy, to the use of routine methods, to the disregard of that watchful and minute care in adapting remedies to the morbid conditions, and the functional derangement present that constitutes the sole basis of rational and successful practice. Such scientific ex-

pectancy or routine practice will certainly impede and postpone the otherwise very possible discovery of new and valuable specific remedies. But, in the opinion of the speaker, the most serious practical injury which follows the excessive prevalence of the doctrine of specific self-limited diseases, is the tendency to underestimate the importance of local lesions, and of peculiarities of individual constitutions, as explaining the symptoms and determining the cause of diseases. Even in typically specific diseases, as, for instance, in typhoid fever, observation convinces one daily more and more strongly that it is impossible to get the best results from treatment without paying the most careful attention to these questions. Again, the fact that circumscribed catarrhal irritation of a mucous membrane, unattended with any considerable amount of catarrhal discharge, is able to excite marked febrile action, is a matter of the greatest practical importance.

Dr. Pepper enlarged considerably upon this topic, and in conclusion said:—

I have been led much further in these remarks than I proposed to go, but I have been drawn on by the sense of the great practical importance of a clearer recognition of the large part played by local catarrhal inflammation in the causation of symptoms now too readily attributed to some hypothetical specific or zymotic process. I do not feel at all satisfied with the theories of treatment largely based upon these hypotheses that are found in the works on medical practice, for the most part translated from foreign languages, which burden our shelves. I am sure they do not accord with the sound practical experience of American physicians, and do not meet the conditions of disease with which we are familiar. I am hopeful that ere long a truly national American system of medical thought and teaching will be developed which shall be animated by a more practical spirit, and shall embody the results of the broadest and most thorough clinical work.

When published in full Dr. Pepper's address will well repay careful perusal, and we regret that our crowded columns should make so brief an abstract unavoidable.

Dr. King, of Washington, read a paper by Dr. Prentiss, of New York, entitled Is Croupous Pneumonia a Zymotic Disease? The writer maintained that croupous pneumonia was a constitutional disease; that the lung affection was purely a local manifestation, and that, therefore, pneumonia must be classed among the zymotic and preventable diseases. The differential diagnosis between croupous and catarrhal pneumonia was dwelt upon, the writer claiming that the two diseases had only one point in common, namely: That in both there was an inflammation of the lung, and that, in fact, catarrhal pneumonia was merely a local disease, while croupous pneumonia was a constitutional disease, with a local (lung) manifestation. The specific cause of croupous pneumonia yet remained undiscovered; the disease must run its course, and treatment must therefore be symptomatic. He urged the importance of giving croupous pneumonia its proper classification in mortuary statistics.

Dr. W. C. Dalney read a paper on The Nature and Treatment of Pneumonia, and arrived at the following conclusions:—

Two views are held as to the nature of pneumonia—one that it is a specific fever; the other that it is a local inflammation of which the fever is symptomatic.

Arguments in favor of the first view : —

(1.) The disease ordinarily commences with a chill.
(2.) The constitutional disturbance is often out of proportion to the local disease.

(3.) The disease usually runs a definite course, and is self-limited.

(4.) The disease occasionally occurs as an epidemic.

Arguments in favor of the second view : —

Traumatic pneumonia is precisely similar to the idiopathic form.

The indications of treatment in the first stage are :
(1.) To lessen the amount of blood in the lungs and to check, as far as possible, the extension of the inflammation. (2.) To reduce the temperature ; and (3.) To relieve pain.

To fulfill the first indication, blood-letting, diaphoretics, saline purgatives, and cardiac sedatives are to be employed.

To fulfill the second indication, quinine is the most important agent.

To relieve pain, sinapisms, wet and dry cups, and opiates may be resorted to.

In the second stage, the indications are : (1.) To lessen the consistency of the fibrinous exudation ; and (2.) To prevent over-distention of the heart.

To fulfill the first indication, alkalies, especially carbonate of ammonia, are to be employed.

To fulfill the second, alcoholic stimulants are especially useful. Digitalis may also be used with advantage. If so much respirative surface is involved as to interfere seriously with respiration, oxygen gas should be used.

In the third stage, tonics, a nutritious diet, etc., are advisable.

The chairman said that the reading of these two valuable papers having been finished, he would now call for the discussion on this, one of the most important subjects now before the medical profession.

Dr. Lynch, of Baltimore, opened the discussion, and said that the various arguments which go to prove that croupous pneumonia was a zymotic disease had failed to convince him that such was the fact. If it was a zymotic disease, then the treatment was a matter of little or no importance, and should be merely symptomatic ; while if it was a local disease, the treatment was of great importance. He believed that it was often aborted by the use of the proper remedies, and had often seen the so-called defervescence produced in a few hours by the use of *veratrum viride*.

Dr. Whittaker classed himself with those who believed croupous pneumonia to be an acute infectious disease (not, of course, contagious). One point in the differentiation of this disease had not been brought out, namely : Catarrhal pneumonia attacked old people principally, while croupous pneumonia was confined to young ones. This, he thought, was a point of importance in the diagnosis of cases.

Dr. Burlington, of Vermont, did not think we could begin to treat the disease intelligently until we had determined its cause.

Dr. Lester, of Missouri, had failed yet to hear the argument which convinced his mind that pneumonia was a zymotic disease. He thought, also, that the discussion yesterday proved conclusively that blood-letting was applicable to a very limited number of cases.

Dr. N. S. Davis, of Chicago, had never been able to decide that pneumonia was zymotic, but believed it to be local. He rose to protest against the course of rea-

soning pursued by some members. Even assuming that pneumonia was a zymotic disease and run a definite course, this was no reason why it might not be cut short, and the physician had no right to fold his hands and do nothing because of such reasoning.

Dr. Oeterlony said that it seemed to be settled by discussion that if pneumonia was a zymotic disease it could not be cut short, but if local, it could. Pneumonia, he thought, was a self-limited disease. In regard to the zymotic character of the disease, he must confess, his mind had not been convinced ; thought it local ; wished to call attention to the danger of death from heart-clot. He thought carbonate of ammonia useful in other stages besides the third.

Dr. Ball, of Ohio, thought the idea of pneumonia being a self-limiting disease, and founding treatment upon that idea, to be exceedingly erroneous, and calculated to do great harm. He thought the disease could be cut short, and called attention to the method of treatment by repeated emetics early in the case, and claimed that it was valuable in aborting the disease.

Dr. McCaul, of Michigan, thought that in his State venesection was not admissible, and that cardiac sedatives must be used with extreme caution. Did not think the disease was purely zymotic, but that there was a zymotic condition of blood which tended to produce it.

Dr. Whittaker, of Cincinnati, asked if pneumonia were a local disease, what caused it ; certainly exposure did not. We had, he thought, no right to call it a local disease until we knew its aetiology.

On motion of Dr. Davis, of Chicago, the discussion upon this subject was closed, and the papers referred to the appropriate committee.

The secretary read by title a paper by Dr. Robertson, of New York, who was absent, entitled, *Nature and Treatment of Pulmonary Phthisis*.

The time until adjournment was then occupied in the reading, by Dr. Bulkley, of New York, of an interesting paper on the Diet and Hygiene of Eczema.

V. OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY. — Dr. Carl Seiler, of Philadelphia, read the first paper, on Syphilitic Laryngitis. He stated that the affection could be diagnosed from non-specific inflammation by the peculiar discoloration of the mucous membrane and the symmetrical disposition of the inflammatory patches. There are frequent ulcerations of the larynx, which may be divided into shallow ulcers, in nothing differing from those seen in catarrhal laryngitis, and deep ulcerations, which were, in the author's opinion, due to the breaking down of the smaller or larger gummata in the mucous membrane. He also stated that a diagnostic sign of syphilitic laryngitis was seen in the red lines and observed upon the *velum palati*. He recommended as treatment, beside the systemic, with iodide of potassium and mercury, and supportive with tonics, etc., local touching of the shallow ulcers with solid nitrate of silver fused upon an aluminum probe, and the deep ulceration with acid nitrate of mercury (1 to 4), or the galvanic cautery.

The subject being open for discussion, Dr. Reynolds said that he thought constitutional treatment would do more good than any local measures. He was surprised at the statement of Dr. Seiler, that the diagnosis of the simple form of syphilitic laryngitis was difficult. He did not believe that catarrhal inflammation could produce ulceration.

He thought that local applications could give no

good results unless restricted to such remedies as would give relief from pain. While not doubting the correctness of Dr. Seiler's observations, he differed with him in his diagnosis.

Dr. Stephens, of Hartford, thought the treatment much more satisfactory when both local and constitutional remedies were employed.

Dr. Walsh said that he thought too much prominence was given to the iodide of potassium. He held the opinion that the shallow ulcer corresponded in its time of appearance with the mucous patch of syphilis, and the deeper ulceration with the tertiary stage. He always found enlargement of the cervical glands in specific laryngitis. He employed mercury internally, especially in the shallow ulceration, and iodide of potassium in the deeper forms. He thought Dr. Reynolds wrong in neglecting local medication, the combination of the local and constitutional treatment giving better results. Of the modes of administering mercury, he preferred inunction. Treatment should be supporting.

Dr. Seiler closed the discussion, saying he thought catarrhal inflammation could produce ulceration. The infiltration of the submucous tissue could break down and produce ulceration. In his paper he had taken it for granted that any physician would employ constitutional treatment in this disease. He claimed that local treatment lessened the amount of cicatricial contraction in the process of cure. The application of caustic served to coat over the ulcer and protect it. He claimed that there was involvement of the cervical glands often in non-specific laryngitis, while it was not a constant symptom in the specific form. He based his diagnosis mainly upon the carmine color of the mucous membrane and the symmetrical arrangement of the ulcers. If there was an ulcer upon one side of the larynx there would be found a corresponding ulcer or focus of inflammation on the other side. He attached much importance to the red lines upon the velum palati, which were sometimes brought out by the irritation of an examination.

Dr. Chisholm read a paper on a form of tinnitus induced by a rhythmical contraction of the tensor tympani muscle, which was first brought to his notice by a muscular twitching in his own left ear. It occurred during the heat of summer, and invariably commenced after dinner. The twitching at first was not of more than half an hour's duration. It did not affect the hearing. The next day after dinner the buzzing sound was resumed. This followed for four days in succession. The duration of the buzzing now was gradually increased until the last recurrence. The noise continued until lost at bed-time in sleep. Inhalation of air-chloroform vapor, electricity, both faradic and continuous, did not in any way control the buzzing sound. The fluttering was felt at the drum head, and analyzed as a rhythmical contraction of the tensor tympani muscle. The contraction and relaxation varied at times from one hundred and thirty to one hundred and sixty to the minute. The cause was ultimately found to be a glass of wine, taken at dinner, in connection with the very hot weather. Omission of the wine stopped the noise, and its resumption at dinner renewed it. Other cases of a similar nature have come under the observation of Dr. Chisholm.

VI. OBSTETRICS AND DISEASES OF WOMEN.—The proceedings opened with a discussion as to whether there was or was not an investing capsule proper of

uterine fibroids, in which various opinions were expressed.

Dr. H. P. C. Wilson, of Baltimore, next exhibited some uterine dilators of his own construction. The relative merits of such contrivances and of tents were a good deal debated by different speakers.

Dr. H. O. Marcy, of Boston, exhibited his double drainage and injection tubes.

Dr. Jas. R. Chadwick, of Boston, chairman of this section, delivered an address devoted to a statistical consideration of the whole volume of literature upon the branch of medicine to which this section is assigned during the past five years. This address is too long and valuable to be done justice to in our limited space. In conclusion, he said:—

"To America I have no hesitation in according pre-eminence in this special field. Our countrymen meet the emergencies incident to child-bearing with a quickness of perception and readiness of action rarely seen in other countries. Their ingenuity has led them to devise new operations in gynecology, and to carry their art with brilliant results, so that to-day the practice of that branch has reached a stage here far in advance of other nations. Of course our natural aptitudes lead many of us to overestimate the beneficial results of surgery. Close observation and study in most of the countries of Europe has confirmed me in the opinion that in obstetrics and gynecology America leads the world. The two most prominent exponents of our branch in America, *The American Journal of Obstetrics* and the Transactions of the American Gynecological Society, present a more happy blending of scientific facts and practical suggestions than is found in any other special gynecological or obstetrical journals in the world."

We hope to publish the address in full at a later date.

PROCEEDINGS OF THE CONNECTICUT RIVER VALLEY MEDICAL ASSOCIATION.

THE annual meeting of the Connecticut River Valley Medical Association was held at Bellows Falls, Vermont, May 4, 1881. The president, Dr. Richardson, in the chair. Thirty members present.

CASE OF OVARIOTOMY.

Dr. D. Campbell reported the case. Mrs. F. R., aged fifty-six, mother of six children, first noticed a "bunch" in the right side some twelve years ago. She was tapped the first time, June 10, 1872, and eight times subsequently. The fluid discharged had the ordinary ovarian appearance up to November 14, 1880. At this time the cyst contained sixteen pounds of a fluid of a decidedly purulent character.

For the last three months the patient's general health had rapidly declined. She was greatly emaciated, with rapid pulse, high temperature and night sweats. It was evident that the case must terminate fatally in the near future without the radical operation, and it was decided to attempt the removal of the cyst. The operation was done December 16, 1880. Drs. George L. Foster, D. P. Webster, of Putney, and E. R. Campbell, of Bellows Falls, assisted, J. W. Keyes, D. M. D., having charge of etherization. The cyst was extensively and firmly adherent to the abdominal walls and to the omentum. The vascular supply to the cyst

was more extensive through the omental vessels than from the pedicle. The cyst contained fourteen pounds (by estimation) of fetid pus, with a quantity of gas. The pedicle was long, and tied in halves with carbolized silk and dropped back into the pelvis. The omentum required three ligatures. A cyst somewhat larger than a kidney was found in the left ovary, tied and removed. It contained a substance exactly resembling soft faecal matter, but without odor.

The usual antiseptic precautions were observed, as far as circumstances would permit. The abdominal wound healed kindly, and the sutures were removed on the twelfth day. Up to this time the temperature was below 100° F. On the sixteenth day the temperature rose to 102° F., the highest point at any time after the operation. No chill and no complaint of abdominal pain or tenderness at any time since the operation. On the eighteenth day, matter began to discharge slightly from the pubic extremity of the wound, and on the nineteenth day, while on the stool, an abscess burst, discharging a large amount (estimated eight ounces) of extremely fetid pus.

January 4, 1881, the twentieth day after the operation, the double ligature, with some two inches of the pedicle, was discharged.

From this date the case progressed favorably, the temperature and pulse becoming normal on the twenty-second day.

It is somewhat remarkable that peritoneal inflammation terminating in suppuration should produce so slight constitutional disturbance, and should be present without the slightest abdominal pain or tenderness.

It is also remarkable that the sloughed pedicle, with the double ligature attached, should find its way out of the abdominal cavity on the twentieth day after the operation.

The after-treatment was conducted by Dr. Foster, and much credit was given him by Dr. Campbell for the favorable result of the case. The two evacuated cysts were exhibited to the Association.

POPLITEAL ANEURISM FOLLOWING AMPUTATION.

Case reported and patient exhibited by Dr. C. A. Allen, Aeworth, N. H.

A. H., male, aged twenty-two, single, received an injury to his right knee, when three years old, which resulted in ankylosis of the joint. He does not remember walking without crutches, and, from want of use, all the muscles of the limb were atrophied. In July, 1880, he fell from a horse-rake, severely injuring the ankylosed knee. The resulting inflammation was severe enough to cause necrosis of the joint, for which the thigh was amputated by Dr. D. Campbell, September 21, 1880. At the point of amputation, the lower third of thigh, the main artery was about half the usual size, with very thin walls. The operation was performed antiseptically, vessels tied with carbolized catgut, and the usual dressings applied. On the sixth day dressing renewed. Upper half of wound healed by first intention, and no pus. Dressed again the ninth and twelfth days, and seemed doing well. On the thirteenth day after the operation active hæmorrhage took place, which was quickly controlled by the nurse with pressure over the femoral artery. Dr. Allen used styptic dressing, compresses, and pressure sufficient to check the force of the blood current. The sixteenth day there was another hæmorrhage, more copious than the first, but controlled in the same

way. On the nineteenth day there was a third hæmorrhage. In consultation with Dr. E. R. Campbell the propriety of ligating the femoral was discussed, but it was finally decided to temporize, as the last hæmorrhage was slight and easily controlled.

October 30th, forty days after amputation, stump was healed, and case dismissed.

December 4th. Was again called to see patient. A small abscess had formed and opened in the line of the cicatrix, and was discharging a sanious fluid containing but little pus. Abscess healed slowly. On the morning of the twenty-fifth of same month was hastily summoned, and found copious hæmorrhage had taken place. In consultation with Drs. D. and E. R. Campbell it was decided to ligate the femoral at once. Dr. D. Campbell performed the operation. After ligating, the end of the stump was opened, and it was found that the coats of the popliteal artery had not been firm enough to retain their position while a plug was forming, but had gradually distended, forming an aneurism the size of a small hen's-egg, which had burst, causing the hæmorrhage. The upper wound healed kindly, although the patient had an attack of scarlatina, coming on the day following the last operation, which ran its regular course.

The stump has been very tardy about healing, owing, probably, to deficient blood supply and want of innervation.

ANCHYLOSIS OF BONES OF HAND.

Dr. Albee presented a patient whose hand had been caught in machinery a few months before, and all the soft parts of the palmar aspect were torn away. The hand healed by the aid of skin-grafting, but most of the carpal and metacarpal bones were ankylosed.

Dr. Porter read an interesting paper entitled *Life*.

Dr. E. R. Campbell presented a paper on

THE INFLUENCE OF REPARATIVE SURGERY ON AMPUTATIONS.

He claimed that the more modern artificial limbs had greatly modified the form of amputation, especially above the ankle-joint. Syme's amputation is now considered preferable by all intelligent surgeons to any amputation at a higher point. The supra-malleolar amputation should always be preferred to one at a higher point, where, from the nature of the injury, Syme's is impossible. At the present time many excellent surgeons prefer a Syme to a Chopart operation, as an artificial limb can be better adapted.

The president, on retiring, conformed to the by-laws by reading a paper on *Death*.

Dr. Loveland reported a case of attempted cure of morphia habit, resulting fatally. The case was reported in this journal March 31, 1881.

Recent Literature.

What every Mother should Know. By EDWARD ELLIS, M. D. Philadelphia: Presley Blakiston. 1881.

A very good little book, written with discretion and good sense.

— An exchange states that a Choctaw princess died in the Indian Territory, the other day, at the great age of one hundred and fourteen years. She had thirteen great-great-grandchildren.

Medical and Surgical Journal.

THURSDAY, MAY 26, 1881.

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THE RELATION OF SOILS TO HEALTH.

SOMEWHAT more than a year ago Prof. Raphael Pumpelly appealed to the National Board of Health for aid in carrying out a series of investigations into the relations of different soils to the air and water currents passing through them. He proposed to study at the outset,—

(1.) The rates of flow of water and of air under given conditions.

(2.) The capacities of soils as filters in eliminating organic and inorganic substances from liquids.

(3.) Their capacities as filters in eliminating the living low forms of vegetable life, both germs and adult organisms, from ground-water and ground-air.

The National Board responded to Professor Pumpelly's request, and through its assistance the indispensable coöperation of a chemical collaborator, Prof. George A. Smyth, was secured, and the expenses of the experiments have been defrayed. Thus far the work has been confined to the soils and some other substances as filters in eliminating living low vegetable organisms from air and fluids, and in this direction only a beginning has been made. Though it is proposed to conduct the experiments as far as possible in the ground itself upon undisturbed soils, it was necessary to study first in the laboratory the behavior, in their pure state, of the separate constituents of soils, such as, quartz, sand, clay, loam, marl, loess, etc. A report of the work up to the present time appears as a supplement to a late Bulletin of the National Board of Health.

The question of ground-air and ground-water, of subsoil ventilation and drainage, as affecting the health of the inhabitants of the surface of any given territory, and especially of made-land, is an immensely important one, and, notwithstanding the researches of Von Pettenkofer, Wagus, Buhl, Buchanan, and other trans-Atlantic investigators, the suggestions of Dr. Bowditch, and the conclusions of Professor Nichols in his paper on *The Composition of the Air of the Ground-Atmosphere*, contributed to the Sixth Report of the Massachusetts Board of Health, the amount of exact knowledge on the subject is still small, and the attention given to it of late years is by no means proportionate to its importance. The value of pure atmospheric surroundings above ground is steadily preached, and widely heeded, but how few are the thoughts given to the atmosphere permeating the ground beneath our feet, and underlying our houses,—an atmosphere responsive to every

change in composition and equilibrium of the outer air, to every variation in rain-fall, and fluctuation of tidal movements. The changes affecting and produced by this ground-air are of an especial consequence to a people dwelling, as we in the Northern United States do, in houses heated for the most part by furnaces, whose air-chambers are too often fed by air drawn from the surface of the soil, and passing into the interiors through loosely-jointed wooden conduits resting upon the ground beneath a basement floor; such dispositions being calculated to make the character of the ground-air of even more consequence to the inhabitants of a house than that of the external atmosphere. The results of the experiments still being conducted at Newport will therefore be awaited with interest, and we trust that definite and reliable conclusions may be reached, at least on some of the vital questions involved. Time and money will be well spent if answers can be given to two questions which are proposed for resolution: (1.) To what extent various soils are capable of eliminating the injurious properties contributed to ground-water by the more usual sources of pollution. (2.) To what extent different soils are able to filter the injurious properties out of the air passing through them. The experiments proposed embrace, therefore, in a word: (1.) The action of soils or of artificial filters as filters for air or gases generally. (2.) Their action as filters for water and other liquids.

From the results of preliminary experiments already completed, the reporter concludes that it appears very clearly that sand interposes absolutely no barrier between wells and the bacterial infection from cess-pools, cemeteries, etc., lying, even at great distances, in the lower wet stratum of sand. And it appears probable that a *dry gravel* or possibly a *dry very coarse sand* interposes no barrier to the free entrance into houses built upon them of these organisms which swarm in the ground-air around leaching cess-pools, leaky drains, etc., or in the filthy made-ground of cities; and that a house may be built on a thoroughly dry body of sand or gravel, and its cellar may be far above the level of the ground-water at all times, and it may yet be in danger of having the air of its rooms contaminated by the germs from leaching cess-pools and vaults, for, if the drift of the leaching be toward the cellar, very wet seasons may extend the polluted moisture to the cellar walls, whence, after evaporation, the germs will pass into the atmospheric circulation of the house.

A further consideration of these questions will involve the determination of the influence of size of grains and character of interstitial passage; the influence upon the germs of length of time occupied in transit; of temperature and pressure, and of presence or absence of nourishment in the liquid; the determination also of the presence or absence of germs at various depths in different soils.

The important question, now in controversy, regarding the ability of germs or bacteria, or other particulate matters to disentangle themselves from a liquid and become suspended in the atmosphere, which has

an important bearing upon the relation between ground-water and ground-air, will likewise be investigated.¹

THE ARRANGEMENTS FOR THE CENTENNIAL ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

THAT the advisability of departing from the usual routine, and substituting therefor a new and more varied order of exercises for the forthcoming meeting of the Massachusetts Medical Society, in which is celebrated its centennial anniversary, has been sufficiently appreciated by the committee of arrangements is abundantly evidenced by the programme already issued, a copy of which is given in this number of the JOURNAL.

As will be seen by reference to this programme, the time at the disposal of the Society has been so divided among the various subjects of interest as to enable members to include the whole or to select such as may be most to their individual taste, and the arrangements made include ample provision for the convenience of the visiting members, and for passage from point to point.

Members taking the special train on the Boston and Albany railroad from Boston on the morning of the first day will be met at the Brighton station by a marshal, who will conduct them to the Abattoir, where arrangement has been made for a thorough exhibition of the buildings, and of the processes of slaughtering and rendering therein conducted. From the Abattoir coaches will run to Cambridge, arriving in time for the centennial address by Dr. S. A. Green in Sanders Theatre.

Visitors who prefer devoting the morning to Cambridge, will find, on arriving at Harvard Square, a guide who will direct them to the various points of interest, including the Museum of Comparative Zoölogy, founded by Louis Agassiz, and now containing the most complete collections illustrating the subject to which it is devoted in this country; the Peabody Museum, filled with objects of interest to the student of American archaeology and ethnology, among them large collections of prehistoric crania, specimens of the implements of extinct American races, and models of their dwellings; and the Gymnasium, the gift to the university of Augustus Hemenway, probably the most complete in all its appointments of any building devoted to similar purposes in this country, and especially worthy of a visit, since it provides so thoroughly for that perfection of physical training, the value of which can be perhaps best appreciated by the physician.

Through the courtesy of the president and corporation, receiving the society as guests of the University, an unusual opportunity is afforded for visiting these institutions, and also the Botanic Gardens, the Library, recently enlarged, and Memorial Hall.

Following the luncheon in Memorial Hall, speedy

conveyance is provided to Rowe's Wharf, whence the steamer starts for a harbor excursion, including a landing and lunch at Nantasket, all of which, if the weather is propitious, cannot but prove enjoyable.

Through the courtesy of the trustees of the Art Museum, an especially favorable opportunity is afforded for visiting the museum in the evening; the reception tendered will be a purely informal one, the attendance of ladies is requested, and members who have participated in the harbor excursion will return in ample time to find their way to the museum by the hour appointed, and that the day may be "in fair proportions fully rounded out," the reception at the Art Museum will be followed by a reception at the house of the president of the Society, Dr. Henry W. Williams.

On the morning of the second day, in addition to the usual visits to the various hospitals and museums in the city, the Art Museum, Trinity Church, and the Massachusetts Institute of Technology will be open to the members of the Society and its invited guests, and there will be also, as an especial feature of the meeting, a historical exhibit in Horticultural Hall. This exhibit will include valuable medical books, many of them of great antiquity and rarity, old and new surgical instruments, and a display in materia medica and pharmacy, the basis of which is furnished by the cabinets of the medical department of Harvard University and of the Massachusetts College of Pharmacy.

The committee of arrangements of the Society is to be congratulated upon its programme, and should the members show as much zeal in availing themselves of the privileges offered as the committee has shown in providing them, the centennial anniversary can hardly fail to prove an occasion of equal profit and enjoyment.

TWO IMPORTANT PRIZES.

WE take much pleasure in calling the attention of our readers and of the general medical public to the announcement of the terms of two of the most important prizes offered in this country to the profession.

The Warren Prize Committee, which is composed of the physicians and surgeons of the Massachusetts General Hospital, *ex officio*, offer a premium of \$400, the largest medical prize offered in this country for general competition, for the best dissertation worthy of a prize upon Chronic Bright's Disease (parenchymatous and interstitial nephritis): The Nature and Mutual Relations of the Circulatory and Secretory Organs. This is a triennial prize, and will be awarded in 1883; none of the essays offered in 1880 were found worthy of an award.

The other prize to which we direct the attention of those whom it may concern is that offered by the Alumni Association of the College of Physicians and Surgeons of New York. The precise terms of the prize will be found in the committee's announcement in our advertising columns. The amount of the award is \$500; competition is restricted to graduates of the College of Physicians and Surgeons; the sub-

¹ The microscopic examinations involved in the studies hitherto undertaken have been for the most part made by Drs. Steinberg United States Army, and W. S. Bigelow, of Boston.

ject of the essay is at the option of each competitor, the committee only stipulating that the essay present sufficient experimental or clinical observation to form a useful contribution to medical literature.

MEDICAL NOTES.

— A young girl, a domestic in a family in Brookline, was attacked with small-pox during the past week. She undoubtedly contracted the disease from her brother, whose case was recently reported from Brighton.

— The annual report of the Zoölogical Society of Philadelphia gives the report of Professor Henry C. Chapman, the prosecutor, of the causes of the fifteen deaths that have taken place during the year. A *siren lacertina*, an ant-eater, a porcupine, and a kangaroo died without organic disease, a moor monkey and a howling monkey of phthisis, a howling monkey and a porcupine of heart disease, a cassowary of dysentery, a howling monkey of inflammation of the intestines, a phalanger of peritonitis, a sea lion of tuberculosis, a phalanger of tuberculosis, a kangaroo of hydatids of the liver, and a *menobranchius lateralis* of tania and peritonitis.

— Among the French Canadian colony at Adams, in the western part of this State, there is an epidemic of small-pox of a severe and malignant character. There have been forty cases and eight deaths up to the moment of writing. The first case occurred in a woman occupied as a rag-picker, and was not immediately recognized, there being a great deal of measles about the town.

WASHINGTON.

— At two of the tri-weekly meetings of the Anthropological Society, April 12th and 26th, Dr. Robert Fletcher, U. S. A., gave an interesting account of the most recent investigations into the origin and nature of *rondelles*, in a paper entitled *Prehistoric Trephining*. He began by referring to Prunières's researches in the dolmens of La Lozère, and his description of the cranial amulets as found there. The determination of the fact that these *rondelles* are connected with a surgical operation was brought out by the investigations of Broca, who cooperated with Prunières in this field of study. He showed that in the numerous skulls from which portions had been removed after death (*post-mortem trephining*) there was in every case a fragment of the hard ivory-like edge indicating *electrization during life*. He inferred that an operation must have been performed, probably to relieve disease, and that after death *rondelles* or amulets were taken from the skulls of those who had survived the operation, and were consequently possessed of peculiar qualities; these *rondelles*, like the apertures in the skulls, always presenting one edge that was smooth and polished as consequent upon a process of natural electrization, the well-defined beveled edges at the expense of the outer table and the sharp scratches showing where the tool had slipped, preclude

their consideration as the result of wounds or other injuries, but confirm the opinion that they were made by the aid of a special instrument; the appearance of the parts operated upon and of the adjacent sutures in the skulls found, all seem to indicate that the operation was performed at an early age. At this point an interesting question was raised as to how far race characteristics may influence the ability to resist the after effects of surgical operations. Then came an inquiry into the character of the instrument used; it was not the trephine as we know it, not a boring instrument, nor a flint saw, but probably a *scraper*, such as is used to-day in the South Sea Islands. Broca imitated exactly the condition of the parts by the use of a piece of broken glass, in four minutes, on a child's skull, and by the use of a piece of flint from Cro Magnon, in eight minutes, on the skull of a two months' old puppy. The summary of Broca's conclusions as to the purpose of this trephining was, in effect, that the operation was not performed for fracture or disease of the bone, but for simple or epileptic convulsions. Here the use in historic times of powdered bones in epilepsy, and of exorcisms on the person possessed with a devil, comes with peculiar aptness to our minds. Among the South Sea Islanders and Arabs of Algeria this operation to-day lets out the evil spirit.

The discussion of the extent and range of this singular custom formed an interesting part of the paper; researches in France seem so far to prove the most prolific, and no well-authenticated cases appear to have been discovered of earlier date than the polished stone age. Some twenty specimens exist where the outer table alone was removed by scraping. Dr. Fletcher refers to a little work, now excessively rare, published in Lyons, 1603, a treatise on epilepsy by Jehan Taxil, where the writer prescribes the scraping away of a portion of the outer table of the skull, sometimes also removing the inner table by the *exfoliative trephine*. In Germany a few examples have been met with, but Dr. Fletcher questions the probability of the skulls found in the Sedlee (Bohemia) ossuarium as belonging to this class. Russia, Italy, and Denmark have all furnished specimens for this interesting study. In America the Inca skull brought from Peru by Squier is our only evidence of prehistoric trephining, and this differs very materially from those described.

The paper concluded with a description of the method of trephining now used by the Kabyles of Algeria. The conclusions reached are that these perforated neolithic crania establish the existence of a custom of trephining, performed on both sexes, and generally at an early age, probably for disease of the brain, injury of the skull, epilepsy, or convulsions; that it was performed by scraping, possibly by a series of punctures; that fragments were removed, after death, from the trephined skull, each fragment to show a portion of the edge of the part operated on, and to be worn as an amulet in protecting the individual from the disease or injury for the relief of which the operation was performed.

This brief notice gives but an inadequate idea of the interest and value of a paper which it is hoped will soon be published, with the illustrations which accompany it.

Miscellany.

LETTER FROM VIENNA.

NOTES ON THE SURGICAL CONGRESS AT BERLIN.

MR. EDITOR,—Having recently attended the annual meeting of the Society of German Surgeons at Berlin, I will endeavor to call attention to a few of what seemed to be the most interesting and important subjects discussed, without attempting to give anything like an account of the very interesting four days' session.

Four papers relating to joint disease, and especially treating of their connection with tuberculosis, were read by Professors König and Hüter, and Drs. Mikulicz and Lönneburg. These papers led to a very interesting discussion on the recent observations on joint tuberculosis, and their effect on the methods of treatment. All agree that tuberculosis often does occur in cases of chronic inflammations, without (apparently) being present in other organs; that the patients so affected may afterwards die of general tuberculosis; and, finally, that there are cases of joint disease and caries where no tubercle can be found.

On the other hand, it seems to be still undecided at what stage of the disease tubercle first appears when present, and what weight its presence should have in forming a prognosis. It is observed that miliary tubercles may be present in the granulations of wounds after any long suppuration, as, for example, after complicated compound fractures, about sequestra, etc., and in these cases, as a rule, their presence does not render the prognosis especially unfavorable. In other cases, however, soon after their appearance in joints, tendon sheaths, or elsewhere, there follows, more or less rapidly, general infection and death. Thus the theory has been advanced that where the tuberculosis is local and the diseased tissues can be removed, it should be treated like any malignant growth, and excised as soon as possible, in the hope of checking its further progress.

In this hope Professor König has been operating, and he gives, as the result of his operations performed comparatively early in joint disease, a mortality from subsequent tuberculosis and other wasting diseases of twenty per cent. This is for a period of three and a half years; adding another year's results to this the mortality becomes twenty-five per cent., which is exactly the same result observed by Billroth in an enormous series of cases, covering a period of sixteen years.

The experiments on animals have been very unsatisfactory. Rabbits can be inoculated with tuberculous abscess membranes, and tuberculous disease of the joints produced, but other, indifferent substances have the same effect, and experiments have as yet shown but little.

Professor Tiersch, in summing up, remarked that much work had been done in this department of surgery of late, but that the subject was still in a confused, uncertain condition, many most important questions remaining to be answered through long and careful experiment and observation.

Dr. Mikulicz' paper on Iodoform as a Dressing in Joint and Bone Tuberculosis, was a short but interesting report of a series of thirty-six cases occurring in Professor Billroth's clinic, where this treatment was used. This series includes cases of disease of nearly all the large joints, the hip, knee, ankle, elbow, etc., and many chronic abscesses connected with diseased bone. This form of treatment was first proposed by Professor Mosetig-Moorhof, of Vienna, where the method has been quite generally adopted with the most satisfactory results. The use of iodoform as a dressing of unhealthy wounds has long prevailed, but now it is used somewhat differently, and much more thoroughly.

In joint diseases, caries, cold abscesses, etc., the diseased bone, fungous granulations, and other abnormal tissues are removed with knife or curette, the cavity thoroughly washed out with carbolic or thymol, and *entirely filled* with iodoform. A usual dressing of gauze and Mackintosh is then applied over all, and the part immobilized by means of an organic bandage. Unless the discharge soaks through the dressing it is not removed for one, two, or even three weeks.

The results obtained have been remarkably good, cases having been cured that would have been amputated under the older methods of treatment. The iodoform diminishes the secretion, prevents its decomposition, and prevents the formation of tubercle in the granulations or destroys them if they are already present. This specific local action on tuberculous granulations has been repeatedly observed, portions of the tissues being examined microscopically before and after its use. This may easily be observed where the granulations have not been first removed.

This observation of the action of iodoform upon tuberculous masses with which it is in contact led to the trial, in Professor Billroth's clinic, of injecting an ethereal solution of iodoform into joints in the early stages of fungous inflammation, and into other suspected tuberculous swellings. A solution of iodoform in ether, one part to five, is injected with a hypodermic syringe directly into the joint or tumor in several places, one or two syringes full being used. The ether is immediately absorbed, and the iodoform is left in substance in contact with the diseased tissues. This method has been too short a time in use to allow judgment to be passed on its merits, but in the large number of cases where it has very recently been tried, no inflammation or irritation has followed, and in some cases there has been a decided decrease in the swelling.

Iodoform is also used in all wounds connecting with the mouth, intestine, rectum, vagina, etc., in fact in all places where a disinfectant and antiseptic is needed where carbolic acid cannot conveniently be used. Thus, in recent tongue and partial larynx excisions, and in cancers of the mouth, iodoform has been used as a dressing, a piece of gauze plentifully sprinkled with the powder being packed against the wound. This completely checks all tendency to decomposition of the secretions, and no odor can be perceived, thus rendering unnecessary the hourly washing out with permanganate or carbolic solution.

Iodoform is apparently absorbed but little, and no toxic effects have been observed beyond a slight nausea in thirty-six to forty-eight hours in a few cases, even this symptom immediately disappearing.

Dr. Mikulicz described a series of experiments made

by him on the antiseptic action of iodoform. He found that when added to urine or solutions of animal matter it did not entirely prevent the formation of bacteria, but the solutions remained without smell or signs of decomposition. In blood the bacteria appeared in smaller numbers, and much more slowly, probably on account of the solution of a part of the iodoform present by the fatty matter contained in the blood.

Professor Gussenbauer spoke of nineteen cases in which he had resected the larger joints for disease, the after-treatment being with iodoform. In one case the whole calcaneus was removed, and the cavity filled with two hundred grammes of iodoform. The dressing was changed but once a month, and the wound healed. He considered his results in these cases much better than could have been expected with the usual treatment.¹

Professor Langenbeck spoke of amputation of the tongue, recommending the use of the thermo-cautery after the ligature of one or both linguals. The mouth is drained by large tubes inserted, through the wounds made by tying the linguals, by means of a large trocar.

Professor Langenbeck also showed a patient on whom he had operated some time previously for recurrent epithelioma of the forehead, removing a piece of the diseased skull and dura mater ten centimetres in diameter, together with a piece of pia mater and adherent brain substance two centimetres in diameter. The wound was healed with the exception of a small, healthy granulating surface in the centre of the cicatrix.

Dr. Martin, of Berlin, reported a series of twelve cases of cancer of the uterus where he had performed vaginal hysterectomy. In four of these cases he was not able to complete the operation on account of firm adhesions to neighboring parts. Of the other eight cases six recovered. Patients were shown who were operated upon in October and November last, where there was, as yet, no recurrence of the disease.

This operation has now been performed in Germany about fifty times, with a mortality of twenty-five per cent.

Dr. Gluck, of Berlin, showed two dogs in which he had removed bladder, prostate, and penis, both having made good recoveries. The ureters were brought out through the abdominal wall. He has performed this operation on dogs many times, always with success; when, however, he attempted to modify the operation by turning the ureters into the rectum the dogs always died from entrance of faeces into the peritoneal cavity.

Dr. Gluck also showed a hen, three centimetres of whose sciatic nerve had been excised, and a corresponding piece from another hen had been put in its place. This transplanted piece had been removed eighteen hours previously, and had been kept in a warm salt solution. At first there was total paralysis, but when exhibited, six weeks after the operation, she could use the leg almost as well as ever.

Dr. Mikulicz described a new osteo-plastic resection of the ankle, showing his patient. The operation is as follows: an incision is made through the sole of the foot from a little in front of the tuberosity of the scaphoid to a point just behind the tuberosity of the fifth metatarsal bone. From the ends of this incision others are made to the two malleoli, and their ends connected by a horizontal incision on the posterior

surface of the leg. All these incisions are quite to the bone. The foot is then disarticulated at the ankle-joint from behind, the astragalus and calcaneus freed from the soft parts on their dorsal surfaces, and removed by disarticulation at Chopart's joint. The malleoli and the posterior surfaces of the scaphoid and cuboid bones are then squarely sawed off, and the foot flexed until the sawed surfaces are opposed. Thus the foot is brought into a perfect equine position, the toes pointing in the same direction as the axis of the leg. In the present case the wound united by first intention, and when bony union was sufficiently good the patient was taught to walk, the toes bending at right angles to the metatarsals. Before the operation the patient had not walked for four years, and now, six months after the operation, he can walk without a cane, and works daily in the forests as a wood-chopper.

The three tumors of the pylorus recently removed by Professor Billroth were shown, and the cases reported.

Dr. Rydygier, of Kulm, also showed a pyloric tumor, removed a short time before with fatal result. In this case catgut sutures were used.

Dr. Madelung, of Bonn, read a very thorough paper on Extirpation and Uniting of Intestine. A large number of preparations from dogs were exhibited, showing the advantage of the Lambert over the Jobert (or invagination) method. His experiments also show that when the mesentery has been separated from too large a portion of the intestine, the nourishment through the intestinal wall is not sufficient, and the intestine becomes necrosed. Hence he advises that in ovariectomies, etc., where a considerable portion of the omentum is adherent, and must be tied, the corresponding portion of the intestine be excised, and the ends united. He has collected forty-nine cases of excision of portions of the intestine, with thirty-six recoveries. These operations were nearly all performed by German surgeons, and do not include the recent stomach extirpations or Koeberle's case, where over two metres of small intestine was successfully removed.

A discussion followed over the relative merits of silk and catgut for sutures in wounds of the intestinal tract. Silk was considered as much more suitable and safe by the majority of the speakers. S. J. MIXTER.

LETTER FROM LEIPSIK.

VETERINARY CLINIC OF LEIPSIK UNIVERSITY.

Among the numerous buildings belonging to the Medical Department of Leipzig University is one with a sign before it, stating that "Here are received, daily, animals of all sorts which are in need of medical attention." They can be brought to the Policlinic, or enter the hospital as patients.

A few inquiries of its enthusiastic director, Prof. Dr. Zürn, proves the institution to be not only interesting to horse doctors but to medical men in general. Its intention is not only to teach the diseases common to birds, dogs, horses, cattle, sheep, etc., but also to afford an opportunity to observe those which are transmitted from animals to men. Among those which are, perhaps, best illustrated are the diseases arising from the eating of infected meats.

From time to time trichinae are found, but the Germans claim to discover these chiefly among American hams.

¹ The cost of iod. form here is about five dollars per pound, much less, I think, than in America.

Tape worms are of very frequent occurrence in dogs, and specimens are shown, colored with carmine, and spread between two plates of glass, giving an excellent opportunity to observe their development and various segments up to maturity. The *echinococcus* is also preserved in a completeness in which one rarely has an opportunity to observe it in man, not only the cysts being shown, but also the intermediate forms, as they have been obtained from animals. There is also an opportunity from time to time to see several varieties of parasites, which are transmitted from animals to men.

The institution undertakes not only to treat animals, but also to make autopsies upon those that die in the hospital, and those that are brought from elsewhere for post-mortem examination.

Some pathological processes, as for instance that of arthritis, are beautifully illustrated by specimens in the museum, and from time to time interesting specimens are sent to the Pathological Institute of the Medical School for demonstration to the students.

Among the operations which are performed is that of tracheotomy, which is accomplished by the plunging of a sort of curved trochar into the trachea and the insertion of a tube. After the operation the animals almost universally do well, since the cases are not complicated by a diphtheritic process, as they usually are in man.

Inflammation of the leg of a horse is most effectively treated by inclosing the leg in a rubber, like the leg of a pair of trousers, and then flooding it continually from the water pipes, by fastening a hose filled with small holes around the upper part of the horse's leg. Thus the constant flow of water cools the leg efficiently, and the director says this plan accomplishes vastly more than ice-bags. The institution also provides conveniences for the propagation of vaccine lymph.

During the last year have been sent to the hospital for treatment 1655 animals, of which number 357 were received into the hospital, and 1298 were treated at the Polyclinic. The charges for care, treatment, and medicine for a horse amount to less than 75 cents daily, unless he has the colic and requires night attention, when the charges may reach \$1. The expense for a cow is between 40 cents and 50 cents daily, and for a dog from 20 cents to 25 cents per day.

In addition to the facilities for the treatment of animals are also those for medical investigations conducted upon animals, and the institution is utilized from time to time for such purposes.

PHAGEDENIC ULCERS TREATED BY INJECTIONS OF NITRATE OF SILVER.

A method of treatment practiced by Professor Karl Thiersch, of Leipzig, upon several cases of phagedenic ulcer, has produced excellent results. A solution of nitrate of silver one part to water 1000 parts is injected subcutaneously about the ulcer. The points of injection are separated from the edge of the ulcer, and from each other about three eighths of an inch, and perhaps a drachm of the solution is injected at each point. The ordinary subcutaneous needle is used with a syringe holding about an ounce. One case was that of a woman with a phagedenic bubo of the groin. The ulcer was about three and a half inches wide by about five inches long. The edges were indurated, and the integument was undermined by the ulcerative process. The ulcer had previously been curetted and treated

with various dressings, but without success, since the ulcerations continually extended. The patient was chloroformed, and the injections were made all about the edges of the ulcer, at a distance of one centimetre. Slight inflammation followed. Soon the edges of the ulcer became adherent to the parts below, and the process of cicatrization began. The injections were several times repeated. Two months later the patient was shown in the clinic with the ulcerated surface fully healed.

A second case was that of a man who had lived a good many years in India. While there several fistulous tracts developed themselves about the folds of the nates. The disease was supposed to be syphilis and the patient was treated specifically. In India, London, and Germany the case had been treated for several years as one of syphilis, and everywhere the patient was given iodide of potash. There was no improvement, however, but the fistulae extended until the folds of the nates and the tissues about the rectum, and the inner and posterior surfaces of the thighs were involved in a cicatrix, filled with fistulous tracts. Motion of the legs had become difficult and it was a question if the hip-joints were not becoming involved in the disease. When the patient came under Professor Thiersch's care the iodide of potash was discontinued. Injections of the solution of nitrate of silver were made about each of the fistulous openings, and into some of the longer fistulae was injected a solution of nitrate of silver one part to ten parts of water, but the injections about the fistulae was one to one thousand parts, as in the other cases. During the months succeeding, the injections about the fistulae were repeated three times. After each injection the patient's temperature rose to 39.6° C., and the patient lost all appetite, but after two days the temperature became normal again. Six weeks after the first injection the patient was shown vastly improved. His appetite, which had been very poor, became good. He could move his legs very much better. The fistulae had many of them closed, and the local improvement was very marked.

Appearances seem to indicate a speedy and complete recovery. Both of these cases are especially interesting from the obstinacy with which they have resisted other treatment, and the rapidity with which their condition has been changed by the injections of nitrate of silver.

FRACTURED PATELLA TREATED BY MALGAIGN'S HOOKS.

Two cases of fractured patellae have recently been treated by Professor Thiersch by the application of Malgaign's hooks. In one case there was a large effusion into the knee-joint. The joint was punctured with a common trochar under antiseptic precautions, and the fluid, which was partly clotted blood and partly serum, was removed. Three weeks later all swelling and inflammation had disappeared. The fragments of the patella were separated from each other about three fourths of an inch. About this time Malgaign's hooks were applied and the fragments were drawn into close apposition. The hooks were allowed to remain in place four weeks. During this time there was no inflammation, and no pain except a little the first two days. On removal of the hooks the bones separated from each other about one fourth inch, and there was found to be no bony union, but the fragments were separately movable. A second case of fractured patella, in which

there was slight effusion, was also treated by the insertion of hooks, which remained in place four weeks. On their removal there was no bony union.

If bony union of fragments of a patella is to be secured by the application of apparatus it would seem that it would be secured by the use of Malgaign's hooks, but neither of these cases showed more successful results than those treated in the Massachusetts General Hospital by the attachment of strips of adhesive plaster above and below the knee, drawing the fragments of the patella together. The common idea, however, that hooks are barbarous, would not seem to be borne out by these cases, since in each case the patients said the pain was but slight for from one to two days, and in neither case was there inflammation or suppuration.

SPINA BIFIDA TREATED BY IODINE INJECTION.

A child nine months old was shown by Professor Thiersch, that had been treated and apparently cured of a tumor such as commonly accompanies spina bifida. It was born with a tumor about three inches in diameter, located in the lumbar region. This was treated with injections of iodide, the formula being iodide of potash, two parts; iodine, one part; and water sixty parts. The first injection was made when the child was six weeks old, fifteen minims being injected. The injection was repeated twice each week, until nine injections had been given. Very little disturbance followed the injections. Seven months later the child was shown, and the tumor had contracted to one half its original size. The mass which remained was tough and unyielding, and seemed to be composed wholly of cicatricial tissue. The child was very active, seemed perfectly healthy, and all its movements were normal.

DUDLEY P. ALLEN, M. D.

INTRA-UTERINE POST-PARTUM INJECTIONS.

MR. EDITOR.—I have read with much interest the article by Dr. Edward J. Forster in the *JOURNAL* of May 12th, on intra-uterine injections after confinement, but would suggest, however, that the necessity of this procedure would less often occur if it was customary to express the blood clots from the uterus the first two or three days after delivery, as is practiced in Vienna by Dr. Pawlik, Prof. Carl Braun's assistant.

The Credé method for the expression of the placenta is now universally used, and I think that its adoption for the expression of blood clots after delivery would remove in a great measure one of the commonest causes of septicæmia. HAROLD WILLIAMS, M. D.

—The seventy-fourth annual commencement of the College of Physicians and Surgeons was held on the evening of the 13th of May at Steinway Hall, when the degree of doctor of medicine was conferred upon one hundred and twenty graduates. The five hundred dollar Cartwright prize of the Alumni Association was awarded to the essay of Dr. Henry, of Philadelphia, on The Hematoeycometer in the Examination of Blood and Milk Globules, and the Joseph Mather prize of one hundred dollars to that of Dr. Etienne Evetsky, of New York, on The Physiological and Therapeutic Effects of the Scabæ Cornutum. There was no valedictory by a member of the class, and the address to the graduates was delivered by the Rev. Wm. M. Taylor, D. D.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 7, 1881, TO MAY 20, 1881.

HARVARD, V., captain and assistant surgeon. Relieved from duty at Presidio del Norte, to proceed to Fort Concho, Texas, await there the arrival of Captain Livermore, corps of engineers, and report to him by letter. S. O. 63, Department of Texas, April 28, 1881.

MAUS, L. M., captain and assistant surgeon. Relieved from duty in Department of Dakota, to proceed to Washington, D. C., and report in person to the surgeon-general. S. O. 104, C. S., A. G. O.

SHANNON, W. C., captain and assistant surgeon. Now awaiting orders in New York city, to report in person to commanding general, Department of the Platte, for assignment to duty. S. O. 104, C. S., A. G. O.

SHUFELDT, R. W., first lieutenant and assistant surgeon. Relieved from duty in Department of the Platte, to proceed to Washington, D. C., and report in person to the surgeon-general. S. O. 104, C. S., A. G. O.

CUNNINGHAM, T. A., first lieutenant and assistant surgeon. Now awaiting orders at Danville, Va., to report to commanding general, Department of the South, for assignment to duty. S. O. 104, C. S., A. G. O.

PERLEY, H. O., first lieutenant and assistant surgeon. Relieved from duty in Department of Dakota, to proceed to Detroit, Mich., and report, on arrival, by letter to the surgeon-general. S. O. 104, C. S., A. G. O.

COCHRAN, J. J., first lieutenant and assistant surgeon. Relieved from duty at Fort Lewis, Colo., and assigned to duty at Fort Garland, Colo. S. O. 86, C. S., Department of the Missouri.

BUSHNELL, G. E., first lieutenant and assistant surgeon. To proceed to Fort Yates, D. T., and report to the commanding officer of that post for duty. S. O. 81, Department of Dakota, May 6, 1881.

BIRMINGHAM, H. P., first lieutenant and assistant surgeon. To proceed to Fort Riley, Kans., and report to Major E. B. Beaumont, Fourth Cavalry, for duty with troops about to take the field in Colorado. S. O. 90, Department of the Missouri, May 7, 1881.

KEENEY, C. C., lieutenant-colonel and surgeon. When relieved by Surgeon Bailly to await orders at San Francisco, Cal. S. O. 112, C. S., A. G. O.

BAILLY, E. I., lieutenant-colonel and surgeon. To report in person to the commanding general, Military Division of the Pacific and Department of California, for assignment to duty as medical director of the Department of California, relieving Surgeon Keeney. S. O. 112, A. G. O., May 16, 1881.

MCPARLIN, T. A., lieutenant-colonel and assistant medical purveyor. When relieved by Surgeon Clements to proceed to San Francisco, Cal., and assume charge of the medical purveying depot in that city, relieving Captain Henry Johnson, medical storekeeper. S. O. 112, C. S., A. G. O.

TREMAINE, W. S., captain and assistant surgeon. His leave of absence on account of sickness, granted him January 20, 1881, from this office, further extended six months on surgeon's certificate of disability. S. O. 112, A. G. O., May 16, 1881.

PARZKI, J. H., captain and assistant surgeon. When relieved by Assistant Surgeon Cunningham to proceed to St. Augustine, Fla., and relieve Assistant Surgeon Gardner from duty as post surgeon. S. O. 45, C. S., Department of the South.

WORTHINGTON, J. C., captain and assistant surgeon. Assigned to duty at Fort Wayne, Mich. S. O. 86, Department of the East, May 14, 1881.

CLEMENTS, B. A., major and surgeon. To be relieved from duty at Willer's Point, N. J., June 1, 1881, to proceed to New York city, and assume the duties of attending surgeon there, relieving Lieutenant-Colonel McParlin. S. O. 112, C. S., A. G. O.

BILLINGS, J. S., major and surgeon. To proceed to London, England, as a delegate to the International Medical Congress, to meet there August next. He will also visit, on public service, such points in Holland, Belgium, Germany, and elsewhere as may be deemed necessary by the surgeon-general of the army. S. O. 110, A. G. O., May 13, 1881.

CUNNINGHAM, T. A., first lieutenant and assistant surgeon. Assigned to duty at Jackson Barracks, La. S. O. 45, Department of the South, May 14, 1881.

BRECHEMIN, L., first lieutenant and assistant surgeon. Relieved from duty at Fort Meade, D. T., and assigned to duty at Fort Yates, D. T. S. O. 81, Department of Dakota, May 10, 1881.

BENHAM, R. B., first lieutenant and assistant surgeon. His seven days' leave extended twenty-three days. S. O. 81, C. S., Department of Dakota.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 14, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	822	350	30.41	15.70	8.15	6.69	3.54
Philadelphia.....	846,984	380	123	23.42	5.26	2.90	5.00	2.37
Brooklyn.....	566,689	282	114	26.60	10.28	11.35	7.80	1.77
Chicago.....	503,304	361	230	33.52	8.03	4.13	1.94	11.08
Boston.....	362,535	170	51	17.06	14.70	10.00	—	1.80
St. Louis.....	350,522	127	54	25.20	7.09	2.36	3.15	3.15
Baltimore.....	332,190	184	72	17.93	5.98	4.89	3.26	2.72
Cincinnati.....	255,708	114	36	20.18	10.53	1.75	1.75	7.89
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	82	32	12.20	14.63	1.22	—	4.88
Pittsburgh.....	156,381	100	—	32.00	11.00	3.00	12.00	4.00
Buffalo.....	155,137	57	20	19.30	12.28	3.51	10.53	1.75
Milwaukee.....	115,578	60	36	26.67	10.00	1.67	11.67	5.00
Providence.....	104,855	49	13	18.37	8.16	8.16	4.04	—
New Haven.....	62,882	27	5	18.52	22.22	—	—	—
Charleston.....	49,999	49	18	16.33	4.08	—	12.24	4.08
Nashville.....	43,461	20	5	5.00	5.00	5.00	—	—
Lowell.....	59,485	27	13	14.81	11.11	—	—	3.70
Worcester.....	58,295	20	14	25.00	15.00	—	5.00	—
Cambridge.....	52,740	18	5	22.22	5.56	22.22	—	—
Fall River.....	49,006	16	6	18.75	—	12.50	—	—
Lawrence.....	39,178	15	7	33.33	6.67	—	—	—
Lynn.....	38,284	14	2	7.14	7.14	—	7.14	—
Springfield.....	33,340	17	6	5.88	23.53	—	—	—
Salem.....	27,598	16	4	6.25	31.25	6.25	—	—
New Bedford.....	26,875	13	4	7.70	—	—	—	—
Somerville.....	24,985	4	0	—	—	—	—	—
Holyoke.....	21,851	12	3	25.00	8.33	8.33	—	—
Chelsea.....	21,785	6	3	33.33	16.67	16.67	—	—
Taunton.....	21,213	10	—	20.00	10.00	10.00	10.00	—
Gloucester.....	19,329	3	2	66.67	—	66.67	—	—
Haverhill.....	18,475	5	0	—	20.00	—	—	—
Newton.....	16,995	5	2	40.00	—	20.00	—	—
Newburyport.....	13,537	3	0	—	—	—	—	—
Fitchburg.....	12,405	6	2	16.67	16.67	—	—	—
Twenty-seven Massachusetts towns.	217,062	79	19	18.98	13.92	2.53	3.78	3.78

Deaths reported 3173 (no report from New Orleans); 1251 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 796, consumption 404, lung diseases 347, diphtheria and croup 183, scarlet fever 154, diarrhoeal diseases 122, cerebro-spinal meningitis 88, small-pox 71, measles 47, typhoid fever 42, malarial fevers 27, erysipelas 24, whooping-cough 14, puerperal fever 14, typhus fever ten. From *cerebro-spinal meningitis*, Chicago 25, New York 22, St. Louis 11, Pittsburgh nine, Cincinnati five, Worcester three, Philadelphia, Milwaukee, and Lawrence two, Baltimore, District of Columbia, Buffalo, Springfield, New Bedford, Fitchburg, and Nantucket one. From *small-pox*, Philadelphia 35, New York 19, Chicago 11, Cincinnati two, Brooklyn, District of Columbia, Pittsburgh, and New Haven one. From *measles*, New York 15, Chicago and Baltimore nine, Brooklyn, Boston, and St. Louis three, Winchester two, Milwaukee, Providence, and Lowell one. From *typhoid fever*, New York 10, Philadelphia six, Brooklyn and Chicago four, Pittsburgh three, Boston, Cincinnati, Lawrence, and Holyoke two, Baltimore, District of Columbia, Buffalo, Milwaukee, Lowell, Malden, and Amherst one. From *malarial fevers*, New York 13, Brooklyn four, St. Louis three, Philadelphia, Chicago, and District of Columbia two, Baltimore one. From *erysipelas*, New York six, Philadelphia four, Boston three, Brooklyn, St. Louis, and Brockton two, Chicago, Cincinnati, Milwaukee, New Haven, and Lowell one. From *whooping-cough*, Chicago four, New York three, Brooklyn and Providence two, Baltimore, Lawrence, and Chelsea one. From *puerperal fever*, Chicago and New Haven three, New York and St. Louis two, Boston, Worcester, Fall River, and Newton one. From *typhus fever*, New York nine, Philadelphia one. The mortality from cerebro-spinal meningitis was 88 against 81 for the previous week.

Thirteen cases of small-pox were reported in Brooklyn, 23 in Chicago, one in Boston, one in Cincinnati, three in Pittsburgh, one in New Haven, one in Newburyport; diphtheria 24, scarlet fever 13, in Boston; scarlet fever 14, diphtheria 12, in Milwan-

kee; measles 26, röteln four, scarlet fever five, diphtheria two in Providence.

In 46 cities and towns of Massachusetts, with a population of 1,134,973 (population of the State 1,783,086), the total death-rate for the week was 21.09, against 20.99 and 22.39 for the previous two weeks.

For the week ending April 23d, in 149 German cities and towns, with an estimated population of 7,878,558, the death-rate was 27.7. Deaths reported 4198; under five 1837: pulmonary consumption 641, acute diseases of the respiratory organs 498, diphtheria and croup 166, diarrhoeal diseases 132, typhoid fever 65, scarlet fever 61, whooping-cough 51, puerperal fever 32, measles and röteln 27, typhus fever (Königsberg two, Stettin, Elbing, Thorn three, Tilsit, Bromberg, Berlin two, Frankfurt 12, small-pox (Benthen one, Munich, Berlin two, Aachen two, Essen) seven. The death-rates ranged from 15.3 in Lübeck to 41.2 in Münster; Königsberg 39.8; Breslau 32.7; Munich 40.9; Dresden 24.6; Berlin 26.7; Leipzig 26.5; Hamburg 26.4; Hanover 18.7; Bremen 26.4; Cologne 22.6; Frankfurt 21.3; Strasburg 25.9.

For the week ending April 30th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 21.2. Deaths reported 3089: acute diseases of the respiratory organs (London) 328, measles 83, whooping-cough 83, small-pox (London 70) 71, scarlet fever 60, fever 35, diarrhoea 32, diphtheria 11. The death-rates ranged from 12.8 in Leicester to 26.9 in Salford; Leeds 16.8; Birmingham 17.1; Bristol 21.6; London 21.8; Sheffield 22.5; Manchester 23.5; Liverpool 25.1. In Edinburgh 20.1; Glasgow 21.7; Dublin 30.7.

In the 21 chief towns in Switzerland, for the week ending April 30th, population 479,934, there were 38 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 18, diphtheria and croup four, whooping-cough three, measles two, typhoid fever two, scarlet fever two.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in inches.
May, 1881.																			
Sun., 8	30.146	51	73	43	80	60	92	77	SW	E	E	7	10	10	O	F	O	—	—
Mon., 9	30.092	62	76	43	92	38	64	65	SW	SW	SW	1	10	12	O	C	F	—	—
Tues., 10	30.091	59	90	47	66	58	87	70	SW	NE	NE	1	8	4	O	F	F	—	—
Wed., 11	29.947	70	90	49	91	60	55	69	Calm.	Calm.	SW	0	0	12	G	F	F	—	—
Thurs., 12	30.036	54	80	47	61	87	96	81	NW	E	E	7	8	4	C	G	G	—	—
Fri., 13	30.025	57	64	49	83	78	85	82	Calm.	E	Calm.	0	8	0	O	F	C	—	—
Sat., 14	29.961	58	69	50	72	57	97	75	NW	E	S	1	9	6	C	F	O	—	—
Week.	30.043	58	90	43				74										13.25	.09

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

CENTENNIAL ANNIVERSARY, MASSACHUSETTS MEDICAL SOCIETY.—*Programme for Tuesday, June 7, 1881.* Nine o'clock A. M.: The following departments of Harvard University at Cambridge will be open, and the officers in charge of them will be glad to receive the members of the Society between nine and eleven o'clock A. M.: Museum of Comparative Zoölogy, Peabody Museum of American Archaeology and Ethnology, Botanic Garden and Herbarium, Library, Gymnasium. Horse-cars leave Bowdoin Square, Boston, for Cambridge, every five minutes. The time required for the ride is thirty minutes. On arrival at Harvard Square, Cambridge, a police officer will be in waiting to direct members to such of the above points of interest as they may desire to visit. The Abattoir at Brighton will be open at nine o'clock, and the manager will be happy to explain, and practically demonstrate, the business carried on in that establishment. A special train will leave the Boston and Albany depot, corner of Beach and Albany Streets, for Brighton, at 8.45 o'clock A. M. Fare, fifteen cents. Coaches will leave the Abattoir at 10.25 o'clock, precisely, reaching Cambridge in time for the Centennial Address. Fare, fifteen cents. Eleven o'clock A. M., precisely: the Centennial Address, by Samuel A. Green, M. D., of Boston, in Sanders Theatre, Cambridge, Mass. Twelve o'clock, M.: The President and Fellows of Harvard College invite the members to take luncheon with them in Memorial Hall at twelve M. 12.45 o'clock P. M.: Horse-cars will leave Memorial Hall for Bowdoin Square, Boston, whence conveyances, free, will carry members of the Society to Rowe's Wharf, 340 Atlantic Avenue, Boston. Two o'clock P. M.: By invitation of the profession of Boston and vicinity, members of the Society will embark for an excursion in the harbor on the steamer John A. Andrew, leaving Rowe's Wharf, 340 Atlantic Avenue, at the above hour precisely. The steamer will reach Rowe's Wharf on its return at 6.30 P. M. 7.30 o'clock P. M.: The trustees of the Museum of Fine Arts, corner of Huntington Avenue and Dartmouth Street, will receive the members of the Society, with ladies, from 7.30 to nine o'clock P. M. 8.30 o'clock P. M.: The President of the Society, Dr. Henry W. Williams, will receive the members at his house, 15 Arlington Street, from 8.30 to 10.30 o'clock P. M.—*Programme for Wednesday, June 8, 1881.* Nine o'clock A. M.: There will be a comparative and historical exhibition of instruments, apparatus, books, and medicines, in the lower Horticultural Hall, 100 Tremont Street, Boston. From nine to eleven o'clock A. M. there will be operations and surgical visits at the Massachusetts General Hospital, in Blossom Street; at the Boston City Hospital, on Harrison Avenue; at the Carney Hospital, in Old Harbor Street, South Boston; and at the Children's Hospital, 1583 Washington Street. During the same hours, through the courtesy of the officers in charge, the Museum of Fine Arts, the Institute of Technology, the Museum of the Natural History Society, and Trinity Church, on Boylston Street; also the Warren Museum, at the Medical College, North Grove Street, and the Warren Museum of Natural History, 92 Chestnut Street, will be open to members of the Society. Eleven o'clock A. M.: The One Hundredth Annual Meeting of the Society will be held in Horticultural Hall, Boston. Order of proceedings: (1.) Reports and names of new and of deceased Fellows. (2.) Reports of committees. (3.) Introduction of delegates. Twelve o'clock M., precisely, the annual discourse, by J. Collins Warren, M. D., of Boston. The hall doors will be closed at twelve

o'clock, precisely, and will remain closed during the delivery of the discourse. One o'clock P. M.: The annual dinner will be served in the Music Hall. Fellows will enter by the Tremont Street entrance only, being called in order of seniority in Horticultural (upper) Hall, whence the procession will start.

JAMES C. WHITE, M. D., *Anniversary Chairman.*

No person will be admitted to the dinner without a ticket. The dinner ticket (not transferable) may be obtained on steamer John A. Andrew, on Tuesday, or in Lower Horticultural Hall, from nine to twelve o'clock, on Wednesday, on presentation of evidence that the dues for the current year have been paid.

NORFOLK DISTRICT MEDICAL SOCIETY.—At the annual meeting of the Norfolk District Medical Society, held on the 10th inst., the following officers were elected for the ensuing year: President, W. C. B. Fifield, M. D., Dorchester. Vice-President, T. H. Dearing, M. D., Braintree. Secretary, Reporter, and Librarian, Walter Channing, M. D., Brookline. Treasurer, N. Call, M. D., Roxbury. Commissioner of Trials, J. Steadman, M. D., Jamaica Plain. Censors, Drs. E. T. Williams, Roxbury, W. P. Bolles, Dorchester, G. K. Sabine, Brookline, O. F. Rodgers, Dorchester, W. H. Campbell, Roxbury. Councilors, Drs. S. E. Stone, Walpole, A. R. Holmes, Canton, W. S. Everett, Hyde Park, J. H. Gilbert, Quincy, J. W. Chase, Dedham, G. W. Fay, East Weymouth, U. O. B. Wingate, Wellesley, J. H. Streeter, Roxbury, H. G. Morse, Roxbury, J. S. Flint, Roxbury, R. Amory, Brookline, J. A. Winkler, Jamaica Plain, B. Cushing, Dorchester, G. A. Bragdon, Dorchester, J. S. Greene, Dorchester. Nominating Councilor, J. S. Flint, M. D.

DR. CALER C. FIELD died at his home in Leominster, May 6th, of pneumonia. In the death of Dr. Field the profession have lost an earnest, thorough, and conscientious member, and the community in which he lived will ever cherish his memory as that of a much honored and beloved physician. The funeral obsequies were observed at his residence May 9th, with impressive ceremonies. Members of the Worcester North District Medical Society, and others of the State Society, were in attendance.

SUFFOLK DISTRICT MEDICAL SOCIETY.—There will be a regular meeting at the hall, 19 Boylston Place, Saturday, May 28th, at seven and a half o'clock. The following papers will be presented: Dr. H. I. Bowditch, The Medical Education of Women: The Present Hostile Attitude of Harvard University and the Massachusetts Medical Society. What Remedy therefore can be Devised? Dr. B. Joy Jeffries, The Community's Control of Defective Vision. Supper at nine o'clock.

H. C. HAVEN, M. D., *Secretary.*

The Censors of the Suffolk District Medical Society will meet for examination of candidates for the Massachusetts Medical Society at 19 Boylston Place, June 2d, at three P. M.

BOOKS AND PAMPHLETS RECEIVED.—Medical Electricity; A Practical Treatise on the Application of Electricity to Medicine and Surgery. By Roberts Bartholow, M. D. With Ninety-Six Illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1881. (A. Williams & Co.)

Original Articles.

HYDROBROMIC ACID: ITS ACTION ON THE CIRCULATORY AND NERVOUS SYSTEMS.

BY EDWARD T. REICHERT, M. D., NEWARK, N. J.

Late Demonstrator of Experimental Therapeutics and Instructor in Experimental Physiology in Post-Graduate Course in Medicine, University of Pennsylvania.

THE several papers which have been recorded on the therapeutical use of hydrobromic acid indicate that this new drug possesses sufficient promise to call for a close study of its physiological properties, and especially so because of the asserted similarity of its physiological action and that of the alkaline bromides, together with the noticeable absence of the disagreeable digestive derangements which are known to so often follow the extended use of the alkaline salts. In a review of these papers it is found that this agent was first employed by Wade, who states that it fully represents the action of bromine on the system, and that it modifies the action of both quinine and morphia on the brain, the same as the potassium bromide. These statements have been corroborated by other observers, some of whom have further claimed that its effects are more intense, but less permanent, than it lacks the action of the potassium bromide on the heart and muscular systems, that it has been used with marked success in the treatment of tinnitus aurium, supposed to be due to labyrinthine congestion, that it is a tonic to the digestive organs, and that it readily becomes decomposed in the stomach.¹

This is the sum of the knowledge we possess of the action of this acid on the economy, and it certainly is sufficient to indicate, if the above statements be true, that we have a valuable addition to our materia medica. In order, however, to conclusively determine whether the acid possesses the peculiar physiological properties of the alkaline bromides, the following investigation was made, and since the recognized therapeutical properties of the alkaline salts are conceded to depend upon their peculiar actions on the circulatory and nervous systems, my researches were confined to this special study. One difficulty, however, to contend with in a comparison of the actions of this acid and alkaline bromides is that no thorough manometrical study of the action of the latter has yet been made, and even the papers so far published present conclusions which are at variance on many points.

In my experiments on the *circulation* it was found that the *arterial pressure* was affected in one of three ways, evidently depending upon the dose given. Thus, after very small doses it was wholly unaffected or a slight rise, which was almost inappreciable, occurred. After larger doses the pressure generally fell a little (making a tracing similar to that produced by stimulating the cardiac inhibitory nerves), and was followed by a return to or above the normal, and if the arterial tension was increased above the normal, it frequently remained so for six, eight, or ten minutes. In experiments when the pressure did not primarily fall, it increased from the first, and usually equaled, when it reached its greatest height, about one sixth of the normal pressure. After very large or toxic doses, the

blood pressure fell from the first, and continued to sink until it reached zero. In animals with cut vagi nerves, doses which would cause a primary fall of pressure in normal animals would induce a rise, and it was also noticeable that the rise of pressure, as a rule, was more marked in animals thus operated upon. This clearly indicates that the drug exerts some action on the pressure through the vagi nerves. After isolation of the heart from any centric nervous influence by severing the vagi nerves and cervical portion of the spinal cord, essentially the same results followed as occurred in normal animals. This, therefore, shows that outside of the action on the vagi nerves, as just referred to, these changes in the arterial tension must be dependent upon the action of the acid on either or both the heart and vaso-motor peripheries. In order to determine if the drug had any effect on the latter, microscopical examinations of the web of the frog's foot were made, and it was found that the local application of the diluted acid caused a distinct capillary contraction. A marked pallor was noticed after the local application of the acid to muscular tissue, but just how far this was due to capillary contraction or to probable myosic coagulation is unknown; the same pallor was also noticeable in some instances about the lips and eyes of animals under the influence of toxic doses. I think, therefore, from the above results, that it is fair to conclude that the peripheral vaso-motor mechanism is stimulated.

When the drug is applied locally to the heart the cardiac power becomes at once diminished, and the pulsations are soon arrested.

It is evident from the above results that the rise of pressure was due to a stimulation of the peripheral vaso-motor mechanism, and the fall to a direct depressant action on the heart muscle. The reason why a rise of pressure occurred during a consentaneous depression of the cardiac power was probably and simply because of a comparatively more intense action on the vaso-motor peripheries, the diminished capillary lumen being sufficient to more than compensate for the diminished power of the heart.

The *pulse-rate* was not appreciably affected by very small doses. Larger doses sometimes caused a momentary slowing, with a diminution of the arterial pressure (making a tracing similar to that caused by inhibiting the heart), and after the subsidence of this inhibition the pulse, to a various extent, recovered, not, however, reaching the normal, and it then became slowly diminished; at other times a momentary rise occurred (accompanied by a consentaneous diminution of the arterial pressure, but differing in character from that above noted) which equaled about one tenth to one fifth of the normal in excess, and this rise was followed by a diminution equaling about one third to one half of the normal. The increase of the pulse-rate was marked by pulse-curves, which were lower and less abrupt in their line of ascent than those of the normal, and the diminished pulse-rate by curves which were higher and more abrupt in ascent. After large and repeated doses (thirty drops in dogs) the pulse-rate fell below, but remained near, the normal until after the second, third, or fourth doses, and it then either rapidly fell to zero, or rose very rapidly (in one instance from thirty-three to seventy-eight pulsations in forty seconds); or, in a third lot of cases it rose gradually to the normal (taking in one instance six minutes to do so), and sometimes continued to in-

¹ Wade (Peninsula Journal of Medicine, February, 1875, p. 62); Fothergill (British Medical Journal, 1876, i. p. 42); Forrest (ibid., 1877, p. 398); Campbell (ibid., p. 480); Fry (ibid., p. 480); Woakes (ibid., p. 773); Hamilton (Philadelphia Medical Times, 1877, p. 31); H. C. Woods (Therapeutics, 1879, p. 333); Browne (British Medical Journal, 1877, ii. p. 13).

crease considerably. If the doses are still repeated in cases like the last two the pulse-rate may rise at every dose, being followed by a diminution, and finally, a last dose will cause it to rise to a considerable height, near which point it may remain a few seconds, when the heart fails and the pulsations become slowed and gradually diminish until death ensues; or, instead of the final injection causing such a very marked rise, it may so affect the heart that its movements are at once arrested. In these several instances the increased pulse-rate was always accompanied by a diminution of the blood pressure, deep and labored respirations, and often struggles, and the pulse-curves were equal to only about from one tenth to one eighth of the normal size.

After section of the pneumogastric nerves, no change from the above results occurred, except that the very transient inhibition of the heart immediately following an intravenous injection was not present. The same may also be said of the results of experiments made on animals with cut cervical spinal cords and pneumogastric nerves, by which the heart was cut off from impulses originating in or reflected from the nervous centres. It is obvious, then, that with the exception just made, the changes in the pulse produced by hydrobromic acid are due to a direct action on the heart, and that this action is one of paralysis is evident from the fact that the increased pulse-rate was accompanied by a diminished size of the pulse-curves and diminished arterial pressure (notwithstanding an attendant condition of capillary constriction). It is obvious, then, that the increased pulse-rate was not an evidence of cardiac stimulation, but of depression, and was no doubt, in a measure, but a compensating action of the heart in endeavoring to overcome by increased frequency of pulsation, the results of its diminished power. It has been further found that the heart is less irritable after death than normally, and that the exposed heart of the frog was paralyzed by a direct application of the diluted acid.

Upon the nervous system hydrobromic acid seems to act as a universal depressant, producing in frogs, in toxic doses, a diminution and final extinction of all reflex and volitional phenomena, and the early induction of narcotism. In dogs, cats, and rabbits the action on the brain is comparatively feeble, while the same is equally as true as regards the action on reflex and voluntary movements, although not so marked. In frogs reflex activity is slowly and gradually diminished until a certain period is reached, varying from seven to twenty minutes, when it suddenly and completely disappears, at which time neither mechanical stimuli, nor the strongest current obtained from a Léclanché cell and a Du Bois-Reymond induction coil would induce the least response. It was also noticeable that failure of reflex movements occurred first in the posterior extremities, and that after stimulus, when applied to them, would elicit no reflex response whatever, response would still be called forth by stimulus applied to the anterior extremities; and in several instances, not only were these movements present in the anterior extremities when they were stimulated, but also in the posterior, indicating that the cause of failure of reflex movements in the posterior extremities when stimulus was applied to them was on account of a paresis of either the sensory nerves or sensory portions of the cord. For the motor nerves and motor portions of the cord must be capable of transmitting impulses else reflex phenomena would

not have occurred in the posterior extremities in those cases where the anterior extremities alone were irritated. On account of the interest centred in these experiments, the results of one of them is given in detail:—

Experiment. Frog; normal. 1.53 p. m. Reflex action occurred in one and a half seconds after immersion of posterior extremities in a two-per-cent. solution of sulphuric acid; the frog's legs were then completely washed of the acid solution by a gentle stream of water. 1.55. Ten minims of hydrobromic acid, properly diluted, were injected into the posterior lymph-sac. 2.00. Reflex action, tested as above, occurred in two seconds, the frog's legs being washed as before. 2.05. No reflex movements occurred even after a minute's immersion of the posterior extremities; reflex movements occurred in the anterior extremities in three seconds after being dipped in the acidulated solution, and were accompanied by feeble reflex movements in the posterior extremities.

Although in my experiments with this acid voluntary movements were never observed to occur after the suppression of reflex activity, such as have been so frequently observed after poisoning with the alkaline bromides, yet the above result certainly indicates that the action of these two poisons on both reflex and voluntary movements is identical; and this has been found by further experimentation to be the case, for in animals in which the abdominal aorta were ligated for the purpose of preventing the access of poison to the posterior extremities, reflex movements failed in the unpoisoned limbs as soon as they did in the others, indicating that the failure of these movements must have been due to a direct action of the acid on the spinal cord. Farther, by applying a galvanic current to the exposed spinal cord in the dorsal region of poisoned animals, no movements occurred in the anterior extremities, but pronounced movements were induced in the posterior; certainly showing that the inability of the cord to convey impulses upward must have been due to a paralysis of its sensory portions, while the motor portions must still have been intact, as was evident by the contractions caused in the posterior extremities. It is obvious from this that the seat of reflex paralysis lies in the sensory (reception) portions of the cord, and that if the motor portions of the cord and motor nerves still remain sufficiently intact to convey impulses, after complete paralysis of the sensory portions of the cord, the possibility of the occurrence of voluntary movements, or at least of movements the impulses of which have their origin in the cerebral ganglia, is readily conceivable. And it is probable that with small doses such phenomena will occasionally occur. Whether the peripheries of the sensory nerves are affected or not early in the poisoning I have been unable to decide, on account of the early depression of the sensory portions of the cord; I, however, do not think they are, because in animals in which all the blood-vessels of the left leg were ligated it was found that the unpoisoned nerve failed to respond to stimulus just as soon as the other; but that they are ultimately affected seems proven by the fact that the local action of the dilute acid rapidly destroys their activity. The motor portions of the cord as well as the motor nerves are also depressed, as determined by definite strengths of electric currents, and are ultimately paralyzed—the former succumbing first; since the motor nerves will still transmit impulses even after a complete abolition

of the functional activity of the motor portions of the cord. Consciousness in the higher vertebrates was maintained until almost death ensued, although in frogs narcotism seemed early induced.

In the early part of this paper it was stated that it was claimed that the acid "possesses all the more valuable properties of the potassium bromide, but lacks its influence on the heart and muscular systems;" but whatever it may possess of the aforesaid valuable properties, it certainly does affect the heart the same as the potassium bromide, as has already been conclusively proven; it depresses the skeletal muscles and ultimately paralyzes them (as I have also satisfactorily decided, although it is here unnecessary to give the detailed results of this research), and acts on the nervous system markedly similar.

A summary of the conclusions drawn from the results of the present research is placed for the convenience of reference in a parallel column with the conclusions arrived at by the different investigators on the action of the potassium bromide, which represents the physiological action of the alkaline salts.

HYDROBROMIC ACID.

The Circulation: Arterial Pressure. The arterial pressure is unaffected by very small doses, or a slight rise occurs; moderate doses cause an increase from the first, or a diminution of pressure, followed by a return to or above the normal; large doses cause the pressure to fall, and if sufficient cause it to fall to zero.

The fall of pressure is due to a depression of the heart muscle.

The rise of pressure to a constriction of the vaso-motor peripheries.

Pulse. The pulse-rate is not appreciably affected by very small doses; moderate doses sometimes caused a momentary slowing by inhibiting the heart, the pulse then recovering to a variable extent, and being followed by a gradual fall; or, a momentary rise occurs accompanied by a diminution of arterial pressure, this being followed by a diminution to below the normal; or, after large and repeated doses the pulse falls below normal and then becomes exceedingly rapid, or becomes rapid from the first, or may be depressed from the first. All these effects being due to a direct cardiac action, with the above single exception. The increased pulse-rate being attended with a diminution of pressure and small pulse-curves.

Nervous System: Cerebrum. Consciousness in the higher mammals present until near death. *Spinal Cord.* The sensory portions of the spinal cord

POTASSIUM BROMIDE.

Arterial Pressure: Administered hypodermically it causes diminished arterial tension, with increased pulse frequency. Large doses paralyze the heart, and thus reduce arterial pressure (I. G. Schonten, *Archiv der Heilkunde*, xii., 2, 1871; Schmidt's *Jahr.*, Bd. c. liv.).

(See above.)

Vaso-motor peripheries irritated, causing constriction (Lewisky, *Virchow's Archiv*, Bd. xlv., p. 191; Amory, *The Phys. and Ther. Action of Bromide of Potassium*, Boston, 1872; Menriot, *L'étude de la Belladone*, p. 49; Saisson, Schmidt's *Jahr.*, Bd. cxliii.) This action on the capillaries has been denied.

Pulse. After slow intravenous injection of a two per cent. solution of the potassium bromide, the pulsations become slower and feebler, the blood pressure falls, and the heart is finally arrested. Hypodermically injected, the pulse-rate is increased with diminished arterial pressure and diminished pulse-curves. Large doses paralyze the heart (Schonten, loc. cit.; Eulenberg and Guttman, *Virchow's Archiv*, xli., 1867).

Cerebrum, Spinal Cord and Nerves. "The evidence is, I think, sufficient to prove that bromide potassium affects all parts of the nervous system of

are the first portions of the reflex apparatus to be paralyzed, and reflex paralysis is due to this cause. The motor portions of the cord are also depressed, as well as both the sensory and motor nerves.

Muscular System. The muscular system is depressed.

the lower animals, but that the cerebrum, the motor tract of the cord, and the efferent nerves are the last portions to be affected; that the most sensitive is the receptive [sensory] portion of the cord . . . and next to this are the peripheral ends of the sensory nerves." (H. C. Woods' *Therapeutics*, 1879, p. 825).

Muscular System. Depressed, (Papers Quoted.)

A MEMBRANE-LIKE AFFECTION OF THE BOWELS.¹

BY FRANCIS W. GOSS, M. D.

By the above title I refer to a disease which has been designated by a variety of names, among them, "Painful Affection of the Intestinal Canal," by Powell,² "Diarrhœa Tubularis," by Good,³ "Mucus Disease" by Whitehead,⁴ and "Membranous Enteritis" by Da Costa.⁵ The affection, though not remarkably uncommon, is not often described by medical writers or referred to in text-books. It is characterized by the discharge from the bowels of what appear to be membranes or skins, of varying size, in the form of shreds, strips, or tubes. This peculiar discharge is accompanied with uneasiness and discomfort, if not with actual pain. The malady is of long duration, the patients, during the period of weeks or months while suffering from the discharge, being invalids, often confined to the bed or house. They seldom so far recover as to be in robust health, and sooner or later are subjected to recurrences of the trouble with the accompanying physical weakness and suffering.

Powell, in 1818, appears to have been among the first of modern writers to have called attention to the disease. He describes the evacuations of his patients suffering from the affection to have "exhibited a large quantity of flakes mostly torn into irregular shapes, and appearing to have formed parts of an extensive adventitious membrane of no great tenacity or firmness." "In the first of the cases which came under my notice," he says, "this membrane was passed in perfect tubes, some of them full half a yard in length, and certainly sufficient to have lined the whole intestinal canal. In others, also, the aggregate quantity has been very large, and it has continued to come away for many days, but it has been in irregular, thin flakes of not more than two inches in extent." And he further adds, "The appearance which comes nearest to it, both in resemblance and situation, is the membrane formed in the trachea under croup." Powell observed four cases, all in adult females.

I have myself notes of the following cases, the first two of which have been under my observation a portion of the period of their sickness. They both occurred in ladies of more than ordinary intelligence, able to give an accurate account of their ailments.

¹ Read before the Boston Society for Medical Improvement, May 23, 1881.

² On Certain Painful Affections of the Intestinal Canal. Transactions of College of Physicians, London, vol. vi.

³ Good's Study of Medicine, vol. i. *Diarrhœa Tubularis*. Tubular Looseness.

⁴ Notes on Mucus Disease. By Walter Whitehead, F. R. C. S. Edin. The Manchester Medical and Surgical Reports, 1870, vol. i.

⁵ Membranous Enteritis. By J. M. Da Costa, M. D. The American Journal of the Medical Sciences. October, 1871.

CASE I. Mrs. A., aged forty-three, nearly twenty years ago, and for several consecutive years, had frequent dysenteric attacks. During these years she occasionally noticed white, filmy patches, like bits of wet tissue paper, in the discharges. In October, 1870, she had what her physician called "a slow nervous fever," which confined her to her room for six months. In December of that year she first discovered an appearance like a tangle of white, wet string, perhaps a small cupful in amount, in the evacuations; after this for three months there was more or less membrane-like discharge nearly every day. In character it resembled flakes of cold, boiled starch, sometimes a mass of boiled macaroni pressed or flattened out of shape, at other times a lump of hardened jelly, and more often sheets or strips, skin-like, from three to six inches long. At times some were, perhaps, nine inches in length by two in width. Tubes were occasionally noticed of at least an inch in diameter. At intervals of months during several of the following years there was slight recurrence of the trouble for a few days, without causing special inconvenience to the patient. In 1879, after a feverish condition, she had a prolonged season of the membrane-like affection, continuing for two or three months, with an occasional cessation for a day or two. In this attack the discharge was not as abundant as formerly, nor in so large pieces. In January, 1881, after a season of unusual comparative good health, began another attack of the trouble which lasted eight weeks.

In this case there have not been any definite symptoms to herald an onset of the disease. It does not appear to follow a cold nor indigestion. At times it has seemed to the patient that the recurrences came after over-exertion, either physical or mental. They are always attended by a general nervous condition, "restlessness and fidgets," to use her expression, and by weakness and uneasiness in the stomach. In earlier years there was no marked dyspepsia, but there has been more of late. The kind of diet does not seem to make any difference. The peculiar discharges are not unfrequently painless, though sometimes attended with a cutting or tearing sensation, but are always followed by great prostration for an hour or more. There is no especial pain for the rest of the day. There is general tenderness over the bowels during the period of attack; pulse somewhat quickened at times, usually from 80 to 90; temperature not abnormal; appearance of tongue, gums, and lips not remarkable. In the morning the tongue is apt to be coated. Bowels habitually constipated. The patient thinks she has not averaged more than one spontaneous defecation a month for the past ten years. She uses daily injections of tepid water. When an attack is approaching enemata cause pain. Since the beginning of March of the present year she has been recovering from the last recurrence of the disease. She is, however, still weak; feels tolerably well if she keeps quiet. For the past ten years she has taken but few long walks. There has not seemed to be any direct effect from medication; many things have been tried. Recently the aromatic sulphuric acid appeared to agree with her as well as anything. Sedatives and anodynes have been given *pro re nata*.

CASE II. Miss B., aged fifty-six, has had gastric troubles for many years. She first noticed membrane-like flakes in discharges some fifteen years ago. In 1868 she was confined to her bed for six months; had

pain in bowels and all over body. Since the above date she has had long intervals of comfort, but has also suffered from recurrences, during which, every few days, she would have the membrane-like discharges of varying amount. Sometimes a similar discharge from the vagina has accompanied that from the bowels. The attacks last a number of weeks. The past winter they were of shorter duration, owing, she thinks, to keeping her bed and avoiding care. They are usually preceded by distress in the stomach, with nausea, and sometimes vomiting. There is not great abdominal tenderness nor very much acute pain, but at such times, and during the intervals even, there is obscure pain in lumbar regions and over sacrum. When the gastric disturbance is present she cannot eat, and when this is relieved a diet of soft food for a while suits best. She cannot eat meat at these times. Has what she calls "inward fever." She is habitually constipated, and suffers much from flatulency. Often uses injections of olive oil. The membrane-like discharges have frequently been a quarter of a yard in length, but have never been noticed to be tubular. At one time she thought she must have a tape-worm, such were the length and appearance of the discharges. Following an evacuation of normal feces there is some discomfort, and when the peculiar material is voided, to use her expression, "then, what is curious, I breathe freer." A cheerful and courageous disposition, quiet, keeping in bed, and freedom from anxiety and care reduce the trouble to its minimum. Medicine has not had much effect, excepting the comfort afforded by anodynes and sedatives.

CASE III. M., aged forty, a friend of the patient referred to in Case I., writes the following account of herself, which I give *verbatim*.

"It is between eleven and twelve years since I first discovered anything of a membranous character in the discharges, but they might have been of that nature a considerably longer time, as my health for many years previous had been very poor, having suffered very much before that time, as well as since, with my head, spine, stomach, and in other ways. There has been a combination of different forms and appearances in the discharge, one form looking like membrane, or skin, some pieces of which would measure six inches in length, and on being unrolled an inch or more in width, besides numerous smaller pieces. Some portions are a thick mucus, or viscid transparent substance, tubular in form, nearly as large as a pipe-stem, and from three to eight inches in length, some pieces having a dark-colored thread extending through the centre, which thread is almost as difficult to sever as a wire. Then, again, some portions look like a thick phlegm, are of irregular shape, perhaps two or three inches in length and one half inch in diameter, white, yellow, or brown, while still other portions have an appearance of albumen accompanied with white or yellow froth. A few times there has been as much as a gill of the unnatural discharge at one evacuation, but not many, I think, though sometimes the smaller pieces are so intimately mixed with the feces as to render it difficult to judge of the quantity. Excruciating headaches, to which I am very subject, are induced in various ways, but chiefly by nervous excitement or fatigue, and are succeeded by great distress and weakness of the stomach, which is followed by more copious membranous discharge. Since the first year, when I had several spontaneous discharges daily, composed almost entirely

of mucous and membranous matter, I have averaged not more than five or six spontaneous discharges in a year, and those were of an unhealthy nature, not affording much relief, being only a partial evacuation. Both pain and weakness follow the membranous discharges, and there is but very little of the time but that I have more or less of them."

CASE IV. A friend has furnished from his notebook a case related to him in 1836, as a comment on Good's description of the affection, by his teacher, in whose practice it occurred years before.

"S. C., female, had pain in pit of stomach and bowels, together with abdominal tenderness. Could not take even the lightest food without great pain. Discharges like skin in appearance. Took bitters with no great benefit. Relieved by ferri carb., a teaspoonful three times a day."

The clinical history of the malady has already been quite clearly indicated by the cases here reported. The patients are usually persons who have not enjoyed good health, but have for years suffered from headache, dyspepsia, constipation, and general debility. They are easily fatigued. Care or over-anxiety often precedes and seems to bring on an attack. Rarely is there a single one, but there are commonly recurrences at intervals of months or years. The period of suffering may extend over many weeks, and during this time there are frequent discharges of the membrane-like substance, even several times a day. The paroxysms are commonly preceded by a febrile condition, nervousness, uneasiness in the stomach, and sometimes by nausea and vomiting. Abdominal pain and tenderness are not usually very marked nor limited to any particular region, and the discharge is followed in some cases by a sense of relief. In the intervals between the recurrences of the attacks the patients are rarely restored to vigorous health.

The disease is most frequently observed among females. Whitehead states that of a hundred cases four only occurred in males. Of the seven cases reported by Da Costa, however, four were in males.

The results of microscopical and chemical examinations of the peculiar discharge are recorded by Whitehead and Da Costa; the microscope shows it to be composed of a transparent, amorphous, basement membrane having imbedded in it spherical cells, together with epithelial cells in various stages of development. Chemical analysis, according to Da Costa, shows the discharge to be composed largely of mucus or of a substance of identical chemical composition.

Specimens from the first two cases reported in this paper were submitted to Dr. E. G. Cutler for examination, who has kindly furnished the following report:—

"The specimens correspond perfectly with the description given by Da Costa in his article. They might be divided into two classes, pigmented and non-pigmented. The former represented by the specimens from Miss B., and the latter by those from Mrs. A. The gross appearances of the two sets of specimens differ somewhat from each other, the latter—those from Mrs. A.—being of a bright brownish color, and the different portions appearing more like cords or thin membranes rolled on themselves, and hence somewhat dense; while those from the other patient were whitish or grayish, translucent and gelatinous, suggesting slightly coagulated white of egg, and more disposed in

flakes or plates of some size. Microscopic examination, on the other hand, revealed little difference in the composition of the two sets of specimens; since they varied only in enveloping different amounts of pigment and other extraneous matter. They consisted of an amorphous, transparent, hyaline basement substance, here and there having a few indistinct fibrils and containing a considerable number of nuclei, and also rather granular, imperfectly or irregularly shaped cells, evidently epithelial, in no very large number. Addition of acetic acid gave the mucine reaction. In some of the specimens a good deal of pigment was found and some fat and small granules. Nothing like fibrine or blood was discovered. They evidently consisted of tough mucus entangling cells and foreign matters, such as pigment, small quantities of fat, and so forth, and the difference in color was due to the varied care with which they had been washed, or the difference in the media in which they were preserved."

Of the pathological anatomy of the affection almost nothing is known. As the disease is very rarely fatal the opportunities for post-mortem examinations are few. Many of the names which have been given to it are objectionable for the reason that they imply a pathological condition which has not been proved to exist. The term "Membranous Enteritis" employed by Da Costa is open to this criticism. Powell (1818) remarked that neither "the sort of pain nor the state of the pulse and skin seemed to indicate inflammatory action;" and this is true of the cases reported in this paper. Good (1822) called the malady "Diarrhœa Tubularis" giving prominence to indications, diarrhœa and tubes, which are only occasional attendants. Crampton and John Forbes¹ (1837), improving upon Good, termed it "flaky or membranaceous;" the result of a "peculiar inflammation," peculiar, certainly, if an inflammation. Whitehead's appellation of "Mucus Disease"—though less objectionable, perhaps, than those above mentioned—is also unsatisfactory; for while the chemical composition of the substance discharged may be similar to that of mucus, in its gross appearance and otherwise it frequently does not correspond with the latter.

To avoid theory and assumption where apparently there is so little knowledge, I have called it an *affection*, attaching a prefix to indicate a noticeable peculiarity which, if not strictly a membrane, is certainly, at first sight, *membrane-like*.

The ætiology of the disease is equally as uncertain as its pathology. Various authors have given their various solutions to this problem, all of which are open to many and serious objections. I will not venture to add any theory of my own.

The diagnosis can readily be established by a consideration of the clinical symptoms with an examination of the discharges. Such an investigation will eliminate intestinal worms, fragments of hydatids, intestinal diphtheria, dysentery, or the discharge of a portion of the bowel. Da Costa urges the importance of inquiring, in cases of anomalous nervous symptoms, particularly when happening in hysterical persons, where there is abdominal pain, into the possible existence of the malady under discussion.

The prognosis is rather unpromising for a complete recovery. Doubtless cases occur in which there is but a single attack of the disease with subsequent restora-

¹ Cyclopædia of Practical Medicine, American Reprint, vol. i. p. 634.

tion to health, but the rule, as the cases here reported show, is that there will be recurrences of the paroxysms with intervals of only partial freedom from discomfort and debility.

The treatment during the paroxysm, or when one is threatening, resolves itself into putting the patient in the condition most favorable to mitigate or endure the attending discomfort. Rest of body and mind, simple, easily-digested food, anodynes and sedatives, and such other adjuvants as may suggest themselves to the medical adviser, are to be recommended. During the intervals the endeavor should be to improve as far as possible the general condition of the patient. Many and varied, according to all authorities, have been the medicines employed to prevent the recurrence of the malady, but their results for the most part have been disappointing.

I have brought these cases to the notice of this Society in the hope that light may here be thrown upon a subject evidently obscure in itself, and still needing much elucidation so far as pathology and treatment are involved.

HOW THE COLOR-BLIND SEE COLORS.¹

BY PROFESSOR FRITHIOF HOLMGREN, UPSALA, SWEDEN.

MONOCULAR RED-BLINDNESS; MONOCULAR VIOLET-BLINDNESS.

THAT the color-blind do not see colors as the normal-eyed we may infer from the fact that they confound the kind of light which appears very dissimilar to the latter. When a red-blind can not distinguish the two sorts of light which the normal-eyed recognize as *red* and *green*, we can only conclude that the two look *alike* in color, but not that they appear of either one or the other color. We can at most say that they must appear of the one or other color, or of a third, such as we have in the system of the normal-eyed, yellow for instance, or of a color of which the normal-eyed has no conception. This is all we have a right to infer.

If a theory of color-blindness is to explain the connection of cause and effect, the first being the objective light and the second the subjective sensation of color, then this sensation must be understood. The various suppositions in favor of one or another of the several theories put forth on the subject have been naturally pressed forward. But till now there has been no solid ground of proof; we lacked facts and data. As, however, we have here to deal with subjective phenomena, the hope of obtaining such data had been given up, they were regarded as inaccessible to objective research.

Since we cannot control the subjective perception of another person, we cannot prove that all normal-eyed see colors alike. It may, however, be granted that, at least in reference to the principal colors, their quality is the same for all those who entirely agree in reference to them. There could not otherwise be any question of color between two individuals, just as there could be no intellectual agreement between man and man, if the functions of the senses were essentially different in the two.

Now, admitting this, and granting that all normal-eyed of themselves, and all the color-blind of the same class of themselves, see the principal colors essentially

in the same way, it may be shown that it is not only possible to decide how the color-blind see colors, but scientific and objective proofs can also be given.

There is evidently but one way to obtain a reply. Whilst preserving our own normal vision we must be put in the position to see at the same time with the eyes of the color-blind, and be able to compare their sensation of colors with the normal. But for this we cannot use either one or the other eye, if the two are not in organic living communication with the same brain. The normal-eyed must therefore become a part of the color-blind and exist in his senses whilst still preserving his own.

Such a double being is, however, a *conditio sine qua non* for us, but cannot be produced by grafting a normal-eyed on a color-blind, yet just such an organic combination of two different eyes with one and the same brain I shall now show is not only *not* an impossible thought, but even does exist in nature.

Color-blindness, as is known, is hereditary, and transmitted in accordance with certain laws.² One of these laws is that the defect does not touch all the children of the same parents, but spares some. Besides, it varies in degree in different individuals. It is not against, but rather in conformity with, the great law of heredity that an unequally transmitted defect should give us a person with one eye normal and the other color-blind, or one totally color-blind and the other incompletely so, or with a feeble chromatic sense, and therefore nearly normal.

Moreover, color-blindness may be acquired and so not necessarily affect both eyes at the same time. Hence it is quite possible to conceive of a normal and a color-blind eye connected with the same brain. Isolated cases of this have been reported, one quite recently by O. Becker, of Heidelberg.³ Here we have the double person sought for, in whom the color-blind part can describe his subjective color-sense to the normal-eyed part, and *he* can make it objectively clear to other normal-eyed persons. Here is the bridge between the subjective sensation of the color-blind and the objective investigation of science.

Thus guided, I have carefully searched, in connection with the extended statistical examinations for color-blindness in various directions in Sweden, for a case where one eye only was defective. The difficulties which one always meets with in detecting color-blindness, and which my worsted method first removed to any extent, were for certain reasons more prominent here than usual. I have heard here in Sweden of but one case (in the summer of 1879), which most unfortunately an accident rendered useless for my purposes.

Having succeeded in a practical method of assisting the detection of such cases, I had, within a comparatively short time (June to October, 1880), opportunity of examining not less than two, the first being one of monocular violet-blindness, and the second, for which I have to thank Professor Hippel, in Giessen, a case of monocular red-blindness.

Experience points toward such cases not being so rare as heretofore thought, and hence a complete solution of the question at issue may be thus reached by the method I have entered upon. The plan, principle, and result of the investigations are in brief as follows:—

First of all the color sense of each eye was deter-

² Vide translation of the case in this journal, May 6, 1880.

¹ Centralblatt für med. Wissenschaften, Nos. 49-50, 1880. Translated for the JOURNAL by Dr. B. Joy Jeffries.

³ Vide Ueber die Farbenblindheit in Schweden. F. Holmgren, Cbl. f. pract. Augenheilk., September, 1878, page 206.

mined separately. In both the cases tested there was complete typical color-blindness in one eye (in the left of the violet-blind, and in the right of the red-blind), and in the other eye a feeble color-sense, but so slight, so near normal, that the person could distinguish readily all the principal colors, only failing in the very palest and the very darkest. The cases were, therefore, perfectly adapted for my purposes. The principle governing all the details of the examination was that of comparison. I let the normal eye compare the sensations of the color-blind one with its own, and put the result thus obtained in a form to be readily appreciated by all normal-eyed.

A person with monocular color-blindness has, of course, with his other eye the same idea of colors as the normal-eyed, and can express to the latter just how colors appear to his color-blind eye. We may, therefore, trust his color names as we cannot those of the person with both eyes color-blind.

Here, however, as usual, words are less important than acts,¹ and as description is always less accurate than an objective representation and demonstration, I have always let the person show by colors chosen with the normal eye the sensation his color-blind eye receives. We thus also find indirectly what sensations are wanting in the color-blind eye compared with the normal-eyed. Direct evidence of this we obtain by the reverse, namely, when we let the color-blind eye control the subjective color sensations of the normal eye. The details of the carrying out this principle I reserve for a future more extended publication, both in reference to methods and the results obtained.

To indicate here briefly the principal data can be best done by a simple description of the subjective spectrum of the color-blind. Starting with the solar spectrum, and the subjective spectrum of the normal-eyed as a basis in describing the several kinds of light, we have the following:—

It has been assumed on good ground that the color-blind see only two principal colors in the spectrum. These are the two fundamental colors of his subjective color system. In the violet-blind's spectrum the fundamental colors are *red* and *green*. His spectrum is not shortened at the red end. From the red end his first fundamental color reaches through the red, orange, and yellow of the normal-eyed. First at yellowish green (just beyond the Fraunhofer line D) he sees a neutral colorless small band, beyond which the second fundamental color green commences, becoming more saturated, and then darker over the green, greenish blue, cyan blue, and indigo blue of the normal eye up to violet, where his spectrum wholly fails (about the line G). The violet-blind's confusion with colored pigments is thus explainable (green with blue, purple and red, orange and yellow, violet with yellow, green, and gray).

Now this will all be found to be in complete harmony with the Young-Helmholtz theory. As to the tone of the fundamental colors of the violet-blind, his red is not quite identical with the spectral red of the normal-eyed (cinnabar), but a purer red (more like carmine), nearer to the extreme red as seen by the normal-eyed. The other base color of the violet-blind is green, a pure green, having to the normal eye a slight tinge of blue.

The two base colors of the red-blind are *yellow* and *blue*. Their yellow begins further on than with the red of the normal-eyed (about the line C), reckoning from the red end, and reaches over the rest of red, orange, yellow, and green, ending in bluish green (between the lines b. and F), nearer the latter, where a neutral, colorless small band forms the border to the second base color *blue*, which spreads from here on over the cyan blue, indigo, and violet as seen by the normal-eyed. His spectrum is not shortened at the violet end. The mistakes the red-blind makes with pigments are hence readily explainable (confusing green and yellow, orange and red, purple and blue and violet, extreme red with greenish blue and gray).

This, therefore, agrees objectively with the Young-Helmholtz theory. Subjectively considered we should have, perhaps, expected green to be the first primary instead of yellow. I long ago explained² that yellow and not green is the first primary of the red-blind, and, as did Fick,³ later, that this did not conflict with the principles of the Young-Helmholtz theory. The tone of the first subjective primary color of the red-blind, so far as could be in this case determined, was not pure gold yellow, but a yellow that to the normal eye had a tinge of green in it, in brighter nuances, more like lemon yellow, and in darker nuances more olive green. The red-blind's second color is not a pure cyan blue or indigo, but more of an indigo violet.

Full understanding of the theory in this respect can only be had through opportunity of testing several cases of monocular color-blindness of the several kinds and of different degrees, and, first of all, a typical case of complete green-blindness. We may, however, now consider the road open by this method for answering the theoretical problem of color-blindness, which I shall explain in detail in a future more extended publication.

RECENT PROGRESS IN PHYSIOLOGY.

BY G. M. GARLAND, M. D.

HEAT OF BODY.

WE recently took occasion to commend Dr. Wood's memoir⁴ as a model of skillful physiological investigation, and further study of it only intensifies our admiration of its merits, and we offer the following imperfect summary of its leading points.

The chief phenomena of fever are capable of being grouped into four sets: acceleration of the heart's beat and disturbance of the circulation; nervous derangement; disturbance of nutrition, including secretion; elevation of bodily temperature. Of these four conditions the only one which seems absolutely essential, and capable of producing the others, is elevation of the bodily temperature, and therefore Wood assumes this to be the characteristic feature of fever. By a series of experiments he shows that artificial heating of the body in an oven will produce disturbances of circulation and innervation similar to those present in ordinary fever. Heating of the brain by a hot-water bonnet, or by the sun, will cause symptoms of fever, even convulsions and death. Prolonged artificial heat

² Upsala Läkareforenings. Förhandl. Bd. vii. 1871, p. 119. F. Holmgren. Also, Von Farblindhetensteori, 1872.

³ Fick. Zur Theorie der Farbenblindheit, 1873.

⁴ Professor H. C. Wood. Fever: A Study in Morbid and Normal Physiology. J. B. Lippincott & Co., Philadelphia.

¹ Vide Frithiof Holmgren, Die Farbenblindheit in ihrer Beziehungen zu den Eisenbahnen und der Marine. Leipzig, 1878, page 128.

and continued fever also cause similar nutritive changes in the liver, heart, kidneys, and muscles. It appears, therefore, that elevated bodily temperature is not only a constant feature of fever, but it is capable of producing, *de novo*, all the other phenomena specified, and therefore Wood considers that the aphorism of Galen, "*Nam essentia quidem februm est in caloris præternaturem*," is firmly and logically grounded.

The next question which naturally presents itself is in regard to the mechanism by which the production and dissipation of heat are regulated in the animal organism, and the second chapter of the memoir is devoted to the investigation of this point. An attack was made upon the nervous system by a series of sections of the spinal cord at different levels. Cutting the cord in the lower cervical region caused the bodily temperature to fall rapidly, and it remained permanently low until death occurred, provided the temperature of the air surrounding the animal was lower than his own. If the animal, after section, was placed in a hot atmosphere, or was protected by a cotton pack, the primary fall was soon replaced by a rise, and the animal died with his temperature above normal. Careful calorimetric estimations showed that the fall of temperature was mainly due to an increased dissipation of heat, and that this increase was caused by a dilatation of the peripheral capillaries from vaso-motor paralysis, but it was still a question whether this increased dissipation was associated with increased production of heat. It is evident that there must be an increase of production if the increased dissipation remains permanent, because excessive elimination would soon exhaust the reserve heat of the body, and it could then still continue in excess only by increase of supply. Further investigation revealed that the primary increase was not maintained. And yet there was an evident rise of temperature when the body of the animal was protected from external cold. Wood concludes that section of the cord in the cervical region produces a vaso-motor paralysis and an increased loss of heat. The resulting lowering of the bodily temperature caused a diminished production of heat by checking chemical processes. Where this lowering of bodily temperature is avoided by external warmth there seems to be an increased production of internal heat. The author next desired to further simplify the problem by removing the disturbing influence of the vaso-motor nerves. Of course it is impossible to isolate the vaso-motor fibres in the cord itself, but research has shown that the vaso-motor centre from which these nerves arise is situated in the medulla in the floor of the fourth ventricle. Section below this point produces vaso-motor paralysis, while section above the same will leave the peripheral circulation undisturbed. Pursuing this physiological indication, Wood found that section of the medulla below the vaso-motor centre produced results similar to those which follow the cutting lower down. Section above the point mentioned, that is, between the medulla and pons, causes an immediate rise of bodily temperature. The amount of heat dissipation is somewhat increased, but the heat production becomes so much greater that a rise of temperature results.

Various explanations have been advanced to account for this rise of temperature after section between pons and medulla. One set of observers think it is due to irritation of vaso-motor centres, that is, to a spasm of the peripheral capillaries. Wood argues strongly

against this theory, and thinks that section of a nerve means paralysis, not irritation. He believes there is a centre situated in or above the pons, whose function it is to exert a restraining influence upon the nutritive processes in the various tissues of the body: that is, it is an inhibitory centre. Section between the pons and medulla destroys the function of this centre: thereby removes the governor, and hence the rise. Elevation of bodily temperature, therefore, according to Wood, is probably due to paralysis of an inhibitory heat centre.

It has been pretty clearly established that the thermometer is no measurer of the amount of heat generated in a body, but merely indicates the amount held in reserve at any one time. This reserve amount, moreover, is determined by the play between the functions of heat production and heat dissipation, and hence an elevation of the bodily temperature does not necessarily mean an increase of the chemical movements of the tissues, nor does a low temperature militate against an increased heat production. A dog which is perfectly well and has been fed high will produce more heat units than a dog which is suffering from pyæmia. Yet the fed dog's temperature will be normal, because his heat elimination is equal to the heat production, while the pyæmic dog's temperature is elevated.

The following table of Professor Sanderson shows these peculiarities of heat production in human beings under different conditions:—

Heat production in fever, on fever diet,	2021 K. units.
Heat production in health, on adequate diet,	2118 K. units.
Heat production by excessive diet may reach	2700 K. units.

Here it is observed that the amount of heat produced in fever may be less than that produced on ordinary diet, though usually the production of animal heat rises in the febrile state with the temperature and with the stage of fever. In order to understand these points it is necessary to remember that there are two distinct sources of heat in the body, namely, the food which is floating in the blood, and the stored-up material of the various tissues. If the food be excessive then the amount of heat generated becomes increased. If the food be inadequate then the stored-up material suffers. In fever there appears to be an increased tissue metamorphosis combined with inadequate food, so that Wood defines fever as "a complex nutritive disturbance in which there is an excessive production of *such portion of the animal heat as is derived from chemical movements in the accumulated material of the organism*, the overplus being sometimes less, sometimes more, than the loss of heat production resulting from abstinence from food."

With regard to the origin of fever, Wood is a strong advocate of the neurotic theory, although allowing that many fevers are due to some poison circulating in the blood, and that they may be termed hæmic fevers, in so far as they are induced by the injection of such material into the blood, for he thinks the tissue changes which characterize fever are produced, not by the local action of the poison, but by the mediate influence of nerve centres, which in their turn are deranged by the poison. Fever is "simply a state in which a depressing poison or a depressing peripheral irritation acts upon the nervous system which regulates the production and dissipation of animal heat. . . . The so-called inhibitory nervous system is not paralyzed in fever, but is less capable than in health of answering promptly and powerfully to suitable stim-

uli; in other words, it is in a condition of paresis or partial palsy. . . . In fever vaso-motor paralysis which produced is followed by an immediate fall of temperature similar to but greater than that which is produced by a like disturbance in health."

Thus we have endeavored, with imperfect success, to point out some of the leading topics which are treated so thoroughly and scientifically in this book. We heartily advise those who are at all interested in this subject to read the memoir itself, and we assure them that they will find the subject presented in a very fascinating manner.

ERUCTATIONS.

Foster¹ says, "In the act of swallowing no inconsiderable quantity of air is carried down into the stomach, entangled in the saliva or in the food. This is returned in eructations. . . . The enormous quantity of gas which is discharged through the mouth in cases of hysterical flatulency, even on a perfectly empty stomach, . . . presents difficulties in the way of explanation; it is possible that it may be simply diffused from the blood." Nearly all other writers who speak of this subject define eructation in a similar way by saying that it is the sonorous emission of flatus from the stomach through the mouth. Dr. Weissgerber² has recently published some investigations on this point, which are very interesting. He had under observation, in the medical clinic at Giessen, a man who was endowed with the power of eructation to a remarkable degree. Like the croaking frog of Goltz, it was only necessary to stroke his abdomen, or to touch any part of his body, in fact, to elicit a belching explosion from the mouth. He looked in perfect health, but his wife thought he had hysteria.

Struck by the apparently inexhaustible supply of gas which the patient had at command, Weissgerber tried to imitate in his own person the movements which the patient made in producing the explosions, and after several days' trial he found that he could likewise produce any number of eructations at will. As the result of his experiments he concludes that eructations should be properly divided into two classes, namely:—

(1.) Natural eructations, or those in which gas escapes from the stomach, and is impregnated with the odors of the food ingested.

(2.) Artificial eructations, or those in which air is drawn into the œsophagus and reëxpelled without entering the stomach.

The œsophagus forms a tubular bag, which is closed below by the constriction of the cardiac orifice, and above by the pressure of the larynx. In order for air to get in or out of either end of the œsophagus, therefore, a certain amount of force is necessary to overcome the resistances mentioned. This is accomplished in natural eructations by the following agencies:—

I. Gas may be expelled from the stomach by simple contraction of that organ during quiet respiration.

II. Gas may be pressed out of stomach and remain in œsophagus until the pressure of the next expiratory contraction of the chest expels it.

III. The muscles of stomach and abdominal walls may act in concert.

IV. Air may be sucked up into the œsophagus from the stomach by the negative pressure which is produced in the œsophagus during the inspiratory enlarge-

ment of the chest. Subsequently, the same gas is expelled by the succeeding expiratory contraction of chest.

The artificial eructations are very different from the above, and after a little practice may be called forth at will at any time, in any strength, and with any desired rapidity. They are produced by the alternate admission of air into, and the expulsion of the same out of, the œsophagus, and consist of two easily distinguishable sounds. The first sound is produced by the air as it is forced into the œsophagus, either by the negative inspiratory force of the chest or by the act of swallowing. Weissgerber says that during this act a strong inspiratory effort is made; the larynx is elevated and the glottis is closed. He affirms that he could never swallow air or force it into his stomach without first filling the œsophagus by an inspiratory effort. We have tested these points on our own throat, however, and find that it is possible to swallow air without an inspiratory suction, and we can feel the air trickle into the stomach after an interval of a few moments, provided we refrain from expelling it upward. Moreover, with the inspiratory method it is not essential for the glottis to be closed, because we can hear air enter the trachea and œsophagus simultaneously.

Sometimes the first sound may be absent, and in those cases Wood thinks that the air is drawn very gently past the larynx without producing any sound.

The mechanism of the second sound is less difficult to understand. It is simply an explosive escape of the air, which is squeezed out of the œsophagus by an increased intra-thoracic pressure. During this stage the glottis is firmly closed, and it is apt to open with a little explosion of its own immediately after the eructation is completed.

In this connection it is interesting to recall an observation made many years ago by Professor Freund in a little treatise upon the relation between pulmonary diseases and primary anomalies of the costal cartilages. He says that the suddenly recurring tympany of hypochondriacs and hysterical persons can scarcely be referred to other causes than to a suddenly-occurring and transient paralysis of the abdominal muscles. The complete odorlessness of the air belched out shows that it is not developed in the bowels. The mechanism of this phenomenon is simple. The relaxed abdominal wall sinks downward and forward by its own weight and that of the inclosed organs. The vacuum thus created in the stomach and intestine is filled by air which enters from the mouth. He adds that one may readily observe people also *swallowing* air involuntarily. This he terms an abdominal inspiration, which, unlike thoracic inspiration, is of a passive (paralytic) nature.

This explanation by Freund of the rapid inflation of the stomach, which is so often seen in hysterical subjects and in those persons who are slightly nauseated by any cause, seems hardly satisfactory, and we think the condition is better explained by the suggestions of Weissgerber.

IODOFORM.

Dr. Peterson claims that the odor of iodoform can be completely masked by the addition of tincture of must in the proportion of one drop to the ounce of iodoform whether in the solid or fluid form. — *Peterb. Med. Woch.*

¹ Text-Book of Physiology, page 206.

² Berlin. klin. Wochensh., September 2, 1878, No. 35.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

MAY 23, 1881. DR. T. B. CURTIS presided.

DR. H. I. BOWDITCH presented the portrait of Dr. J. B. S. Jackson into the care of Dr. Holmes, with the following words:—

GENTLEMEN OF THE BOSTON MEDICAL LIBRARY ASSOCIATION AND OF THE SOCIETY FOR MEDICAL IMPROVEMENT.—We meet together this evening to make a formal agreement with one another for the future careful preservation of the portrait of one of our most distinguished and respected associates, now no longer living.—Dr. John B. Jackson, of this city.

DR. HOLMES.—It gives the members of the Medical Improvement Society great pleasure to put into your hands, as president of the Medical Library Association, the portrait which is before you. We beg of you to take charge of it, and to direct that it shall be forever kept with care, and in the sight of all who may visit the library. It will probably remain always with you, but the society, while placing it under your care, does not wish to relinquish the legal ownership thereof.

We feel sure that you will never possess the portrait of a nobler example than he was to the medical profession. We rejoice to feel that by it you will transmit to physicians yet unborn the perfect likeness of one who commanded the respect and esteem of us, his contemporaries, alike for the purity of his character and life and for his unbounded zeal for our honorable profession.

Written upon the back of the portrait are the following words:—

"Sancte inziolate que servatum sit."

I cannot close these few remarks better than by heartily commending them to you and your associates and successors as containing the proper spirit in which the portrait ought to be guarded by all of us and by our descendants.

DR. HOLMES received the portrait, and addressed the Society.¹

DR. CURTIS tendered the thanks of the Society to Dr. Holmes.

DR. GOSS read a paper entitled

A MEMBRANE-LIKE AFFECTION OF THE BOWELS.

Vide page 507.

DR. CUTLER said that he had nothing to add to the description of the affection which had been so well given by Dr. Goss. He had seen a number of specimens of the so-called membrane, some rope-like and tough, as in a sample recently sent him by Dr. Lyman; others long and tubular, notably one procured from a patient of Dr. Cowles a few years ago. They all consisted of tough mucus. He had never seen anything like these collections of inspissated mucus at autopsy, although mucus similar to that discharged in dysentery was not rarely met with. Woodward, in the *Medical and Surgical History of the War of the Rebellion*, Medical Volume, second part, page 363, gives, perhaps, the most complete bibliography of the subject. The

¹ The Address of Dr. Holmes will be printed in the JOURNAL of June 9th.

idea that the trouble was of bacteritic origin had been entertained by at least two writers, but as no other careful observers speak of the rod-like organisms they found, or, indeed, of any others, it is fair to assume that their presence in the instances mentioned was merely accidental. A very great proportion of the patients were women, as Dr. Goss had said, and were either hysterical, hypochondriacal, or suffered from nervous or gastro-intestinal disturbances.

DR. BOARDMAN said that he had met with three or four cases, and they all occurred in hysterical women. He mentioned the case of a lady who thought that she had a tape-worm, who at times passed a pint of this membranous material. She continued to pass this for a year, when the rubber-like masses changed to a sago-like consistency, and now at times, whenever she is hysterical, she has what she calls hæmorrhages, but which are mostly liquid mixed with a little blood. There seems to be a gradual improvement; her only troubles have been hysteria and constipation.

DR. C. P. PUTNAM asked if it was possible to draw the line between these cases and a certain kind of constipation arising from want of activity of the intestines, where the mucous membrane was kept in a condition of slight irritation a large part of the time, yet not often actually inflamed. Fæces may, as is well known, lie in the intestine a long time, and may then either cause no perceptible irritation, or give rise to occasional diarrhœa; but also in a condition between these two, the faecal masses may cause the formation of large masses of mucus, which do not show themselves unless there is an unusually free movement of the bowels, but usually get pressed into the tubes and ribbons described. It was not surprising that hysterical women should be so affected, as they are the very ones where the required conditions—inactivity and insensibility of the bowels—are frequently found. As a rule such patients have learned, as they think, to regulate their bowels, and manage to get a movement every few days, while in fact they leave a part of the fæces lying in the intestine all the time. In such cases frequent large injections of hot water (a quart or more) produced a great change in the condition of the contents of the colon.

DR. FITZ remarked that during the last ten years he had frequently had specimens sent him for examination, and that the history was almost always that they were hysterical and constipated women.

The specimens suggested the large intestine as their origin, and he thought that constipation might very well be the cause of the trouble.

DR. BOWDITCH asked whether it was not uncommon to find these appearances at autopsies, for otherwise it would rather point to something different for irritation from constipation.

DR. FITZ had not found any appearances of this kind in the autopsies which he had made.

DR. BOARDMAN thought if it was not something different it would have been met with, for many people die when in a state of constipation.

FALSE ANCHYLOSIS OF HIP-JOINT.

DR. BRADFORD exhibited for Dr. Buckminster Brown an apparatus for treating the hip-joint, and read Dr. Brown's remarks on this subject:—

An efficient apparatus for the treatment of contraction and false anchylosis of the hip-joint has long been a desideratum in orthopaedic surgery.

In former times these sequelæ of morbus coxarius were more frequently met with than now, when the acute stages of the disease are more scientifically treated. Still, cases in which the femur is fixed at angles, varying from an acute or right angle to one where the foot is but slightly raised from the ground, are not of uncommon occurrence.

For twenty-five or more years it has been my practice to operate upon contracted muscles, tendons, or cicatricial tissues connected with the knee or hip joints: first, by subcutaneous section in the hip of the adductor longus, tensor vaginæ femoris, rectus, or sartorius, and in the knee of the biceps flexor cruris, semi-tendinosus and semi-membranosus, or such of these tissues as required division; followed by forcible rupture of the more deeply-seated adventitious impediments to free movements, — this *brisement forcé* being in all cases carefully gauged and measured as to the degree of power employed by the amount, estimated under ether, of resistance to be overcome.

After the joint has been thus loosened, and partially or completely straightened, the treatment in the knee is facilitated by the firm bearings to be obtained on the femur above and on the bones of the leg below. In the hip it is otherwise. The pelvis does not afford a fixed basis from which to act on the femur.

The best instruments in use by European and American surgeons but partially fulfill the required indications.

The attempt to extend the femur with any of these instruments causes the universally-recognized tilting of the pelvis, producing lordosis to a greater or less extent, thus more or less neutralizing the action of the apparatus.

The application commonly used, namely, a steel pelvic belt, with a long spring extending behind the trochanter and femur to a short distance above the knee, and strapped to the femur near its extremity, is inefficient and unreliable. It becomes easily shifted from its proper position, and when in position is rendered almost powerless by causing the incurvation of the lumbar vertebræ.

This instrument I modified by adding a broad back-board of steel, attached by a broad basis to the pelvic belt, and extending to the middle of the scapulæ. To this back-board, embracing its entire length from scapulæ to pelvis, was attached a wide abdominal belt. By this addition an endeavor was made to antagonize the action of the spring on the femur.

The desired result was not fully attained by this contrivance.

The inefficacy of the weight and pulley in cases of the nature under consideration needs no demonstration to any one who has tried the experiment.

It is requisite, in the first place, to render the pelvis a fixed centre, firm and immovable, — so firm that the leverage on the femur shall not raise the posterior brim and produce incurvation of the spine by the action of the unsevered contracted muscles and ligaments connected with the pelvic bones, and by the antagonism of the muscles arising immediately from the lumbar vertebræ and ilium.

Secondly, to secure an instrument by which, using the femur as a lever, we could extend or flex, abduct or adduct, from the joint.

These movements, to be effectual, must be carefully graduated and guarded to avoid pain, yet steady and *sure* in their action. To overcome these obstacles and

to meet these requirements constituted the problem to be solved.

Professor Bauer, in his Orthopædic Surgery, when treating of fixation of the hip, describes and pictures a concave block of wood, which is accurately turned and adapted to the posterior pelvis and nates from a plaster mould. This block, with the required straps, serves as a counter-extension to the weight and pulley, by which he makes direct extension.

The mattress arranged for the patient is divided into two unequal parts, and the block is placed between them: the shorter portion for the head and shoulders, and the longer for the lower limbs.

The apparatus now presented to the society consists of such a concave block, into which the pelvis sinks. The box is so shaped as to raise the lower part of the sacrum. The nates fit into cavities moulded for them, and the thighs lie in two troughs separated by a prominence rising up towards the pubis. A strong, wide, heavily-padded leather strap is fastened to the box on each side, and buckled anteriorly over the ilii, thoroughly securing them in position. From each side of the block, extending on the sides of the chest towards the axillæ, are two steel rods with knobs. To these rods is attached a belt of thick webbing, eight or more inches wide, which is strapped over the abdomen, and assists in preventing any rising of the lumbar vertebræ.

By these means the pelvis is rendered a solid fixture. To the upper edge of the box or block, and parallel with the anterior margin of the ilium on each side, a narrow bar of steel is screwed, which extends on a level to the lower third of the femur, just above the knee.

At this extremity of the bar are notches which admit the thumb-screw of a padded steel band which grasps the femur. This band is movable to allow of change of position and pressure, and swivels on a pivot to adapt itself to any angle required. In this bar or rod, opposite the hip-joint, two ratchet-screws are inserted, one moving the free extremity of the rod upward and downward, the other acting laterally inward and outward. The pelvis being first secured, as before described, we have here an almost irresistible force with which to extend or flex, abduct or adduct, and this may be accomplished by movements so regulated and graduated as to be almost imperceptible to the patient.

Practically, this has proved the only efficient apparatus for straightening the hip in the difficult cases to which I have referred. All who have attempted to treat cases of this description must have experienced the need of such an instrument.

NOTE. The block is so divided that a section can be removed to give place to a galvanized iron pan for the reception of the alvine and vesicle discharges.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

EMMET'S OPERATION FOR LACERATION OF THE CERVIX UTERI.

At the last meeting of the County Medical Society, May 23d, Dr. C. C. Lee, one of the surgeons to the Woman's Hospital, read a paper on The Proper Limitation of Emmet's Operation for laceration of the

Cervix Uteri. Among the contra-indications for the operation he mentioned pelvic cellulitis and peritonitis, as well as endometritis and acute cervicitis in the great majority of instances. There were also various general conditions which contra-indicated it, such as very marked anemia, chlorosis, constitutional syphilis accompanied by vaginal lesions, carcinoma, and, in short, any unfavorable state of the system, unless, indeed, the latter were due to the laceration. In selecting cases for operation the cardinal point was to be guided strictly by the *pathological import* of the laceration, and not by its extent or special character. In the course of the paper Dr. Lee alluded with approval to the practice originated by Dr. M. A. Pallen of operating upon the cervix immediately after labor in cases of post-partum hemorrhage due to laceration of the latter.

In the discussion which followed the reading of the paper, Dr. Emmet said that, in the light of his present experience, he would confine the scope of the operation within even narrower limits than Dr. Lee. The mere existence of a laceration of the cervix was of no special significance, and if there were no evil effects resulting from it there was not the slightest necessity for resorting to operative interference. When pelvic cellulitis was present in connection with laceration of the cervix, it was the physician's duty to cure the cellulitis first; and it would be found in a large proportion of cases that after this was accomplished all the patient's trouble disappeared, and no operation at all was required. This good result he believed to be due to the beneficial effect upon the circulation of the cervix of the removal of the pelvic inflammation, which always interfered seriously with the latter. If, however, the gap in the cervix were filled with a plug of cicatricial tissue, and the patient were anemic and affected with reflex symptoms, such as the various forms of neuralgia in different parts of the system, the operation was strongly indicated, and the most happy results might be expected to follow it.

Dr. Emmet was followed by Dr. Pallen, who contended, on the other hand, that the scope of the operation should rather be enlarged than further curtailed; believing that if it were performed more frequently, and in cases where there was at the time no trouble apparent, it would be the means of preventing mischief that would be very likely to ensue in the future. Among the other speakers was Dr. Polk, professor of obstetrics in the University Medical School, who expressed the opinion that in ordinary labors a great many lacerations of the cervix occurred which might otherwise be avoided, as a result of the premature rupture of the membranes by the accoucheur; and, in bringing the discussion to a close, Dr. Lee suggested that, in addition to the cause of laceration mentioned by Dr. Polk, the accident not infrequently resulted from the practice of dilating, or attempting to dilate, the cervix by means of the fingers.

—Subscribers wishing to pay their subscription for the Boston Medical and Surgical Journal will find an agent at the coming meeting of the Massachusetts Medical Society at Horticultural Hall, Boston, June 8th.

—A training school for nurses has been started in connection with the Mount Sinai Hospital, a building having been secured for the residence of the pupils, and a graduate of the Bellevue school placed in charge.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.¹

SECOND DAY. GENERAL SESSION.

DR. HUNTER MCGUIRE, of Richmond, chairman of the Section on Surgery, delivered a suggestive address upon Operative Interference in Gunshot Wounds of the Peritoneum, in which he took advanced ground in favor of interference as opposed to the expectant treatment.

Statistics from the Crimean, the French, and the late civil war in America show that more than nine out of every ten cases of wounds of the belly, opening into the cavity of the peritoneum, perish,—no other gunshot wounds being so deadly, not even penetrating and perforating wounds of the skull. In incised, punctured, and gunshot wounds of the peritoneum, the general plan of treatment has been to enjoin absolute rest, give opium to prevent peristaltic action, and encourage the formation of adhesions, in the idle hope of preventing extravasation into the peritoneal cavity.

In the opinion of the writer, when we remember that the alimentary canal is never completely empty, common sense teaches us, when an opening is made in any portion of the peritoneal cavity, that its contents will escape; that there will probably be less resistance to the passage of fecal matter through the unnatural aperture than along the sides of the canal itself. Gas may first be expelled, separating peritoneal surfaces, and then the fluid or solid contents of the bowel follow. Only one or two exceptions to this rule are reported in the history of the late war between the North and South. But, besides alimentary effusion, blood, air, bile, and urine may also be extravasated into the peritoneal cavity. Penetrating wounds of the belly, with fecal effusion, are rapidly followed by general acute peritonitis; ninety per cent. die, and within forty-eight hours. Does peritonitis from any other cause, as a rule, kill as quickly? In spite of the assertion of Malgaigne and others, that the organs contained in the belly fill the cavity to such repletion that shot wounds of that space without visceral injury are impossible, post-mortem examinations and experiments upon dead bodies show that wounds of the peritoneum can be made without injury to the contained viscera. It has fallen to the lot of the writer to witness four such cases. Two occurring in civil life, and being the subjects of legal investigation, careful autopsies were made. Two were soldiers dying from peritonitis, and the autopsies showed no visceral lesion. These four cases coming under the observation of one individual, and having their exact character shown by post-mortem examinations, prove that such results are not impossible, and probably not as rare as we have been led to suppose. Those rare cases of recovery from penetrating wounds of the abdomen have induced surgeons to continue the expectant plan of treatment in place of what appears, at first sight, to be a desperate surgical interference. Some of the alleged recoveries may have been wounds of a portion of the large intestine not covered by peritoneum. Recovery, with fecal fistula, is not uncommon in this case. Others may have been penetrating wounds without visceral injury; others, again, may have been parietal wounds without peritoneal penetration. In connection with the four cases of gunshot wounds of the peritoneum alluded to by the writer, and in which there was no visceral in-

¹ Concluded from page 474. Our reporter wishes to acknowledge his indebtedness to the Virginia Medical Monthly.

jury, the total absence of shock was remarkable, and no diminution of temperature was present. One of them (a soldier) assured the writer that he did not know that he had been wounded until some time after he had been shot. Another (wounded in a duel) insisted that he was able to stand up and fire at his antagonist again. On the other hand, in all cases with visceral lesions the shock of injury is a prominent symptom. The presence or absence of shock seems to be a diagnostic point of no little value. If to this be added sudden meteorism, the character, extent, and direction of the wound, bloody discharges from the bowels or stomach, an almost certain diagnosis by rational symptoms will be reached. In reply to the question, Why are these injuries so fatal? the writer attributes death to some kind of blood-poisoning connected with peritonitis, just as we often see septicæmia associated with peritonitis under other circumstances, notably after parturition and ovariectomy. Dr. McGuire believes that the blood-poisoning after gun-shot wounds of the peritonæum is consequent upon the pent-up, sero-fibrinous exudation which traumatic peritonitis invariably produces in abundance, and that if this effusion could be drained off as soon as it is formed septicæmia might be prevented. In lacerated wounds of the abdominal walls, with exposure of the cavity, protrusion of the contents and the introduction of foreign matter into the cavity are nothing like so mortal.

In all of these cases the nature of the wound prevents union by the first intention, and drainage of abdominal effusions is effected. In the fifty-nine cases of recovery after penetrating wounds of the large intestine fifty-five were perforating wounds, the large aperture of exit being usually on the posterior surface of the body, dependent, and facilitating drainage. In one of the four instances of recovery in simple penetrating shot wound of the large bowel, the edges of the opening in the bowel were fastened to the wound in the abdominal wall, and in this, as well as in the other three cases, fecal fistulae were formed. Shot wounds of the pelvis are nothing like so fatal as wounds of the peritonæum higher up. Unless accompanied by grave visceral lesion, three cases out of four of penetrating or perforating wounds of the pelvis recover. Can this fact be satisfactorily explained upon any other theory than that drainage in these wounds is almost unavoidable? Indeed, in these cases we are taught to explore the wounds with the finger, remove loose pieces of bone and foreign bodies, and keep the aperture of entrance and exit open, that free vent may be given to all inflammatory products; and if the size and position of the wound do not facilitate this we make the opening bigger and insert a drainage tube. Spencer Wells attributes the fatality after ovariectomy to some form of pyæmic fever, or some form of blood-poisoning so often associated with peritonitis, and thinks the lesson taught by many successful ovariectomists of providing for the escape of inflammatory matter of great value, and one which should be recalled by the surgeon who treats gun-shot wounds of the peritonæum. Ovariectomists even go so far as to wash out the cavity when peritonitis exists and death from septicæmia is imminent. In many of the cases of penetrating wounds of the peritonæum the ball passes obliquely through the abdominal wall, and the aperture shuts up like a valve, or, if passing directly through the parietes, the aperture of entrance contracts at once and closes. To all intents and purposes the cavity is

hermetically sealed, and the missile, pieces of clothing, blood from wounded vessels, fecal effusion, if the intestine is wounded, and inflammatory products, are all hopelessly imprisoned there. Can it be wondered at that such wounds are fatal? In no other gun-shot wounds of cavities do we allow the wound of entrance and exit to be closed. Who would think of shutting up the opening in gun-shot wound of the knee-joint? During the late war the plan of hermetically sealing up wounds of the pleura, a structure analogous to the peritonæum, proved most disastrous. In gun-shot wounds of the chest, involving the serous membrane, we keep the wound patent, and, if not dependent, we do not hesitate, when effusion takes place, to make a counter-opening with a knife or trocar, and sometimes to flush out the cavity with detergent and antiseptic lotions. In view of these facts the writer ventures to advocate operative interference in gun-shot penetrating wounds of the peritonæum, with intestinal injury, in penetrating wounds of the peritonæum with any visceral lesion, and in similar cases without visceral injury. The wounds in the abdominal walls should be enlarged, or the linea alba opened freely enough to allow a thorough inspection of the injured parts. Hemorrhage should be arrested. If intestinal wounds exist, they should be closed with animal ligatures, trimming their edges first if they are lacerated and ragged. Blood and all other extraneous matter should be carefully removed, and then provision made for drainage. If the wound of entrance is dependent, drainage may be secured by keeping this open. If the wound is a perforating one, and the aperture of exit dependent, the patency of this should be maintained, and, if necessary, a drainage tube of glass or other material introduced; if there is no wound of exit, and the wound of entrance is not dependent, then a dependent counter-opening should be made and kept open with a drainage tube. If it is urged that the means suggested are desperate, it can be said in reply that the evil is desperate enough to justify the means.

Dr. J. S. Billings, U. S. A., read a paper prepared for the Section on State Medicine, on Some of the Results of the Tenth Census as regards Mortality Statistics.

Early in the census year forms were prepared for a small register of deaths to be kept by physicians.

Each register contained twenty-four such slips, and a copy of the register, with a stamped envelope for its return at the end of the census year, was sent to every one in the United States who was reported by his or her postmaster to be a physician or to be addressed as such.

The registers, having been received, were examined by a skilled physician, who indicated on each slip the name of the cause of death to be used in tabulation. Very few of the registers were in such a condition that they could not be used for statistical purposes, although, as a matter of course, some of the causes of death reported could only be classified as unknown. This had been foreseen, and in the address above referred to it was expressly provided that the physician should use such terms as "paralysis of heart," "apnoea," etc., as equivalent to "unknown."

This point was not, however, made quite so clear as it should have been in the registers, as will be seen by examining the foot-note of instructions, although the intent was probably understood by the great majority of physicians. The number classified as "unknown"

was 4162 out of a total of 166,896, being about 25 per 1000.

The number of post mortems made in this number of deaths was 3755, or 20.7 per 1000.

When the examination and checking of these registers was completed they were taken apart, and as each leaf furnished the record of a single case they could then be used as cards, and readily assorted and classified in various ways. The first classification was into groups by counties. Those coming from the large cities were then set aside, and the remainder, representing the character of the fatal diseases in rural districts and small towns, were so compiled as to show by age, sex, and color the number of deaths from each cause.

The unit of area or locality used in this compilation was neither the State nor the county, but groups of counties in each State, selected according to altitude and topographical characteristics by the geographer of the census. Each State contained from two to six such groups, and thus we can group the prevailing causes of death on the sea-coast, on the table-lands, among the hills, etc.

As the number of deaths returned by physicians upon these registers has no definite relation to the actual number of deaths which occurred in any given locality, and still less to the actual population of that locality, these registers can only be used in this connection to show the proportional frequency of certain causes or groups of causes of death to the whole number of deaths reported in them or to each other. They have other and important uses.

The nomenclature and nosological classification adopted are essentially those used in the last census, being that prepared by the Royal College of Physicians.

The most important differences in it from the old nomenclature of the college are the abolition of the division of general diseases into two groups, — A and B, — and the placing in the general diseases the various forms of diarrhoeal diseases, which before were placed under diseases of the digestive organs. These modifications have been approved by the National Board of Health, and are now under consideration by the Committee of the College, which is engaged in the revision of the nomenclature.

After the compilation above referred to had been completed the slips were used to correct and complete the lists of deaths prepared by the enumerators. The blanks for these lists, which are known as the mortality schedules, differ from those used in previous censuses by having columns for the nativity of the father and mother of the decedent, the length of his residence in the county, the place where the disease was contracted, if not in the county, and the name of the attending physician. They also contain two supplementary schedules: one giving the names of those dying in the place, but belonging to families living in another county or State; the second giving names of persons belonging to families residing in the place, but who have died away from home in another county or State.

The first rough count shows that about 620,000 deaths have been returned upon these schedules. To these there will be added from the register slips above described about 50,000 deaths, and the records of the cities from which no enumerator's schedules are received will add about 80,000 more, making a total of about 750,000 deaths returned for the year, which, for a population of fifty million, give a death rate of fifteen

per thousand. While it is certain that this does not include all the deaths, it is evident that it is much more complete than previous censuses, — the total number of deaths for that of 1850 having been 323,098, being a mortality rate of 13.910 per thousand. In 1860 there were returned 394,153 deaths, being a mortality rate of 12.510 per thousand. Upon this last Professor Elliott constructed life tables, assuming a deficiency in returns of deaths of 41 per cent., or, in other words, that the true death-rate was a little over 18 per thousand. If this were assumed as the true death-rate for the last census year, the deficiency in returns would be less than ten per cent.

From this brief statement it will be seen that General Walker is to be congratulated upon the improvement which has been effected in the Tenth Census in regard to the completeness of the mortality statistics, and also that the medical profession of the country has contributed largely to the securing of this relative completeness.

In order to obtain as much information as possible with regard to the amount and distribution of the actual deficiencies in the mortality lists, the entire registers of deaths of two States and several large cities for the census year have been copied, and will be compared with the mortality schedules furnished by the census enumerators from the same localities. The results of this comparison will probably be interesting and valuable.

An attempt has been made in the Tenth Census to obtain the number of the population on the 1st of June who are so sick or disabled as to be unable to pursue their ordinary avocations, and also to give the causes of such sickness or disability. This attempt has never been made before in this country, and in other countries has only been systematically made, as far as I am aware, in the three censuses of Ireland for 1851, 1861, and 1871. It is too soon yet to speak of the results of this attempt, as the computations have not been made, but it is evident that either the returns will prove to be too imperfect to be of much, if any, statistical value, or amount of sickness is much smaller than has been usually supposed. Taking the State of Rhode Island, where the census was taken under the direction of a skilled superintendent, Dr. Snow, who had so small a territory to deal with that he could make sure of the knowledge and training of almost all his enumerators, and where it is to be presumed the population schedules have been filled out with the greatest accuracy and completeness, it is found by a count that the number reported sick and disabled, aside from those reported as blind, deaf and dumb, insane, crippled, etc., was a total of 3276 out of a population of 276,528, being in the ratio of 11.8 per thousand. Comparing this with the results of the Irish census of 1861, I find that the proportion of sick at their own homes reported in Ireland varied from 1 in 142 to 1 in 912 in the different localities specified, which is in the ratio of 7.01 and 1.06 per thousand respectively. It is usual to compute that for every case of death in a community there are two cases constantly sick.

It will be seen, if the estimate is correct, the Rhode Island census comes much more near completeness than that of Ireland. The only other source of comparison which I have thus far found available is that of the health of the army, in which I find that among the white troops for the year 1877 the average num-

ber constantly on the sick roll was 44 per thousand of mean strength.

Upon the whole, it seems probable that the results from the Rhode Island count are nearer the truth than any other data which we possess.

In conclusion, I think the Association will be glad to know that the work of tabulating these returns of deaths is going on rapidly, and that the results will be published in a form which will be found more satisfactory than the forms heretofore used, because it will present the comparison of mortality rates of countries and groups of countries as well as of entire States. The importance of these mortality records is very great, in fact, because for very large portions of this country they give almost the only positive data we can get for comparison of the truthfulness of different localities; in fact, because they will seem both as a pattern and an incentive for scientific work in this direction on the part of manufactures and States.

Dr. N. W. Davis, of Chicago, reported in behalf of a Committee on Atmospheric Conditions, and their Relations to the Prevalence of Disease. He recommended that a standing committee of five be appointed to take this extensive subject into consideration.

VI. OBSTETRICS AND DISEASES OF WOMEN. — The chair announced the following committees: —

Committee for Selection of Subject of Essay: Prof. E. S. Dunster, Michigan; Prof. G. M. B. Maughs, St. Louis; Dr. H. M. Field, Boston.

Committee of Award: Dr. Robert Battey, Georgia; Dr. Albert H. Smith, Philadelphia, Pa.; Dr. P. F. Mundé, New York city.

Committee to which Papers for Publication are referred: Dr. Joseph Tabor Johnson, Washington, D. C.; Dr. John Byrne, Brooklyn, N. Y.; Dr. H. P. C. Wilson, Baltimore, Md.

Dr. Joseph Tabor Johnson, of Washington, read a paper entitled Can we make a Positive Diagnosis of Pregnancy Previous to the Occurrence of the Audible Sounds of the Fœtal Heart and the Detection of the Fœtal Movements? He thought that in the softened condition of the cervix uteri and the pinkish color and increased temperature of the vagina we have quite a positive diagnostic evidence of pregnancy. It is admitted that the only positive and indisputable signs are determined by auscultation, ballottement, and fœtal movements; but these signs are not usually present in the first half of pregnancy. The presence of kiesteine in the urine, milk in the breast, the odor of vernix caseosa upon the finger as it is withdrawn from the vagina after a digital examination, the smooth condition of the anterior wall of the vagina and anterior cul de sac, associated with a pinkish-purple color of the vaginal mucous membrane, the placental souffle, the existence of *gravidene* in the urine, the presence of certain caseous elements resembling milk in the urine, were all passed in review as diagnostic signs of pregnancy; but no definitely stated conclusion was arrived at.

Dr. R. Beverly Cole, of San Francisco, did not hear the whole of Dr. Johnson's paper, but thought, from what he did hear, it was rather an interrogation than a treatise. He then stated that there were three physical signs of pregnancy which he relied upon chiefly, namely: (1) placental souffle; (2) pulsation of the cord; and (3) the sounds of the fœtal heart. He regarded the last as the best and most reliable of them all. The pulsations vary from 110 to 140, — double

that of the mother. He described the sound as resembling the ticking of a watch under a pillow. Dr. Cole thought no signs positive enough (generally) to justify one in giving *decided* opinions when consulted on this point.

Dr. Albert H. Smith, of Philadelphia, thought placental souffle the most unreliable of the signs mentioned by Dr. Cole. He was anxious, he said, to hear Dr. Joseph Tabor Johnson's results from the thermometric observations on the cervix uteri. He thought Dr. Johnson's suggestions in regard to the application of the telephonic principle to the uterine sound, and the use of the electric light for illuminating the vagina, very good, — quite brilliant, he would say. Liked the bi-manual method best of all.

Dr. Paul F. Mundé, of New York city, agreed with Dr. Smith. His favorite method was the bi-manual. He thought Dr. Smith had touched the key-note in making this statement. He thought that this method, taken with the other signs usually associated, would enable one to make out a case better than any other methods he knew of. He cited a case in support of his position.

Dr. Alexander Dunlap, of Ohio, agreed with Drs. A. H. Smith and Joseph Tabor Johnson. His method was the same, the bi-manual. The presence of fibroids may sometimes mislead, as they enlarge the womb, but they are generally hard when small; sometimes soft and dropsical when large, and rarely symmetrical. These points he thought it well to notice. Sanious discharge from the os is strong evidence of intra-uterine fibroid.

Dr. James M. Scott, of St. Louis, wanted to know if it was not a very difficult thing to use the bi-manual method on a fleshy patient, which was answered in the affirmative.

Prof. G. M. B. Maughs, of St. Louis, wanted to know if there were any signs by which we can tell if a woman is *not* pregnant. Dr. Maughs adhered to the original form of his query. He thought that we have an almost certain method, namely, the bi-manual, and that the measurement of the uterus laid down for the various weeks of pregnancy would enable us to determine after examining.

Prof. A. F. Erieh, of Baltimore, disagreed with Prof. G. M. B. Maughs, of St. Louis, on the ground that the standards of measurement are too variable. He thought the thermometric indications in the os uteri would prove of great value as an aid in diagnosis.

Dr. Robert Battey, of Georgia, arose, and stated that he was surprised that no gentleman had mentioned any of the following aphorisms, in doubtful cases: —

(1.) Always consider a married woman pregnant if living with her husband until *proved* otherwise.

(2.) Always consider an unmarried woman innocent till *proved* guilty.

(3.) Always believe that a woman married, of the highest character, living with a husband of equally high character, both solemnly assuring the medical man that no intercourse has taken place for two years, as she has been bed-ridden for that length of time, may bring forth a dead fœtus.

(4.) Always believe a young unmarried woman with abdominal tumor, of high social position and unimpeachable virtue, if she has been watched over by a platonic and abstemious young cousin of the male persuasion, while the mother went out, to be pregnant.

(Applause and laughter.)

Dr. James R. Chadwick (chairman), of Boston, drew a diagram on the board of the pelvic organs, and illustrated his methods of bi-manual examination.

Dr. Albert H. Smith, Philadelphia, drew a representation on the board of a thermometer made with an angle and guards for taking the temperature of the cervix.

Dr. J. R. Chadwick stated that he had noticed blueness of the vagina in many cases of pregnancy at various stages.

Dr. Alex. Dunlap, Ohio, is very careful about introducing the sound. He makes his digital examinations whilst the patient is standing.

Dr. Johnson asked Dr. Dunlap to give his experience as to the blue color of the vagina in cases of fibroids.

Dr. Dunlap said that as he rarely used the speculum he had none.

Dr. Paul F. Mundé, New York city, exhibited a curette for the removal of adherent placenta after abortion, designed by himself. He said he thought it best to remove the placenta reasonably soon, if it did not come away, in cases of abortion.

VII. PRACTICE OF MEDICINE. — The session opened with the reading of two papers on Pneumonia, one from Dr. Prentice, of Washington, and one by Dr. W. C. Dabney, of Virginia, both advocating the zymotic theory of the disease.

Dr. L. Duncan Bulkley, of New York, read a paper upon The Diet and Hygiene of Eczema. The paper was based almost wholly upon the experience of the writer. After calling attention to the effect which certain articles, as shell-fish, strawberries, bananas, etc., produced upon the skin of those who were peculiarly disposed thereto, in causing erythema and urticaria, and also the well-recognized eruptions from iodide and bromide of potassium, quinine, etc., he stated that in like manner articles of food and modes of life surely did produce cutaneous changes, and that the genesis and obstinacy of many cases of eczema rested upon errors which existed in nutrition from faulty diet and hygiene. Give perfect nutrition, and eczema disappears. The errors were not always apparent, and often required to be searched for.

In regard to the true meaning of dieting in this connection, he did not intend thereby a starvation process, but his definition of diet was as follows: "Such a regulation of the quantity and quality of the food and drink taken, its mode of preparation and time and method of consumption, as shall conduce to the restoration and maintenance of health."

Dr. Whittaker, of Cincinnati, read a paper on the Treatment of Diphtheria, taking the ground that diphtheria was first a local and afterwards a general disease; that it is only when the epithelial barrier is broken down that the blood and the body become infected. The essayist maintained that the poison passes over into the blood little by little, new quantities reinforcing the first installments, until the blood is super-saturated with the disease. The treatment of the poison at the local depot and neutralization of virus in the blood were both necessary.

Dr. Henry A. Martin, of Boston, read a paper upon the Variola Vaccinæ and Variola Equinæ in Massachusetts. He reported a series of cow-pox (which were, so far as he knew, the first authentic cases reported in this country) which were of great interest. He also reported a case of variola equinæ, the

seventh authentic case since the days of Jenner. In conclusion, he moved that this section recommend to the Association that a committee be appointed to visit the various farms and investigate the whole subject of bovine virus, as it was one subject to many and great abuses. The motion was carried.

FOURTH DAY. GENERAL SESSION.

The Association considered the amendment to the code of ethics.

Dr. J. S. Billings then offered the following substitute for the original:—

"It is not in accord with the interest of the public or the honor of the profession that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

The substitute was adopted.

The committee on nominations reported the following additional officers, who were elected:—

Practice of Medicine: chairman, Dr. J. A. Oosterlony, Kentucky; secretary, Dr. Deering J. Roberts, Tennessee.

Surgery and Anatomy: chairman Dr. J. C. Hughes, Iowa; secretary, Dr. William A. Byrd, Illinois.

Obstetrics: chairman Dr. H. O. Marey, Massachusetts; secretary, Dr. C. V. Mottram, Kansas.

Medical Jurisprudence and State Medicine: chairman, Dr. A. L. Gihon, Washington, D. C.; secretary, Dr. J. H. Sears, Texas.

Ophthalmology, Otology, and Laryngology: chairman, Dr. D. B. St. John Roosa, New York; secretary, Dr. J. Solis Cohen, Philadelphia, Pa.

Diseases of Children: chairman, Dr. S. C. Busey, Washington, D. C.; secretary, Dr. William Lee, Baltimore, Md.

Dentistry: chairman, Dr. D. H. Goodwillie, New York; secretary, Dr. P. W. Brophy, Illinois.

Judicial Council: Drs. S. N. Benham, Pennsylvania; J. M. Toner, Washington, D. C.; D. A. Linthicum, Arkansas; William Brodie, Michigan; H. S. Holton, Vermont; A. B. Sloan, Missouri; R. Beverly Cole, California.

THE ASSOCIATION OF MEDICAL EDITORS.

The Association of Medical Editors met at Exchange Hotel on Monday evening, May 2d, at 8:30 o'clock. In the absence of Dr. J. F. Shrady, president, Dr. Oosterlony was called to the chair, Dr. D. S. Reynolds, secretary.

Dr. Shrady's address was read by Dr. Carpenter, and on motion it was ordered that the same be printed.

The committee on necrology (Drs. Dunster, Cole, and Edwards) was appointed. The committee reported the death of Drs. Davis and Cowling during the past year, and requested indulgence for the preparation of their report on memoirs, which was granted.

The committee on nominations reported as follows: president, Dr. Landon B. Edwards, Richmond, Va.; vice-president, Dr. Ralph Walsh, Washington; secretary, Dr. D. S. Reynolds, Louisville.

The Association adjourned to meet on the Monday evening preceding the annual meeting of the American Medical Association.

THE PENNSYLVANIA STATE MEDICAL SOCIETY.

THE thirty-second annual meeting of the State Medical Society at Lancaster, Pennsylvania (May 11th to 13th) was the largest ever held by that body, about two hundred and sixty-five delegates being present. Among the papers read were the usual addresses on recent advances in several departments of medicine, and reports upon special subjects, and about twenty essays upon various topics.

The Address in Medicine was delivered by Dr. J. Solis Cohen, of Philadelphia; it was practical in character, and contained some apposite remarks upon the free and indiscriminate use of new remedies, the physiological effects of which have not been established, and cited several cases in which such clinical experiments had produced dangerous symptoms. The Address in Surgery was delivered by Dr. S. M. Ross, of Blair County. The Address in Hygiene by Dr. B. Lee, of Philadelphia; in Obstetrics by Dr. S. T. Davis, of Lancaster; and in Mental Diseases by Dr. S. S. Schultz, of Danville. A number of practical papers upon miscellaneous subjects were discussed in the two daily sessions; and a very able annual address was delivered on the evening of the first day by the president, Dr. John T. Carpenter, of Schuylkill County.

A resolution memorializing the legislature, and insisting upon the appointment of female physicians in insane asylums, did not pass the association; the same fate met one permitting representation to the Philadelphia College of Physicians.

Considerable attention was paid to the necessity of preparatory education of medical students, very able communications upon this subject being presented by Dr. Traill Green, of Easton, and Dr. O. H. Allis, of Philadelphia. Every county medical society, by a standing resolution of the Pennsylvania State Society, is now obliged to have a board of examiners, whose duty is to examine into the qualifications of every young man desiring to study medicine previous to entering the office of a member of the society as his preceptor; and members are obliged to have their office students approved by such board of examiners under penalty of discipline.

The committee on the State Board of Health reported progress; there appears to be some hope that the bill now before the legislature may become a law, but it has not yet succeeded in obtaining the necessary authority.

The following officers were unanimously elected:—

President, Dr. J. L. Ziegler, of Mount Joy. Vice-presidents, Dr. Jos. A. Reed, of Allegheny; Dr. W. L. Roland, of York; Dr. J. W. Houston, of Chester; Dr. W. Murray Weideman, of Berks. Permanent secretary, Dr. W. B. Atkinson, of Philadelphia. Recording secretary, Dr. G. Thicksow, of Erie. Corresponding secretary, Dr. O. H. Allis, of Philadelphia. Treasurer, Dr. Benj. Lee, of Philadelphia.

Next place of meeting, Titusville, Crawford County, Pa., on the second Wednesday in May, 1882.

Recent Literature.

Lectures on Diseases of the Nervous System, especially in Women. By S. WEIR MITCHELL, M. D. Philadelphia: Henry C. Lea's Son & Co. 1881. Pp. 238.

The preface says: "The lectures which compose this volume deal chiefly with some of the rarer maladies, or forms of maladies, of women. Many of them are original studies of well-known diseases, and others deal with subjects which have been hitherto slighted in medical literature, or which are almost unknown to it."

Probably Dr. Mitchell is better qualified by experience than others to write upon these subjects, and he has certainly produced a very interesting book. The first chapter is devoted to the Paralysis of Hysteria. The author takes a thoroughly sensible view of the subject, does not have confidence in the possibility of speedy cures in all cases, but looks rather to "slow, steady, hopeful training of the will-powers through every-day effort, which needs some caution not to err in the way of excess."

Next follow chapters on Hysterical Motor Ataxia, Hysterical Paresis, Mimicry of Disease, Unusual Forms of Spasmodic Affection in Women, Tremor, Chronic Spasms, Chorea of Childhood. This latter chapter is devoted to a discussion of the meteorological conditions favorable to the outbreak of chorea. The largest number of cases were found to occur in March. Dr. Mitchell has also compared the frequency of chorea with the occurrence of storms, a subject which it would be interesting to pursue still further. He also refers to the frequency with which chorea recurs, and thinks that by giving arsenic in the spring he has prevented the recurrence.

The chapter on Habit Chorea is devoted to a subject not often referred to, excepting very incidentally, one which is very troublesome to both friends and physicians, though often the patient is singularly unconcerned in regard to the infirmity.

Disorders of Sleep in Nervous or Hysterical Persons is devoted to certain shocks occurring while the patient is falling asleep or during the earliest part of the night's rest, which are not only very annoying, but frequently give rise to great anxiety in the patient's mind, lest they should be precursory of more serious disturbance.

This chapter is of much interest, and would have been still more so if the author had given an explanation of these phenomena.

In the chapter on Hysterical Aphonia is recorded the method of teaching the patient to talk by beginning with sounding the simple vowels, having previously filled the lungs with air, and then advancing to consonants and more complex sounds.

The book closes with a chapter on Treatment by Seclusion, Rest, etc., in which the author gives his latest views in regard to such treatment. In this chapter there is not much variation from the opinions and directions given in *Fat and Blood*. Dr. Mitchell emphasizes the importance of having a good nurse, and that the nurse and patient should harmonize with each other. This is a very essential point in the treatment of such cases.

Such is, in brief, the object of the book and the general scope of its teachings. A short notice cannot do justice to the book; there are many valuable hints in regard to diagnosis and treatment scattered through the work.

It might be more interesting, perhaps not more useful, if greater attention had been given to a fuller consideration of the nature of some of the affections described.

S. G. W.

Diseases of Children. By DR. WM. HENRY DAY, F. R. C. P., London, Physician to the Samaritan Hospital for Women and Children. Second edition, revised and enlarged. 8vo, 752 pages. Philadelphia: Presley Blakiston, No. 1012 Walnut Street. 1881.

Dr. Day has been a frequent contributor to the different English medical journals, and is also known as the author of a book entitled *Headaches, their Causes, Nature, and Treatment*, which has been well received by the profession, and has already reached its third edition. The present work has rapidly reached a second edition, and from the date of the author's preface we infer that the American edition appears simultaneously with its publication in England. Dr. Day brings to his task a large experience, and evidences a very thorough knowledge of the literature, native and foreign, pertaining to this special branch of medicine. One of the notable features in this treatise is the very large use made by the author of extracts and quotations from the works of others, and from articles taken from the medical journals, which his wide and varied reading has placed at his disposal, and which, as a rule, have been carefully and judiciously selected. The references are always most punctiliously given, and while the work may not have the same stamp of originality that has marked other similar works that might be named, we think that in the present case it would be detrimental to its usefulness were this feature not a prominent one.

There is a good index at the end of the book, and also a descriptive heading before each chapter.

There are, for those who desire such aid, ninety-four prescriptions to be found interspersed through the pages, and these have been collected together at the end of the book, numbered in the order in which they follow each other, and also have set against each "formula" the page on which they are found.

We find the usual preliminary chapters in this case under the head of Introductory Remarks, Milk Diet and Hygiene, and Acute and Chronic Disease, after which follows the consideration of the special diseases.

We confess to a feeling of dissatisfaction with much that the author has to say upon the treatment of children's diseases. There is a too great readiness to resort to active and powerful drugs; there is not enough credited to the natural history of disease, and a want of appreciation of the part self-limitation plays in many acute diseases, as well as a desire to intervene too much for the purpose of "expediting the different stages."

It savors of a time which we thought had long gone by to read in the treatment of acute disease, page 56:—

"The remedies we employ are, as a rule (at least at an early stage), antiphlogistic and eliminative, such as venesection and the use of calomel and antimony."

Tartarated antimony is spoken of in croup as "our sheet anchor for its effect in producing free and speedy vomiting," to be followed, if there be much febrile excitement and disordered *prima via*, by one grain of calomel every four hours, or one full dose for the purpose of emptying the bowels and controlling the fever; and in the fibrinous form, when there is violent and acute inflammation, with a firm, hard pulse, and a full reserve of strength, two or three leeches may be applied over the xiphoid cartilage." (Page 332.) Tartar emetic is spoken of as "a most useful drug" in the treatment of pneumonia, given to children, when strong, for a

short time, in doses of one twelfth to one sixth of a grain. With the tendency to exudation of lymph mercury is said, "as an antiphlogistic to shorten the stage of exudation and promote and shorten the absorption of the newly-effused lymph before it has had time to become organized, and to act as an irritant to the surrounding healthy structures." Small doses of calomel and James's powder are recommended for this purpose.

In the treatment of pleurisy, while a small dose of antimony at the beginning, every four hours, is recommended, to be added to the solution of acetate of ammonia and a few drops of laudanum, as lowering the pulse and promoting diaphoresis, he adds at the same time that it "is far less beneficial than in pneumonia; and unless the case is complicated with the latter affection it is quite secondary to calomel and opium." (Page 435.)

"Calomel with Dover's powder," he writes, "is a good combination;" and if there is not much pain the mercurial may be given with nitrate of potash and James's (antimonial) powder."

In the author's recommendation of the employment of tincture of aconite, as advocated by Ringer, in various febrile diseases, especially in scarlatina, tonsillitis, and sore throat, it should be remembered that the preparation of the United States Pharmacopœia is between two and three times stronger than that of the British. This precaution is particularly necessary, as the dose prescribed by him of half a minim (one drop) every hour or half hour would be unsafe unless with older children and under a most careful watching.

There are but few errors to notice among the prescriptions. In Formula 24, page 185, 3i. should read ʒi. In Formula 57, page 379, *ad* should read *aa*. In the list at the end of the book, Formula 32, *Acid. nucis vom.* should be *Tinct. nucis vom.* In the same list, Formula 42, *Aquæ ad ʒiv.* should read *Aquæ ad ʒiv.* The author describes the "compound phosphorated cod-liver oil" of Savory and Moore, which is recommended by him in the treatment of phthisis pulmonalis. (Page 521), as containing in each fluid drachm one grain of iodine, two grains of bromine, and one fortieth of a grain of phosphorus. This must, of course, be a mistake.

The book has been written with great care, and the author is a good writer. The publisher's part of the task has also been excellently performed.

Mr. Spencer Wells's Note-Book for Cases of Ovarian and other Abdominal Tumors. London: J. and A. Churchill, New Burlington Street. 1881.

A new edition (the sixth) of Mr. Wells's Note-Book for recording cases of ovarian tumors is just published. To a surgeon who operates for the removal of abdominal growths this little book is very valuable. It saves time, and when filled out describes the case so that the diagnosis is much more easy; besides, when the case books are filled and accumulate they can be bound and preserved, a ready book for reference, as well as a very useful one to lend a nurse in charge of her first case of ovariectomy. The only alteration in the book is the substitution of a better diagram on page 3, and a note in regard to whether spray is used. Since 1878, when Mr. Wells began to use spray, he has had 137 cases of ovariectomy, with 13 deaths, a mortality of 9.4 per cent.

J. H.

Medical and Surgical Journal.

THURSDAY, JUNE 2, 1881.

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No. 4 PARK STREET, BOSTON, MASS.

THE CELEBRATION OF THE CENTENNIAL ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

IN the last issue of the JOURNAL attention was called to the measures adopted for the reception and entertainment of the members of the Massachusetts Medical Society who may attend the approaching centennial anniversary. The committee of arrangements of the society desire again especially to emphasize the following details.

It is especially important that members should bring their tickets of invitation, already sent out with the programmes, as no duplicates are issued.

Tuesday, June 7th. The special train for Brighton will leave the Boston and Albany station, Beach Street, at 8.45 A. M. precisely, and the Columbus Avenue station two minutes later. Visitors to Cambridge take the horse-cars from Bowdoin Square, Boston.

Guides will be stationed at Quincy Street and Harvard Square, Cambridge, and at the various points of interest.

The doors of Sanders Theatre will be open to the society and to the public at 10.30 A. M., and the centennial oration will be delivered at eleven o'clock.

At 12.45 P. M. cars will be in waiting at Memorial Hall, and will start immediately for Bowdoin Square, where barges will be in readiness to convey members of the society to Rowe's wharf, whence the steamer will start at two P. M., or upon the arrival of the last barge from Bowdoin Square.

The harbor excursion has been so arranged that the steamer will reach Boston on its return as early as 6.30 P. M.

Wednesday, June 8th. The tickets of invitation give free admission to the Art Museum in the morning.

The Museum of the Boston Society of Natural History, the Institute of Technology, Trinity Church, and the historical exhibition in Horticultural Hall will be open to members of the society from nine A. M.

The latter exhibition will be one of especial interest, and will well repay careful inspection.

At twelve M. the doors of Horticultural Hall will be closed, and will remain closed during the delivery of the oration. When opened at the conclusion of the oration members are requested to enter the hall and join the procession, as called by classes, to the dinner, as by so doing they will assist in avoiding the confusion incident to a crowd at the Music Hall entrance.

AN HISTORICAL AND COMPARATIVE EXHIBITION OF MEDICAL INSTRUMENTS AND BOOKS AND OF MEDICINES.

TO many, one of the most attractive and interesting features of the celebration of the one hundredth anniversary of the Massachusetts Medical Society will be the comparative and historical exhibition of instruments, apparatus, books, and medicines which will be open to visitors at nine o'clock Wednesday morning, June 8th, in lower Horticultural Hall. The Metric Bureau will also contribute to this exhibition. The collection of apparatus and of surgical instruments is in charge of Drs. J. O. Green and E. H. Bradford, and is designed to illustrate the progress made in this direction within the past century, embracing, as it will, the old and the new.

The collection of books, which it is thought will be particularly fine, is in charge of Dr. David Hunt, and will be confined to old and rare medical works.

The contemplated display in materia medica and pharmacy will illustrate the advance in these departments during the past century. It is in charge of Dr. Wm. P. Bolles, and will consist of:—

(1.) A collection of drugs, showing; *a*, those which have been in use during the entire century; *b*, those discarded; and *c*, those introduced during the same time.

(2.) Active principles, with the dates of their discoveries.

(3.) Illustrative modern preparations.

(4.) Novelties: *a*, drugs, *b*, preparations.

(5.) Ephemeral drugs.

(6.) Obsolete mixtures and pharmaceutical curiosities. This scheme does not include instruments or mechanical appliances; these will form a separate feature in the exhibition, and are in the care of other hands.

(7.) Medicinal plants, living, pressed, and painted.

The cabinets of the medical department of Harvard University and of the Massachusetts College of Pharmacy will form the basis of the exhibition, and it will be completed by donations (of which many are already promised) and by purchase. These additions, after the anniversary is over, unless their disposal is especially provided for by the donors, will be kept for the benefit of the institutions above mentioned.

From the Botanic Garden and the Herbarium at Cambridge a fine display of living and pressed medicinal plants is expected.

The bottles and labels are to be uniform, and will be provided by the society.

It will be seen from the above plan that the exhibition is to be purely historical and scientific in character, and that it must be restricted to such proportions as are consistent with this object. Every form of advertising will be necessarily excluded.

A card or bulletin will be displayed, upon which a courteous acknowledgment to contributors will be made.

Members of the society are advised not to omit visiting this exhibition, forming, as it will, both a novel and very instructive feature of the celebration.

RESISTANCE TO TYRANTS IS OBEDIENCE TO GOD.

To whom it may concern, but especially to members of the Massachusetts Medical Society:—

A despot! and an oligarchy! having conspired how not to do it, and a certain number of irresponsible members of the Massachusetts Medical Society having announced on a slip prefixed to the first page of the JOURNAL that they will do it, we think some asperities may be softened, and the minds of our readers be cleared up by the reproduction of the following extracts from the society's records:—

"Councilors' Proceedings, June 8, 1880: Dr. Bronson requested the president to rule upon the following: Can a question now upon the table of the councilors, *if taken therefrom and acted upon affirmatively during the current year*, be also acted upon at an adjourned meeting of the society from to-morrow? The president replied that it could.

"Society's Proceedings, June 9, 1880: Dr. Bronson stated that a question was *now pending before the councilors*, namely, that of the admission of women to the society, on which the councilors might take such action during the coming year *as would require the concurrent vote of the society*. In view of such a contingency, and to meet it, *should it arise*, he offered the following:—

"*Voted*, That when this meeting adjourn it does so to meet at the place of annual meeting on Tuesday preceding the annual meeting of 1881, at four o'clock, P. M.

"After discussion the motion of Dr. Bronson was adopted. A true copy. Attest: F. W. Goss,

Recording Secretary."

The contingency above referred to did not arise, the councilors not having voted on the question, and it certainly seems very desirable that the subject of despotism and that of women should be kept distinctly separate, as far as the incorporated body known as our State Medical Society is concerned, whatever may be the unfortunate association between these words in the minds of some members in connection with the small organization known as the family.

MEDICAL NOTES.

—Subscribers who desire to do so can pay their subscriptions at the coming meeting of the Massachusetts Medical Society, June 8th.

THE LATIN INSCRIPTION ON DR. J. B. S. JACKSON'S PORTRAIT. A CORRECTION.

—As a number of errors found their way into the type of the Latin inscription on the portrait of J. B. S. Jackson as given in the report of the meeting of the Improvement Society in our last issue, we reproduce the inscription entire:—

JOHANNES B. S. JACKSON, M. D.,
Anatomici Pathologici Præstantiss., Anatomie Pathologicæ
Prof. Harv., Musculi Pathologici conitoris, Societatis
pro Medicina Progressu constituta decoris et præ
sidi, Hunc typhum Solatus ejus gratia
Memoriæ dedit.
A. D. MDCCCXXXI

—The Washington Training School for Nurses held their graduating exercises in the Congregational

Church, Tuesday evening, the 24th instant. The church was packed with an audience of interested people to witness the conferring of certificates upon the first class of graduates from this institution. The president of the society, Dr. Toner, presided, and opened the exercises by an appropriate address, giving such an interesting history of this institution that we give it in full. On the conclusion of these remarks, Dr. William Lee, a member of the medical faculty of the training school, made a very felicitous address, contrasting the efficiency of "Sairy Gamp" in the sick-room with that of the trained hospital nurse of to-day.

NEW YORK.

—Several important bills, from a sanitary point of view, have recently been passed by the legislature. Among them is the act to secure the registration of plumbers, and the inspection of plumbing and drainage in the cities of New York and Brooklyn, which provides for the registration of all plumbers, in order that the artisans engaged in this important branch of industry can be relied upon by the community as being qualified to perform the duties of their vocation, and that prior to the construction of new buildings plans for plumbing the same shall be submitted to and approved by the boards of health of New York and Brooklyn. Other bills passed were: the act conferring upon the State Charities Aid Association the power to visit and inspect any of the state, county, or town charitable institutions in the State, which has been pending for some time; and an act to promote the health of female employees, which makes it a misdemeanor not to provide and maintain suitable seats for the use of women employed in mercantile establishments, and directs that they shall be allowed to remain seated for a reasonable time each day.

—The committee on experimental medicine of the State Medical Society, which includes the names of such men as Drs. James R. Wood and Willard Parker, of New York, Joseph C. Hutchinson, of Brooklyn, S. O. Vanderpoel, of Albany, and H. D. Didama, of Syracuse, and which was especially appointed for the purpose of protecting experimental investigations from harmful interference, has addressed a communication to the Society for the Prevention of Cruelty to Animals, in which they protest against such interference on the part of the latter society in the matter of vivisection. In it they set forth that should the efforts made in the name of the society succeed in preventing this by legal enactment, a lasting detriment to the cultivation and improvement of medicine would ensue; that the experiments in question are not performed in a spirit of wanton cruelty, nor in such a way as to inflict needless suffering upon the animals employed; and that the information acquired by their means is often of the highest value for the protection of life and property.

—The hot weather that occurred during the week ending May 11th had a very appreciable effect upon the mortality of the city, and the deaths for the week reached the very high figure of eight hundred and twenty-two.

Miscellany.

"UNNECESSARY OPERATIONS IN UTERINE SURGERY."

MR. EDITOR, — I have read with much interest the admirable paper On Unnecessary Surgical Operations in the Treatment of the Diseases of Women, by Clifton E. Wing, M. D., recently published in the JOURNAL. With the doctrines therein enunciated I fully concur. His statement that "*lacerations involving the sphincter muscle and the rectum*" (the italics are Dr. Wing's) "of course always demand operative measures" prompts me to relate a case which happened in my own practice. June 17, 1877, I attended a little lady in her first labor. I say advisedly a *little* lady, as her normal weight was but eighty pounds. Although of such diminutive size, she was plump, admirably proportioned, a little model of perfect womanhood. The head had for some time lain low in the excavation; the perinæum was fully distended, but the vulva refused to dilate. I applied my forceps, and just as the head was emerging from the outlet she suddenly threw up the pelvis (thus altering the line of traction), the thin distended tissues gave way, and a fearful laceration was the result. Perineal resistance was so completely done away with that not only the head, but the whole body of the child, as it were, *dropped* out. The child weighed nine pounds and four ounces. Not only was the perinæum torn throughout its whole extent, but also the sphincter ani, and the rent extended fully two inches up the rectum, causing very profuse hemorrhage from the hemorrhoidal veins. I frankly told the patient and her husband what had happened; explained to them the nature of the injury and its extent, and that at some future time it would necessitate a surgical operation. So perfectly was all control of the bowels lost that for many days when she would have a passage from the bowels, so hard that it could be taken up in the fingers, the first intimation she would have of its presence would be by the scent. The injury was of such extent I deemed anything short of an operative procedure utterly useless, and so did absolutely nothing, save directing the nurse to keep the wound clean. I did not even tie her knees together. To my surprise and delight the wound soon filled with healthy granulations, and in less than two months it was perfectly healed, the normal action of the sphincter restored, and the woman as well as ever. May 10, 1878, I again attended her in confinement, when, after an easy labor and without the slightest difficulty, she gave birth to a child weighing nine pounds and twelve ounces. Scarcely any trace of cicatrix from the laceration could be discovered.

T. C. WALLACE, M. D.

CAMBRIDGE, N. Y., May 17, 1881.

LETTER FROM LEIPSIC.

MR. EDITOR, — Prof. Karl Thiersch, of Leipsic, recently presented in his clinic three cases of extirpation of the larynx for carcinoma. The results were different in the three cases, and seem sufficiently interesting to be reported. In one case recovery is complete, and there are no signs of recurrent disease, after a lapse of ten months. Another case is still living, three months after the extirpation, but has large recurrent growths, and will soon die. A third case died of pneumonia three or four days after the extirpation. The

method of operation was essentially the same in each case, and need be detailed but once.

The patient was a woman, fifty-seven years old. For a considerable time past she had had great difficulty in swallowing, but could breathe well. Examination externally showed the larynx to be widened, but there were no enlarged lymph glands to be felt. Examination with the laryngoscope showed a growth in the lower part of the pharynx, rough and villous, looking like cancer. How far down into the œsophagus it extended could not be determined. A sound could not easily be passed into the œsophagus. The epiglottis and anterior part of the larynx were normal, and a view could be obtained with the laryngoscope down into the trachea. The membrane covering the arytenoids and that in the sinus pyriformis was œdematous, but showed no foreign growth. On December 9th tracheotomy was performed low down, below the isthmus of the thyroid gland, that the patient might become accustomed to the tube before the larynx was extirpated. Five weeks later the operation for the removal of the larynx was performed. A Trendelenburg tampon tracheotomy tube was inserted into the trachea, which prevented blood entering the lungs. This tube is constructed with two walls. The inner is continuous; the outer has an opening in its side. About the tube, and inclosing this opening, is tied a membrane of rubber; so that when inflated through a rubber tube connected with an opening at the upper part of the cavity, between the double-walled tracheal tube, the membrane can be inflated, filling the trachea so as to prevent the entrance of blood into it. An incision was made from one half inch below the chin to within one half inch of the tracheal tube, and transverse incisions were made from the upper extremity of this incision to the angle of the jaw, and from the lower extremity outward for about two inches on either side.

The sterno-hyoid and thyroid muscles were then dissected away, the inferior thyroid arteries were tied, and the trachea was divided at about two inches above the sternum, not so low, however, as the opening for the tracheal tube. The larynx with the thyroid gland was dissected free from the œsophagus, but at the upper part of the larynx the new growth was found to connect the two, so the œsophagus was also divided. The superior thyroid arteries were tied, and the pharynx and larynx were removed up to a level with the hyoid bone. The growth was found to extend downward in the œsophagus, so that this was cut away down to the same point at which the trachea had been divided, beyond which point the œsophagus appeared to be healthy. During the operation there was no severe hemorrhage. The common carotid and first part of the external carotid on either side were fully exposed for about four inches. A rubber tube, about three eighths inch in diameter, and sufficiently long to reach the stomach, was inserted into the œsophagus, and held in place by a thread passed through the rubber tube, and hung over the tracheal tube. The flaps of the wound were laid in place, stitched together, and drainage tubes were laid under them. The patient, chloroformed badly at first, wholly stopped breathing twice, but revived after performing artificial respiration for a short time. The day after the operation the patient was apparently in good condition, and was doing well. The day following she developed pneumonia, and a day or two later died. The post-mortem examination showed that the patient had died from pneumonia, re-

sulting from the inhalation of foreign substances into the lungs. This had been prevented, as was supposed, during the operation by the double tracheotomy tube, with the inflated membrane filling the trachea, but had occurred subsequently through the divided end of the trachea.

The patient whose recovery was complete is a man fifty-two years of age. He had had difficulty in breathing for about five years previous to operation, and this had gradually increased until it had become very great. On March 3, 1880, tracheotomy was performed, preparatory to the operation for extirpation. On April 15th the larynx was extirpated. The patient made a good recovery from the operation, and on February 8, 1881, ten months later, was shown in the clinic. The patient looks well, has a good appetite, can work, and shows no signs of recurrent disease, and is apparently cured. He can talk, breathe through his nose, and eat in the normal manner. The connection of the mouth with the trachea and œsophagus is accomplished by means of a peculiarly constructed tube. After the incisions for the removal of the larynx have nearly closed, there still remain three openings: one into the trachea, which holds the tracheal tube; one at the upper extremity of the divided œsophagus, which holds the long tube going into the patient's stomach, and through which he is fed; a third opening leads upward into the pharynx, through which the saliva constantly runs down upon the neck. When the parts are healed a tube is inserted into the openings. This tube differs from a common tracheotomy tube. To an ordinary tube is added another part bending upward from the part of the tube which projects externally from the trachea, just as the part which is inserted into the trachea bends downward. These two tubes (namely, those bending upward and downward in the same manner and with the same curves) open into the part of the tube projecting forward. The anterior part thus becomes common to both tubes. If a cork is placed in the part of the tube projecting anteriorly the patient breathes through his nose in the usual manner, the air entering the tube which projects upward into the pharynx, and passing downward into the trachea. If the cork is removed from the anterior portion of the tube the patient breathes as do other patients who have had tracheotomy performed. When the patient swallows, the food passes behind the tube going up to the pharynx, and enters the upper divided end of the œsophagus. To prevent foreign bodies entering the lungs when the patient eats or drinks the cork is removed from the portion of the tube projecting anteriorly. Thus the small amount of matter entering the tube projecting into the larynx comes out at its anterior opening. Solids give very little trouble, and when fluids are swallowed very little enters the pharyngeal tube. Over the end of the tube extending up into the pharynx are fastened two pieces of rubber tissue, the edges of which are parallel to and separated from each other but a short distance, and resemble, and in fact take the place of, vocal cords, so that the air passing between them produces a distinctly audible sound. The patient talks quite distinctly, but there is no modulation of the voice. His talking reminds one of an intoned service heard from a distant corner of a large cathedral.

A third patient mentioned is a woman, forty years of age. Three months have elapsed since the larynx was extirpated, but there have been recurrent growths, which must soon destroy the patient. The operation

was done after the usual method, tracheotomy having previously been performed. The patient did well, and was fed by means of the rubber tube, which remained constantly in the œsophagus, being long enough to reach the stomach. The patient was fed daily one and one half litre milk, six eggs, three hundred grammes leguminous soup, with wine, beer, and coffee. The œsophageal and tracheal tubes were removed from time to time to be cleaned, and also for the purpose of cleansing and dressing the wound, since there was constantly more or less saliva present, which flowed downward into the wound through the opening upward into the pharynx. After the operation the general condition of the patient improved, and she was much better nourished. Recurrent growths have repeatedly occurred, however, and for their removal there have been four or five subsequent operations. At one of these the external carotid of the right side was ligated, and a portion removed. In spite of the secondary operations the cancerous growths have continued to recur, and have now become so deep seated that further operative interference is impossible, and the patient cannot long survive.

The operation for the extirpation of the larynx and pharynx is a desperate measure, but would seem to be warranted. Of the three cases cited one has recovered, and cases of recovery are recorded by other surgeons. Without operative interference the patient is sure to die, and most cases coming to operation are in such a desperate condition that without operation death must occur very soon, unless the patient could be preserved by tracheotomy to prevent asphyxia, and an artificial opening into the stomach through which the patient could be fed. The dangers of the operation are chiefly from mediastinal abscess and pneumonia following the inhalation of foreign substances. If the cancer is confined to the larynx, so that the removal of the upper part of the œsophagus is not also necessitated, the dangers of operation are greatly diminished, as would also be the case were operative measures instituted before the growth had become greatly extended, and the glands of the neck thoroughly infected with the disease.

DUDLEY P. ALLEN, M. D.

THE LIBEL SUIT AGAINST THE BRITISH MEDICAL JOURNAL.

COPIES of the *Irish Times* containing a full report of the libel case of *Crawford v. The British Medical Journal* and *Cork Constitution* have reached us. This suit was brought by the plaintiff, the father of the child with suppressed scarlatina, to whom a dose of pilocarpin was administered in the Cork Fever Hospital by order of Dr. Maenaughton Jones, on account of the comment of the defendants upon the previous persecutions of Dr. Jones by the plaintiff. The jury was unable to agree. The *Times* makes the following remarks on the case:

"The Cork medical libel case has ended in a disagreement of the jury, and it is to be hoped that the public has heard the last of it. A more profitless feud than that which has divided the people of Cork into two factions for the last few months has seldom come under our observation. When the plaintiff first moved in the matter of the treatment to which his child had been subjected, there is every reason to believe that he was simply actuated by a desire to ascertain the facts and see justice done, and that he was without any special animus against the medical

practitioner, to whose practice he had been induced to ascribe the fatal result of the child's illness. After a time, however, the guilt of Dr. Jones seems to have become a fixed idea with him, irremovable by any process of reasoning or any weight of evidence. Some allowance must be made for a man so sorely tried as Mr. Crawford had been, but it is impossible also to be without sympathy for a practicing physician, who found himself the object of persistent attacks calculated to injure him materially, and unjustified by any serious argument. We think we express the views of most intelligent persons who have followed the whole story, when we say that it is probable Mr. Crawford's child would have died in any case, and that there were reasons for supposing that the drug administered might have a good effect. This being admitted, the systematic set made on Dr. Jones was utterly inexcusable. If we make an exception in favor of the bereaved father, we can make none in the case of those who joined with him and encouraged him. The comments made on the affair in the *British Medical Journal* were exactly such as might have been expected from an organ of the medical profession. The annoyance to which Dr. Jones was subjected was denounced in very severe and trenchant terms, which certainly, however, only expressed in plain language the views which such a paper was in a measure bound to advocate in the interest of the class

of professional men among whom it circulates. It is far from being clear that Mr. Hart's uncomplimentary references were aimed specially at the plaintiff in the trial under notice. We rather think they were intended principally for others. But even if the strong language of the *British Medical Journal* was meant to apply exclusively to Mr. Crawford, it would be a very dangerous precedent to make it the basis of a conviction for libel. To the paper the subject was one of the very highest importance, which it could not afford to pass over, and on which it was bound to express a strong opinion. On the other hand, the injury inflicted on the plaintiff by an unfavorable article appearing in a professional journal published in London could be only infinitesimal. If we were to take the facts of the story merely from the very clear charge of Mr. Justice Barry, and without reference to our previous knowledge of the affair, we should be inclined to blame the jury for not bringing in an almost immediate verdict of acquittal. And even with our belief in the sincerity with which Mr. Crawford took up the matter, and with our conviction that there was at least no "malignity" on his part, we do not see how a sensible jury could have found against a journalist for having used a word a shade too strong in denouncing what he sincerely believed to be the most unjustifiable persecution of a member of the profession of whose rights he was the champion.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 21, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhoeal Diseases.	Scarlet Fever.
New York.....	1,206,590	693	264	27.87	12.84	7.22	4.62	4.76
Philadelphia.....	846,984	366	128	18.85	6.56	4.64	1.64	3.28
Brooklyn.....	566,689	197	71	18.78	8.63	10.15	1.52	3.55
Chicago.....	503,304	—	—	—	—	—	—	—
Boston.....	362,535	141	49	14.89	12.77	8.51	2.13	—
St. Louis.....	350,522	114	36	24.56	6.14	.88	5.26	—
Baltimore.....	332,190	116	45	18.97	6.03	5.17	.86	3.45
Cincinnati.....	255,708	81	43	20.29	13.52	—	6.17	—
New Orleans.....	216,140	157	73	26.75	3.82	—	19.11	3.82
District of Columbia.....	177,638	60	15	18.33	10.00	1.67	3.33	—
Pittsburgh.....	156,381	64	33	37.50	4.70	3.13	1.56	17.19
Buffalo.....	155,137	85	42	21.18	15.29	4.71	2.35	4.71
Milwaukee.....	115,578	—	—	—	—	—	—	—
Providence.....	104,855	49	19	22.45	10.20	10.20	2.04	2.04
New Haven.....	62,882	21	7	4.76	14.29	—	—	—
Charleston.....	49,999	42	21	33.33	2.38	—	19.05	14.29
Nashville.....	43,461	24	12	16.67	—	—	12.50	—
Lowell.....	59,485	21	7	19.04	4.76	4.76	4.76	—
Worcester.....	58,295	28	12	21.43	17.86	—	—	3.57
Cambridge.....	52,740	17	5	11.76	17.65	5.88	—	—
Fall River.....	49,006	16	10	25.00	6.25	6.25	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	11	3	18.18	9.09	18.18	—	—
Springfield.....	33,340	9	1	22.22	—	22.22	—	—
Salem.....	27,598	10	1	10.00	20.00	—	—	—
New Bedford.....	26,875	10	3	20.00	10.00	—	—	—
Somerville.....	24,985	5	3	20.00	—	20.00	—	—
Holyoke.....	21,851	—	—	—	—	—	—	—
Chelsea.....	21,785	7	1	28.57	—	14.29	—	—
Taunton.....	21,213	7	1	14.29	28.57	14.29	—	—
Gloucester.....	19,329	6	2	16.67	33.33	16.67	—	—
Haverhill.....	18,475	5	2	20.00	—	—	—	—
Newton.....	16,995	3	0	—	—	—	—	—
Newburyport.....	13,537	8	3	25.00	—	12.50	—	—
Fitchburg.....	12,405	6	3	—	—	—	—	—
Twenty-six Massachusetts towns...	210,899	77	17	20.78	5.19	3.90	—	5.19

Deaths reported 2156 (no reports from Chicago or Milwaukee); 932 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 573, consumption 367, lung diseases 232, diphtheria and croup 133, diarrhoeal diseases 104, scarlet fever 89, cerebro-spinal meningitis 53, small-pox 50, measles 36, typhoid fever 28, malarial fevers 21, erysipelas 20, puerperal fever 15, typhus fever 14, whooping-cough ten. From *cerebro-spinal meningitis*, New York 20, St. Louis 14, Pittsburgh four, Cincinnati and Worcester three, District of Columbia and Buffalo two, Philadelphia, Baltimore, Providence, New Haven and Fall River one. From *small-pox*, Philadelphia 23, New York 20, Adams three, Brooklyn two, Cincinnati and Pittsburgh one. From *measles*, New York 13, Cincinnati six, Baltimore five, Pittsburgh three, New Orleans and Buffalo two, Philadelphia, Providence, Lowell, Worcester, and Westborough one. From *typhoid fever*, New York eight, Philadelphia five, Boston and Baltimore three, Pittsburgh two, St. Louis, New Orleans, District of Columbia, Lowell, Chelsea, Newburyport, and Adams one. From *malarial fevers*, New York eight, St. Louis, New Orleans, and District of Columbia three, Brooklyn, Baltimore, Cincinnati, and Nashville one. From *erysipelas*, New York four, Boston, Fall River, and New Bedford two, Philadelphia, Brooklyn, St. Louis, Baltimore, New Orleans, Providence, Worcester, Cambridge, Salem, and Haverhill one. From *puerperal fever*, New York six, St. Louis two, Brooklyn, Boston, New Orleans, Providence, Attleborough, Spencer, and Holliston one. From *typhus fever*, New York 10, Buffalo four. From *whooping-cough*, New York and Philadelphia three, Brooklyn two, Cincinnati and Spencer one. The mortality from cerebro-spinal meningitis has decreased from 88 for the week ending May 14th to 53.

Nineteen cases of small-pox were reported in Brooklyn, seven in Pittsburgh, two in New Haven, one in Cambridge, one in Brookline; one case of varioloid in St. Louis and two in Adams; diphtheria 37, scarlet fever seven in Boston.

In 43 cities and towns of Massachusetts, with a population of 1,067,781 (population of the State 1,783,086), the total death-rate for the week was 18.90, against 21.09 and 20.99 for the previous two weeks.

For the week ending April 30th, in 149 German cities and towns, with an estimated population of 7,813,015, the death-rate was 27.3. Deaths reported 4099; under five 1732; pulmonary consumption 673, acute diseases of the respiratory organs 476, diphtheria and croup 153, diarrhoeal diseases 121, scarlet fever 75, typhoid fever 58, whooping-cough 34, measles and 16theln 28, puerperal fever 21, typhus fever (Königsberg five, Stargard three, Memel two, Bromberg, Erfurt, Nordhausen, Gotha two), 15, small-pox (Königsberg two, Munich, Berlin five, Aachen four) 12. The death-rates ranged from 15.6 in Mannheim to 44.1 in Munich; Königsberg 32.1; Breslau 29.4; Dresden 22.9; Berlin 27.4; Leipzig 23.3; Hamburg 26; Hanover 20.3; Bremen 25; Cologne 32; Frankfurt 28.5; Strassburg 25.9.

For the week ending May 7th in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20.1. Deaths reported 2929; acute diseases of the respiratory organs (London) 297, measles 105, small-pox (London 88) 89, whooping-cough 76, scarlet fever 56, diarrhoea 31, fever 31, diphtheria 22. The death-rates ranged from 12.4 in Brighton to 28.5 in Wolverhampton; Birmingham 16.5; Bristol 17.8; Manchester 19.9; Sheffield 20; Leeds 20.6; London 20.7; Liverpool 22.1. In Edinburgh 20.1; Glasgow 21.2; Dublin 27.5.

In the 21 chief towns in Switzerland, for the week ending May 7th, population 479,934, there were 29 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 23, measles nine, diphtheria and croup eight, whooping-cough three, typhoid fever two, scarlet fever one, puerperal fever one. The death-rates were: Geneva 22; Zurich 27.1; Basle 28.5; Bern 38.6.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
May, 1881.	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 15	29.712	54	61	49	97	86	96	93	SE	S	NE	8	4	4	R	O	T	—	—
Mon., 16	29.790	46	51	41	96	95	91	94	NE	NE	NE	12	21	19	G	R	R	—	—
Tues., 17	29.948	43	47	42	92	85	96	91	NE	NE	NE	26	33	19	R	O	R	—	—
Wed., 18	30.082	43	46	41	95	97	98	97	NE	NE	NE	20	20	6	R	R	R	—	—
Thurs., 19	29.969	49	53	44	100	94	95	96	N	N	NW	6	4	1	R	R	O	—	—
Fri., 20	30.019	50	61	41	98	83	100	94	E	E	C	3	4	0	G	F	R	—	—
Sat., 21	30.097	48	54	45	94	79	93	89	E	NE	C	7	10	0	O	O	O	—	—
Week.	29.915	48	61	41				93										68.55	2.70

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DETIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 21, 1881, TO MAY 27, 1881.

Byrth, D., major and surgeon. His leave of absence for one month, on account of sickness, extended one month. S. O. 79, Division of the Pacific, and Department of California, May 17, 1881.

Meacham, F., captain and assistant surgeon. Relieved from duty at Fort Hamilton and assigned to duty as post surgeon, Fort Wadsworth, New York Harbor, relieving Assistant Surgeon Burton. S. O. 70, Department of the East, May 20, 1881.

Woodbury, E., captain and assistant surgeon. Now awaiting orders in New York city, to report to commanding officer, Wadsworth Point, N. Y., to relieve Surgeon Clements. S. O. 116, A. G. O., May 21, 1881.

Shannon, William C., captain and assistant surgeon. Assigned to duty at Fort D. A. Russell, Wyoming. S. O. 44, Department of the East, May 21, 1881.

Burton, H. G., first lieutenant and assistant surgeon. Assigned to temporary duty at Fort Hamilton, New York Harbor. S. O. 90, Department of the East, May 20, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, June 6th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Inches. Subject, A Case of Gangrene of the Lung.

M. H. Richardson, M. D., Secretary.

CORRECTION. — The pressures under which the sphygmographic tracings, published with the first part of Dr. Reich's paper (page 466), were made were respectively as follows: 1, 50 grammes; 2, 50 grammes; 3, 250 grammes; 4, 150 grammes.

CORRECTION. — We are requested to state that the confirmation of his opinion quoted by Dr. Harris in the report of the Suffolk District Society, published in the JOURNAL of April 14th, was not given by the senior counsel in the case.

THE SEVENTIETH ANNUAL MEETING OF THE RHODE ISLAND MEDICAL SOCIETY will be held in Lyceum Hall, 62 Westminster St., Providence, on Wednesday, June 8, 1881. Exercises commence at ten a. m. The annual address by the president of the Society, Dr. Charles O'Leary, will be delivered at one p. m. The annual dinner will be served at the City Hotel at 2.15 p. m., Dr. L. F. C. Garvin, anniversary chairman.

Original Articles.

PORTIONS OF THE CENTENNIAL ADDRESS
BEFORE THE MASSACHUSETTS MEDICAL
SOCIETY, JUNE 7, 1881.¹

BY SAMUEL A. GREEN, M. D.

I. THE Massachusetts Medical Society is about to enter upon the second century of its existence. Following the customs of this centennial period, it proposes to celebrate the anniversary of its origin by the story of its life. It was born in troublous times; and its founders were still engaged more or less actively in a political struggle which even to-day, by reflex action, is exerting a powerful influence on the events of the world. It was during the War for Independence that the physicians and surgeons of this Commonwealth were led to feel the need of some association in order to encourage professional studies. A new field was then opened for medical investigations, and the workers were eager to cultivate it. At no previous time had so many medical men of the State been brought into close relations with one another, or in contact with their brethren from other States; and this intercourse necessarily stimulated inquiry and discussion, and produced a community of professional feeling, such as had never before existed. In union there is strength; this was true in war, and it was true in peace. They saw that better results were accomplished by concerted action than by individual effort; and they were then ready to associate themselves together for the purpose of improving the practice of medicine and raising the standard of its study. It is a singular fact in the social economy of affairs that some of the oldest and most learned scientific associations, both in this country and in Europe, have been formed during the clash of arms and the din of war; and this Society is no exception. Nothing happens in this world by chance, though oftentimes it may be difficult to discover the law which underlies a principle.

The Massachusetts Medical Society was incorporated on November 1, 1781, and its charter was signed by Samuel Adams, as president of the Senate, and by John Hancock, as governor of the Commonwealth. These names suggest Revolutionary times and smack of patriotism. It will be noted that the centennial anniversary of the birth of the Society does not occur for some months to come; but it is fair to assume that the preliminary steps for its organization cover this interval. In the presence of this audience it need not be said that a period of gestation always precedes a birth; and without attempting to fix the limit of this period I shall assume that it is now a century since the conception of the Society took place in the brains of its founders.

There had been before this time a medical society in Boston, which was the first one formed in America. It appears to have been in existence as early as the year 1735, though it did not continue long. Its records are irretrievably lost, and all that is known about it is gathered from fragmentary sources. It is very likely that it included in its list of members some of the ministers, as they were interested in the study and practice of medicine. Dr. William Douglass,² a noted author and physician of that day, writes, under date of

February 17, 1735-36, to Cadwallader Colden, of New York, that, —

... "We have lately in Boston formed a medical society, of which, this gentleman [Dr. Clark, the bearer of the letter], a member thereof, can give you a particular account. We design from time to time to publish some short pieces; there is now ready for the press number one, with this title page: —

NUMBER ONE.

MEDICAL MEMOIRS

CONTAINING

- (1.) A miscellany. Practical introduction.
- (2.) A history of the dysentery epidemical in Boston in 1734.
- (3.) Some account of a gutta-serena in a young woman.
- (4.) The anatomical inspection of a spina ventosa in the vertebrae of the loins in a young man.
- (5.) Some practical comments or remarks on the writings of Dr. Thomas Sydenham.

Published by a Medical-Society in Boston, New-England."

This letter is now among the Colden Papers, in the possession of the New York Historical Society; a copy of it is printed in the second volume, fourth series, of the Massachusetts Historical Collections (pages 188, 189).

Gutta serena, Englished into drop serene, was the cause of Milton's blindness. The poet alludes to himself, when he says: —

"Eyes that roll in vain
To find thy piercing ray, and find no dawn;
So thick a drop serene hath quenched their orbs."

The disease was afterward known as amaurosis. Spina ventosa is an affection of the osseous system, — according to old notions, — in which the texture of the bone dilates, seemingly distended with air.

The first number of these Medical Memoirs was never printed. It was probably Dr. John Clark, at that time a prominent practitioner of medicine, who is referred to in the letter, as a member of the Society. He was born on December 15, 1698, and was then in the height of his professional zeal, when he would naturally be interested in a scientific association. He belonged to a family of medical antecedents and traditions, being himself of the fourth generation in a direct line of John Clarks, all physicians, and he was followed by three more, equally direct, of John Clarks, these three also physicians, — covering a period of more than a century and a half and including seven generations of the same name.

During the year 1736, Dr. Douglass published a pamphlet entitled *The Practical History of a New Epidemical Eruptive Miliary Fever, with an Angina Ulcusculosa which prevailed in Boston, New-England, in the years 1735 and 1736.* It is inscribed "To a Medical Society in Boston," and the preface begins: —

"Gentlemen, This Piece of Medical History does naturally address it self to you, considering that I have the pleasure of being one of your number, that you have been fellow labourers in the management of this distemper, and therefore competent judges of this performance, and that where difficult or extraordinary Cases have occurred in any of your private practice, I was favoured to visit the Patients in order to make a minute clinical enquiry:

¹ Through the courtesy of Dr. Green we are enabled to publish parts of his interesting Address at this early moment.

² Appendix A, p. 537.

in short, without your assistance, this piece would have been less perfect, and not so well couched."

In The Boston Weekly News-Letter, January 5, 1737, there is a long communication, addressed "To the Judicious and Learned President and Members of the Medical Society in Boston," and signed "*Philanthropos*." It takes strong ground in favor of regulating the practice of physic throughout the province, and advocates the plan of having all practitioners examined by a board of physicians and surgeons appointed by the General Court. The writer is justly severe on the "*Shoemakers, Weavers, and Almanack-makers*, with their virtuous Consorts, who have laid aside the proper Business of their Lives, to turn Quacks."

In the same newspaper of November 13, 1741, is an interesting report of a surgical operation performed about that time for urinary calculus, on Joseph Baker, a boy six years old. It was done "in Presence of the Medical Society," by Dr. Sylvester Gardiner, and "according to Mr. Cheselden's late Improvement of the lateral Way." The report begins:—

"A Medical Society in Boston New England, with no quackish View, as is the manner of some; but for the Comfort and Benefit of the unhappy and miserable Sufferers by excruciating Pain, occasioned by a Stone in the Bladder, do Publish the following Case."

Dr. Gardiner, the operator in this case, was a rising young surgeon who had studied his profession in London and Paris. He began the practice of medicine in Boston, where he also lectured on anatomy, which he illustrated by preparations brought from Europe. His enterprise led him to establish an apothecary's shop, in which he carried on an extensive wholesale and retail business. His career as a physician and surgeon was attended with remarkable success, and he soon acquired from his profession both fame and fortune. His prosperity, however, was interrupted by the political troubles which preceded the Revolution, and during the struggle he took sides with the mother country. He thus became odious to the patriots; and when Boston was evacuated by the British troops, he was compelled to leave his native country and pass eight or ten years in exile. He finally returned and died at Newport, Rhode Island, August 8, 1786, in the 80th year of his age.

Although the Medical Society in Boston was short-lived, no account of the history of medicine in the State would be complete which did not mention its existence. In its day it exerted a good influence on the profession, and showed a zeal on the part of the physicians which is alike honorable to their heads and creditable to their hearts. The origin of the Society may have had some connection with the epidemic of diphtheria which broke out in Boston during the summer of 1735; at any rate, it was organized about that time. It is known to have been in existence late in the autumn of 1741, though ten years afterward there was no trace of it. Dr. Lloyd, who began the practice of medicine in Boston about the year 1752, and continued in it for more than half a century, had no recollection of such an association. This fact is mentioned by Dr. Bartlett, in his address before the Massachusetts Medical Society, June 6, 1840, and shows that it had disappeared before Dr. Lloyd's time. The founders of this local society, the pioneer association of its kind in the country, represented the active medical thought in Boston; and, though they are unknown to us by name even, deserve on this occasion a tribute which is freely given.

A long generation passes, and the Massachusetts Medical Society takes the field, and occupies the broad limits of the State, including the District of Maine. Many of the original members had served in the army, and were familiar with the capital operations of the hospital and the battle-field, while others had filled important public positions of a civil character. In any prescience they would have been considered accomplished physicians and surgeons, and they were the peers of other professional men. Together with the clergy they represented the education and refinement of the community.

II. The rise and progress of medicine in Massachusetts during the colonial and provincial periods gives some idea of the antecedents and traditions of the Medical Society. The corner-stone was laid on such a ground-work; the structure was built on such a foundation. It was so planned that additions and changes might be made to meet the wants of advancing time, and not weaken the unity or symmetry of the whole. The workmen were earnest and honest, and the result proves their faithful labor. They have erected an edifice which has stood the test of a century, and now bids fair to last for ages to come.

I now purpose to trace in some detail the development of the Society from its beginning, one hundred years ago, to the present time.

Civil commotion stirs up thought and quickens mental activity. When the first steps were taken to establish this Society, the surrender of Yorktown had not occurred, and it was a matter of grave doubt when the Revolution would come to an end; but a six years' war had drilled the popular mind in great things. The uncertainty of public affairs tended rather to excite effort than to repress it. In such a time and under such conditions the Massachusetts Medical Society was organized. It was no small affair to bring together from all parts of the Commonwealth the representatives of the medical profession and to harmonize their conflicting views. Berkshire County was two days distant from Boston, and relatively as far off as Chicago and St. Louis are to-day; while that large northeast territory, called the District of Maine, was almost as little known as the farthest northwest region is known to us now. Between the different sections of the State there were then small conveniences for general travel and few postal facilities, by means of which an interchange of visits and ideas, so conducive to unification of action, could be brought about. The formation of this Society at once increased professional intercourse, in spite of these difficulties, and accomplished excellent results.¹

The act of incorporation, under which this Society first met one hundred years ago, is found in the first volume of its Communications, pp. 8-11, and is as follows:—

COMMONWEALTH of MASSACHUSETTS, in the year of our Lord, 1781. An Act to incorporate certain physicians, by the name of The Massachusetts Medical Society.

As health is essentially necessary to the happiness of society; and as its preservation or recovery is closely connected with the knowledge of the animal economy, and of the properties and effects of medicines; and as the benefit of medical institutions, formed

¹ Appendix B, p. 538.

on liberal principles, and encouraged by the patronage of the law, is universally acknowledged : —

Be it therefore enacted by the Senate and the House of Representatives in General Court assembled, and by the authority of the same, That Nathaniel Walker Appleton, William Baylies, Benjamin Curtis, Samuel Danforth, Aaron Dexter, Shirley Erving, John Frink, Joseph Gardner, Samuel Holten, Edward Augustus Holyoke, Ebenezer Hunt, Charles Jarvis, Thomas Kast, Giles Crouch Kellogg, John Lynn, James Lloyd, Joseph Orne, James Pecker, Oliver Prescott, Charles Pynchon, Isaac Rand, Isaac Rund, Jr., Micajah Sawyer, John Sprague, Charles Stockbridge, John Barnard Swett, Cotton Tufts, John Warren, Thomas Welsh, Joseph Whipple, William Whiting, be, and they hereby are, formed into, constituted and made a body politic and corporate, by the name of The Massachusetts Medical Society; and that they and their successors, and such other persons as shall be elected in the manner hereafter mentioned, shall be and continue a body politic and corporate by the same name forever.

And be it enacted by the authority aforesaid, That the Fellows of said Society may from time to time elect a president, vice-president, and secretary, with other officers as they shall judge necessary and convenient; and they, the Fellows of said Society, shall have full power and authority, from time to time, to determine and establish the names, number, and duty of their several officers, and the tenure or estate they shall respectively have in their offices; and also to authorize and empower their president or some other officer to administer such oaths to such officers as they, the fellows of said society, shall appoint and determine for the well ordering and good government of said Society, provided the same be not repugnant to the laws of this commonwealth.

And be it enacted by the authority aforesaid, That the Fellows of said Society shall have one common seal, and power to break, change, and renew the same at their pleasure.

And be it enacted by the authority aforesaid, That they, the Fellows of said Society, may sue and be sued in all actions, real, personal, or mixed, and prosecute and defend the same unto final judgment and execution, by the name of The Massachusetts Medical Society.

And be it enacted by the authority aforesaid, That the Fellows of said Society may from time to time elect such persons to be Fellows thereof, as they shall judge proper; and that they, the Fellows of said Society, shall have power to suspend, expel, or disfranchise any Fellows of said Society.

And be it enacted by the authority aforesaid, That the Fellows of said Society shall have full power and authority to make and enact such rules and bye laws for the better government of said Society, as are not repugnant to the laws of this Commonwealth; and to annex reasonable fines and penalties to the breach of them, not exceeding the sum of twenty pounds, to be sued for and recovered by said Society, and to their own use, in any court of record within this Commonwealth proper to try the same; and also to establish the time and manner of convening the Fellows of said Society; and also to determine the numbers of Fellows that shall be present to constitute a meeting of said Society; and also, that the number of said Society, who are inhabitants of this Commonwealth, shall not at one time be more than seventy, nor less than ten; and that their meetings shall be held in the town of Boston, or such other place within this Commonwealth, as a ma-

jority of the members present in a legal meeting shall judge most fit and convenient.

And whereas it is clearly of importance that a just discrimination should be made between such as are duly educated and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered or perhaps lost to the community : —

Be it therefore enacted by the authority aforesaid, That the President and Fellows of said Society, or other such of their officers or Fellows as they shall appoint shall have full power and authority to examine all candidates for the practise of physic and surgery (who shall offer themselves for examination, respecting their skill in their profession), and if upon examination the said candidates shall be found skilled in their profession, and fitted for the practise of it, they shall receive the approbation of the Society in letters testimonial of such examination, under the seal of the said Society, signed by the President, or such other person or persons as shall be appointed for that purpose.

And be it further enacted by the authority aforesaid, That if the said president, and such other person or persons, so elected and appointed for the purpose of examining candidates as aforesaid, shall obstinately refuse to examine any candidate so offering himself for examination aforesaid, each and every such person so elected and appointed as aforesaid, shall be subject to a fine of *one hundred pounds*, to be recovered by the said candidate, and to his own use, in any court within this Commonwealth proper to try the same.

And be it further enacted by the authority aforesaid, That the Fellows of said Society may, and shall forever be deemed capable in law of having, holding, and taking in fee simple or any less estate, by gift, grant, or devise, or otherwise, any land, tenement, or other estate, real or personal; provided that the annual income of the whole real estate that may be given, granted, or devised to, or purchased by the said Society, shall not exceed the sum of *two hundred pounds*, and the annual income or interest of said personal estate, shall not exceed the sum of *six hundred pounds*; all the sums mentioned in this act to be valued in silver at *six shillings and eight pence* per ounce: And the annual income or interest of the said real and personal estate, together with the fines and penalties paid to said Society, or recovered by them, shall be appropriated to such purposes as are consistent with the end and design of the institution of said Society, and as the Fellows thereof shall determine.

And be it further enacted, That the first meeting of the said Medical Society shall be held in some convenient place in the town of *Boston*; and that *Edward Augustus Holyoke, Esq.* be, and he hereby is authorized and directed to fix the time for holding the said meeting, and to notify the same to the Fellows of said Medical Society.

IN THE HOUSE OF REPRESENTATIVES, *October 30, 1781.*

This bill having had three several readings, passed to be enacted. NATHANIEL GORHAM, *Speaker.*

IN SENATE, *November 1, 1781.*

This bill had two several readings, passed to be enacted. SAMUEL ADAMS, *President.*

Approved, JOHN HANCOCK.

A true copy.

Attest, JOHN AVERY, JR., *Secretary.*¹

¹ Appendix C., p. 533.

In accordance with the last clause of this Act, Dr Holyoke published a notice in *The Boston Gazette* and *The Country Journal*, November 12, 1781, calling a meeting of the members whose names are mentioned in the charter. It was called "at the County Court-House, in Boston, on Wednesday the 28th Day of this Instant November, at Ten o'Clock, A. M. for the Purpose of choosing Officers of the Society, and transacting any other Matter (which by this Act they are empowered to do) as they shall think proper."¹ The charter members were thirty-one in number, and represented different sections of the State: fourteen of them lived in Boston; two in Newburyport; two in Salem; and one in each of the following towns: Cambridge, Danvers, Dedham, Dighton, Great Barrington, Groton, Hadley, Northampton, Portland, Rutland, Scituate, Springfield, and Weymouth. By counties, as constituted at that time, Suffolk had sixteen members; Essex had five; Hampshire three; Middlesex two; Berkshire, Bristol, Plymouth, Worcester, and Cumberland, in the District of Maine, one each.

The first meeting of the corporation was duly held in the county court-house, on November 28, 1781, at which time there were present nineteen of the thirty-one persons whose names are given in the Act of Incorporation.² The court-house of that period stood on the site of the present one in Court Street. The first vote passed was that the officers at this meeting should be chosen *pro tempore*; and subsequently "Edward Augustus Holyoke Esq;" was elected president, "Doct^r. Isaac Rand jun^r," secretary, and "Doct^r. Thomas Welsh," treasurer. The records follow the precedent of the Act in withholding the medical title from Dr. Holyoke's name. Perhaps it was because Dr. Holyoke held a commission as justice of the peace, and the title of esquire at that time carried a great deal of dignity with it.

The second meeting was held in the court-house, on April 17, 1782, and Dr. Samuel Holten chosen president *pro tempore*.³ A committee, consisting of Drs. Tufts, Warren, and Appleton, was appointed to consider the form of letters testimonial to be given to those candidates who were approved by the Censors of the Society; and to invent a device and motto for a seal. This was an important committee, and they appear to have reported at the next meeting, — though I do not find any record of the details, — when they asked for further time in regard to the seal. One of the prime objects of the Society was to draw the line between the intelligent and the ignorant practitioners of medicine; and it was the function of this committee to devise some method to reach this end. Even the matter of the seal was considered sufficiently important to be mentioned in a separate clause of the original Act.

The third meeting was held on June 5, 1782, and Dr. James Lloyd chosen president "*pro hac vice*." At this meeting permanent officers were elected for the ensuing year; and as the pioneers of a long line of eminent physicians who have held office in this distinguished organization, I give the names of them all, as taken from the records: —

Edward Augustus Holyoke Esq., President
Doct^r James Pecker, Vice President

Doct ^r Samuel Danforth	}	Counsellors
Doct ^r Joseph Gardner		
Hon: Sam ^l Holten Esq.		
James Lloyd Esq.		
Doct ^r Isaac Rand jun ^r		
Doct ^r John Sprague	}	Corresponding Sec ^r
Hon: Cotton Tufts Esq.		
Doct ^r John-Barnard Swett		Recording Sec ^r
Doct ^r Nath-Walker Appleton		Treasurer
Doct ^r Thomas Welsh		Vice Treasurer & Librarian
Doct ^r Aaron Dexter		
Doct ^r Sam ^l Danforth	}	Censors
Doct ^r Charles Jarvis		
Doct ^r Joseph Orne		
Hon: Cotton Tufts Esq.		
Doct ^r John Warren		

At this meeting it was voted

"That a Committee be appointed to publish a List of the Officers this day elected, to announce to the Public that the Massachusetts Medical Society is organized, also to invite the Correspondence of the Faculty and others as they shall think proper."⁴

By the Act of Incorporation, Dr. Holyoke was empowered to name the time and place for holding the first meeting of the Society; and it was a fitting supplement to the previous arrangements that he should be chosen its first president.⁵

The fourth meeting of the Society was held on July 18, 1782, when "The Com:" appointed to agree upon a Device and Motto for a Seal, laid several Devices before the Society, particularly a Figure of Æsculapius in his proper habit pointing to a wounded Hart nipping the Herb proper for his Cure with this Motto '*vivere natura*.'" The design was adopted, though the motto was changed to *naturâ duce*; and the same committee was authorized to procure a seal made after this device.

The fifth meeting was held on September 4th, when it was voted, "That the Fellows of this Society be requested to transmit to the Recording Secretary an Account of those Diseases that have from one stated Meeting to another been most prevalent in the Circle of their practise, that the same may be laid before the Council for their inspection and such communicated to the Society as the Council shall direct." Many such papers were then sent in, which are now carefully preserved on the Society's files.

The sixth meeting was held on October 16th, but no quorum was present.

The seventh meeting was held on April 9, 1783, when the committee on the seal reported that they had procured one, which was laid before the Society and unanimously accepted. It was also voted that candidates for practice, who had passed a satisfactory examination by the Censors, should pay the sum of eight Spanish milled dollars. A circular letter was adopted to be sent to those members mentioned in the Act of Incorporation, who had not been present at any of the meetings. By the records it appears that there were eight such persons. The letter is as follows: —

"Sir, The Fellows of the Mass: Medical Society, who have met from time to time for the purposes of their appointment, have conceived themselves happy in your having been appointed one of its Fellows, and

¹ Appendix D, p. 539.

² Appendix E, p. 538.

³ Appendix F, p. 542.

⁴ Appendix G, p. 539.

⁵ For a short biography of Dr. Holyoke, see p. 545 of this Journal.

Ed.

beg Leave to assure you, that your Communications will at all times be highly acceptable; and that they are sincerely desirous of your Assistance in carrying on the Business of the Society, which in its Beginning call for more particular Exertions, and requires the joint Efforts of all its members.

"The Society has been so unfortunate as not in any way to be informed of the Determination of several Gentlemen, appointed by an Act of the General Court Fellows thereof, relative to the Acceptance of the Trust, for want of which information, the Society in the prosecution of its Business, has found itself embarrassed and unable to make such arrangements as might more fully tend to promote the Ends and Designs of the Institution, for which Reason we have addressed you on the subject; not doubting of your benevolent Intentions and Readiness to promote an Undertaking, conducive as we hope to the Benefit of Mankind in general and the Medical Faculty in particular. We presume that your answer of acceptance will be forwarded by the first opportunity."

"With sentiments of Respect and Esteem,
"We are &c."

At the same meeting a Resolve was read, passed by the General Court March 20, on the petition of Cotton Tufts, granting the use of a room in the Manufactory House to the Massachusetts Medical Society, in connection with the American Academy of Arts and Sciences. The Manufactory House was a noted public building of that time, belonging to the State, and situated on Tremont Street, nearly opposite to the site of the Park Street Meeting-house. The room was fitted up conjointly by the two associations, and first used by the Medical Society on October 15, 1783. It was occupied by them for the stated meetings held on October 30, and April 14, 1784, and probably for other minor purposes. The meeting on June 2, as well as the one on June 21, took place in the county court-house, where all the former ones had been held, before the room in the Manufactory House was occupied. The meeting of April 13, 1785, was held in "the Stockholders' room in the Bank." The Massachusetts Bank, at that time the only one in the State, was organized in the year 1784, at which date it bought the Manufactory House, sold by order of the General Court. 'The stockholders' room in this building was the apartment previously used by the Society. The meeting of May 4, 1785, took place in the Senate Chamber of the Old State House, and the one of October 19, 1785, was held in "Mr. Furnass's painting room in Court St.;" while that of October 18, 1786, was "in the hired room in Court Street,"—which may have been the same as Mr. Furnass's room. The meetings of October 20, 1790, and April 13, 1791, were held in Concert Hall, a noted tavern at the southerly corner of Court and Hanover streets. I have been particular in giving some of the minor details of the early history of the Society, in order to show its small beginnings and the changing places of its meetings. It is well sometimes to compare present opportunities with the narrow means of past generations.

The birth of the present Medical School in the year 1783 formed an epoch in the medical history of the State, though the Massachusetts Medical Society, as a corporate body, did not officiate on the occasion. At first the school was looked upon by the Fellows with some jealousy, as they feared that the existence of

two institutions would lead to serious embarrassments. The matter was considered of sufficient importance to be referred to a special committee of the Society, which, however, did not report for nearly three years. At the meeting held on October 15, 1783, it is recorded that

"Upon a Recommendation of Council to consider Whether the Doings of any of the literary Societies in this Commonwealth, interfere with the Charter Rights of the Medical Society;

"Voted That a Com: of three be appointed to take into Consideration the above Recommendation and to confer with any such Societies (upon the Subject, as they may think proper) and report:

"Voted That Dr. Cotton Tufts, Dr. Kneeland & Dr. Appleton be this Committee."

Nothing further relating to this subject appears to have been done, until the meeting on June 7, 1786, when:—

"The Com: appointed on 15 Oct. 1783 to consider whether the Doings of any of the literary Societies in this Commonwealth interfere with the Charter Rights of this Society, & to confer with any such Societies upon the Subject as they might think proper, reported, That they had attended the Business of their appointment upon examining the Medical Institutions of Harvard College, the Com: were of opinion that those Institutions did interfere with the Charter Rights of this Society 'to examine Candidates for the practise of Physic & Surgery & to grant Letters testimonial of the Examination of such as shall be found skilled in their profession' in that, those Institutions provided for the Medical professors of that College examining their Pupils & granting Letters testimonial or public Certificates to such of them as they judged proper, of their Abilities to practise physic. Whereupon the Com: applied to the Government of the College for a Conference upon the Subject, which was had, & ended in an agreement that the Com: should confer with the Medical professors of the College & make such arrangements respecting this matter as should be mutually agreed upon for the Honor of both Societies & the advancement of Medical Knowledge. This Conference between those Medical professors & the Com: for some reasons, unknown to the Com: was never held. The Com: further report that it has lately been suggested to them that the Medical Institutions of Harvard College have been altered, whereupon Enquiry was made respecting the Matter and an Acc^o of the above Institutions authenticated by the Sec^y. of the Overseers, was procured, and upon a careful examination the Com: were clearly & unanimously of Opinion that Harvard College Medical Institutions do not and that no Doings of that or of any other literary Society do, as far as the Com: could find, interfere with the Charter Rights of this Society."

At this time there were but three professors in the Medical School; and two of these were original members of the Medical Society. It was, therefore, extremely improbable that there would be any permanent friction between the two bodies. The Medical Society had no right to confer degrees; and it does not appear that the Medical School had any intention of granting testimonial letters to the profession at large. What then bid fair to be a little tempest soon subsided.

At the meeting held October 26, 1785, corresponding and advising committees were appointed for the different counties of the State, in order to encourage

reports of professional cases to this Society; and many years later, on April 28, 1803, it was voted, —

"That the Commonwealth be divided into four Districts, the Middle, Southern, Eastern, and Western; the Middle to consist of Suffolk, Norfolk, Essex, and Middlesex; the Southern of Plymouth, Bristol, Barnstable, Dukes County, and Nantucket; the Eastern district [to consist] of Maine; the Western [of] Hampshire, Bristol, and Worcester."

Immediately afterward committees were appointed for each of these districts, "to ascertain who are deserving of becoming Fellows." These organizations have since grown and become the present District Societies.

At the meeting held on November 8, 1786, the council of the Society was requested to consider the propriety of addressing the legislature that some measures might be taken to prevent the sale of bad and adulterated medicines, and to report thereon.

In the spring of 1790, the first number of a publication entitled *Medical Papers* was prepared under the direction of the Society, and five hundred copies printed; but, for the want of funds, the second number did not appear until the year 1806. The third number was printed in 1808, which completed the first volume of the series now known as the *Medical Communications of the Massachusetts Medical Society*. It is made up almost entirely of papers written by the members, giving the result of their observations on diseases and epidemics in their respective neighborhoods. The address of Dr. Isaac Rand, delivered June 6, 1804, is usually bound in this volume. Its subject is *Observations on Phthisis Pulmonalis*; and it is the first one of the long series of annual addresses made before the Society. This pamphlet became so rare that, by a vote of the councilors, it was reprinted in the year 1853. It was published in exact *fac-simile*, under the careful supervision of our late associate member, Dr. Nathaniel Bradstreet Shurtleff. The *Medical Communications* have been continued until now, when they comprise a work of twelve volumes. One number of the *Communications* appears each year, and five or six of them make up a volume; the later numbers consisting of the annual addresses, proceedings of the meetings, and other papers.

A *Pharmacopœia*, prepared by Drs. James Jackson and John Collins Warren, was published in the year 1808, under the auspices of the Society. It was formed on the plan of the *Pharmacopœia* of the Edinburgh College, and was designed to introduce modern nomenclature, and to establish greater uniformity in the prescriptions of physicians. The *American New Dispensatory*, written by Dr. James Thacher, and published in the year 1819, was submitted to a committee of this Society, and received its official sanction. The basis of this work was the *Pharmacopœia* which has just been mentioned.

"The Publications of the Massachusetts Medical Society," technically so called, were begun in the year 1800, and kept up until 1871. They consist of three volumes, comprising, for the most part, essays and reports read at the meetings, and subsequently published. Papers of this character are now printed in the *Communications*, and do not appear in any separate serial.

It may not be inappropriate to mention in this place *The New-England Journal of Medicine and Surgery*, which was published quarterly in Boston. While it

was not an official organ, it was "conducted by a number of physicians," in the warmest interest of this Society. It was edited with much ability, and contained many original papers. It began in the year 1812, and was kept up until 1828, when it was followed by *The Boston Medical and Surgical Journal*, a publication which has continued till the present time.

The protective power of vaccination was discovered in England by Edward Jenner, near the end of the last century; and the news of its discovery was soon brought to this country. Among the first persons here and perhaps the first whose critical attention was called to its importance, was Dr. Benjamin Waterhouse, of Cambridge, an early Fellow of this Society. Its introduction, like that of variolous inoculation, was destined to meet with many difficulties and obstacles; and Dr. Waterhouse was to be the champion. He wrote much as an advocate of the cause; and against popular ridicule and prejudice he succeeded in carrying the day. A communication, signed with his initials and dated at Cambridge, March 12, is found in the *Columbian Centinel* of March 16, 1799. It is headed "*Something curious in the MEDICAL LINE*," and is the first account of vaccination that was given to the public in this country. In the article Dr. Waterhouse describes cow-pox, and says that it must not be confounded with another disorder incident to the human race, which bears a somewhat similar name. He printed the account in a newspaper in order to excite "the attention of our dairy farmers to such a distemper among their cows," and to inform the profession generally of this security against small-pox.

In the year 1800 he published a tract entitled "*A Prospect of exterminating the Small-Pox, being the history of the Variola Vaccina, or Kine-pox*" etc.; and in it he describes the method he used, July 8, 1800, in vaccinating his son, Daniel Oliver Waterhouse, a lad five years of age, who had this disease in a mild way. From the arm of this boy he vaccinated another son, three years old, who had the customary symptoms in a light form; and subsequently he "inoculated a servant boy of about twelve years of age, with some of the infected thread from England." This expression furnishes the clew to the method adopted for obtaining the vaccine virus, which came "by a short passage from Bristol, England; though in the autumn of 1802, Dr. Waterhouse speaks of receiving quill-points, or "tooth picks," charged with virus. Before he had finished the practice in his own family, he had vaccinated four of his children and three of his servants, with no serious symptoms or consequences. The faith he had in the efficacy of the operation, prompting him to try it on one of his own children, was of that living kind which always commands attention. In this matter we are reminded of Dr. Boylston's bold act in inoculating his son for small-pox.

In the year 1802 Dr. Waterhouse published a work of 134 pages, which formed Part II. of the previously-mentioned tract; and in it he gives a full account of the new inoculation in America. In all his efforts to introduce vaccination, Dr. Waterhouse was warmly seconded by Dr. William Aspinwall, of Brookline, who deserves no small meed of praise in this matter. Dr. Aspinwall had paid much attention to variolous inoculation; and after the death of Dr. Boylston, the first American inoculator in point of time, he erected small-pox hospitals in Brookline, where he treated a large number of patients for the disease, which had been ar-

tificially induced. No man in America, probably, ever inoculated so many persons, or enjoyed so wide a reputation for his skill in so doing, as Dr. Aspinwall.

Massachusetts was the first colony to introduce small-pox inoculation, and she was also the first State to adopt kine-pox vaccination; and her towns have always taken the lead in sanitary matters. During the summer and autumn of 1802 some interesting experiments were conducted under the direction of the Boston Board of Health, whose unremitting exertions at that time, to prevent contagious diseases, entitle them to the highest praise. The Board fitted up a hospital on Noddle's Island, now known as East Boston, and invited a number of physicians to coöperate with them in an undertaking to diffuse knowledge and dispel prejudice in regard to vaccination. Some bold experiments were tried at this hospital, and fortunately all were highly successful. On August 16th, nineteen boys were vaccinated; and all passed through the regular stages of the cow-pox: and on November 9th, twelve of these children, together with a son of Dr. Bartlett, who had previously had the cow-pox, were inoculated for the small-pox, with matter taken from a patient in the most infectious state of the disease, and no trouble whatever followed. In order to show the true variolous character of the virus used in this experiment, two lads were inoculated at the same time with the same matter; and in due time a severe eruptive fever followed, with a plentiful crop of variolous pustules. When these two cases were in the right stage, matter was taken from them and inserted, for the second time, in the arms of the twelve children who had been previously inoculated, and besides in the arms of the other seven boys who were absent at the first inoculation. They had, moreover, been exposed to infection, most of them for twenty days, by being in the same room with the two lads who had the small-pox; and all nineteen escaped. These and other facts are given in a report which was made and signed by eleven physicians,—James Lloyd and Benjamin Waterhouse appearing at the head of the list. A full and official account of the whole affair is found in the *Columbian Centinel*, December 18, 1802.

The town of Milton was the first to act in its corporate capacity, and extend the benefits of vaccination to its citizens. In the year 1809, three hundred and thirty-seven persons of different ages and conditions among its inhabitants were vaccinated; twelve of them were afterward tested by inoculation for small-pox, and found fully protected. The test was conducted by Dr. Amos Holbrook, a Fellow of this Society; and the twelve persons—eight boys and four girls—were volunteers for the operation. The town acted during the whole affair in a most liberal and intelligent spirit, and published a valuable pamphlet, setting forth all the transactions concerning it. It was entitled "A Collection of Papers relative to the Transactions of the Town of Milton, in the State of Massachusetts, to promote a General Inoculation of the Cow Pox, or Kine Pox, as a never failing preventive against Small Pox Infection"; and a copy was sent to the selectmen of each town in the Commonwealth.

About this time a similar plan of public vaccination was adopted at New Bedford. By an act of the General Court, passed March 6, 1810, the towns throughout the State were directed to appoint committees to superintend the matter, and authorized to defray the expenses of a general system of vaccination. The

motive power of all these proceedings was furnished by the Massachusetts Medical Society, though it was not always apparent.

By the act of incorporation the membership of the Society was limited to seventy persons; but on March 8, 1803, an additional act was passed by the General Court, which removed all limitation and made many changes in other respects. Since then the number of fellows has been steadily increasing; and at the present time every town in the State, with the exception of a few small ones, is represented among the members.

In the winter of 1811, an effort was made to obtain from the General Court a charter for another medical society, to be called the Massachusetts College of Physicians. The movement was strenuously opposed, as might have been expected, by the Massachusetts Medical Society; and a long controversy was the result. There had not been so much personal and professional feeling excited among the physicians of the State, since the introduction of small-pox inoculation, ninety years before this time.

The following petition to the legislature was received by that body on February 12, 1811, and referred by them six days afterwards to the next General Court:—

"To the Honourable the Senate, and the Honourable the House of Representatives, in General Court assembled, this petition most respectfully sheweth:—

"That seeing health is a blessing, which sweetens all our enjoyments; and long life that which all men naturally desire, so everything that tendeth to secure the one or leadeth to the other, is an object worthy the attention of this legislature.

"And considering, moreover, that of the various methods of obtaining and diffusing medical knowledge, not one is found so effectual and desirable as a friendly and liberal intercourse and honorable associations of its professors; more especially when their end and aim is mutual improvement and the publick good; and experience has proved that two literary and scientific societies produce more than double the advantage of one—

"Influenced by these sentiments, we your petitioners humbly pray the Honourable the Legislature to constitute us, and such may hereafter associate with us, a body politic and corporate, by the name and title of the Massachusetts College of Physicians; with such powers, privileges and immunities, as other medical associations of the like nature and views enjoy, under the same denomination, in several states of the union.

"And your petitioners shall, as in duty bound, ever pray.

THOMAS WILLIAMS.	JAMES MANN.
SAMUEL DANFORTH.	CHARLES WINSHIP.
MARSHALL SPRING.	ABRAHAM DRAPER.
NATH. AMES.	JAMES LOVELL.
WILLIAM ASPINWALL.	JACOB GATES.
JOHN JEFFRIES.	WILLIAM INGALLS."

At the annual meeting of the Medical Society, held June 5, 1811, a committee, which had been appointed "to prepare a memorial to the General Court respecting a petition for the incorporation of a college of physicians," presented the following remonstrance. It was adopted almost unanimously, one member only out of seventy-two dissenting:—

"To the Honourable the Senate and the House of Representatives of the Commonwealth of Massachusetts.

"The Massachusetts Medical Society, in consequence of an application to the General Court in February last, for the incorporation of a College of Physicians, beg leave respectfully to represent.—

"That the said Massachusetts Medical Society was established in November, 1771, with power to elect officers, examine and licence candidates for practice, hold estate, and perpetuate its existence as a body corporate. In June, 1782, the Society was organized agreeably to the provisions of the statute, and the members directed in every way to extend and increase its usefulness. By an additional act of the General Court in February, 1789, authority was given to point out and describe such a mode of medical instruction as might be deemed requisite for candidates previous to examination; which important duty has been constantly attended to, and occasionally revised. By a further additional act in March, 1803, as the Society was thought too limited to answer the purposes of its establishment, its state was so essentially changed that the number of its Fellows originally limited to seventy, may embrace all respectable physicians and surgeons resident in the State; and that district societies may be established in such places as will facilitate medical improvement, and prevent the inconvenience of applying in all cases to the censors in Boston for an examination.

"In consequence of this provision, several district societies are formed, and are in a prosperous condition, cultivating medical science, and qualifying candidates, in various parts of the Commonwealth. It has been the constant endeavour of the Society, without reference to local or political considerations, to admit the most respectable practitioners in every section of the State, and they are desirous to elect all others of known talents who, by accident or from any other cause, are not admitted.

"The number of candidates licensed for practice by the Society is more than eighty, all of whom, as well as all bachelors of medicine in Harvard University, may claim admission as Fellows of the Society, after three years' practice.

"The present number of Fellows exceeds two hundred. Publications of important cases communicated to the Society; of a Pharmacopœia, which is now in general use; and of Dissertations read at the meetings, have been made, as often as the funds would possibly admit; committees have been appointed to investigate the nature, causes, and cure of epidemics, and the result of their inquiries communicated to the publick. The greatest harmony has distinguished their proceedings. No mention was ever made, as has been insinuated, of regulating fees in practice. The sole object of the Society has been to promote the design of its institution and the Fellows have been led to believe by the constant patronage and support of the Legislature, as well as the publick voice, that their conduct has been approved.

"It is scarcely necessary to remark, that, from the state of medical science, at the incorporation of the Society, its progress, for several years, was slow, and that it was less useful than could have been wished; but by the aid and cooperation of the flourishing medical school at the University, it is at this time in a most prosperous state; and it is the united endeavour of all

to promote medical instruction, and discourage unworthy practices.

"It is found on examination that the petition on the files of the General Court, for a College of Physicians, is for similar powers and privileges with this Society, on the ground, 'that two literary and scientific societies would produce more than double the advantages of one.'—The Society presume not to dictate to the Legislature on this important subject; but they beg leave respectfully to offer an opinion, that the establishment of such an institution can effect no object, not accomplished by existing societies, and would be so far from promoting a laudable and useful emulation, that candidates rejected by one society would resort to the other, with the greatest hopes of success, whatever might be their qualifications for the proper exercise of their profession. Hence would arise disagreements and animosities, which in other parts of the United States (particularly in Philadelphia at a former period, and very recently at New York) have been injurious to the profession and to the publick. Such animosities were threatened in the infancy of this establishment, by a supposed interference of Harvard College with the rights of the Society, and would have produced the most unhappy effects, but for the repeal of an exceptionable article in that establishment, and the accommodating conduct of those who at that period were the guardians of science, and the patrons of the healing art.

"From these considerations, and from other circumstances which the Medical Society are prepared to state, they have thought it an incumbent duty to request that the prayer of the said petition should not be granted, and they as in duty bound will ever pray.

"In behalf of the Society,

"JOHN WARREN, *President.*

"BOSTON, June 5, 1811."

On June 11, 1811, both the petition and remonstrance were presented at the same time to the legislature; and they were referred to a joint committee of the House and Senate. After certain formalities final action was deferred until the second session of the General Court, which was to meet on January 8, 1812. During this interval communications appeared in the newspapers, and pamphlets were printed, setting forth the views of the writers on each side of the question. At one time it seemed as if the petitioners would be successful in their efforts, but finally they were defeated.

The speech of Governor Gerry, at the opening of the session, contained the following remarks:—

"Many Institutions in this Commonwealth which have promised great benefit to the public, would have met with much more success had similar Corporations been established. When only one of any kind is permitted, it too frequently happens that a majority of individuals composing it indulge their private views and interests, to the exclusion of men of the most enlarged, liberal, and informed minds, and thus destroy the reputation and usefulness of the society itself. The multiplication of such institutions has a tendency, not only to prevent this evil, which is an *opiate to genius*, but to produce a competition, and to promote in the highest degree the utility of such establishments."—*Columbian Centinel*, January 15, 1812.

An attempt had been made, before the legislature met, to mingle politics with the question and render it a party one; and it will be seen that the Governor threw his influence on the side of the petitioners.

In the early part of February, 1812, the committee of the legislature gave a hearing in regard to the matter in the Senate Chamber, which was filled at the time with spectators. Drs. James Mann, William Ingalls, Abijah Draper, and Joseph Lovell appeared in order to support the petition; and Drs. David Townsend, John Warren, Thomas Welsh, Aaron Dexter, Josiah Bartlett, William Spooner, and Benjamin Shurtleff, as a committee of the Medical Society, to defend the remonstrance. The petition was also advocated by Dr. Benjamin Waterhouse, Professor of Theory and Practice of Physic, who, with Drs. Leonard Jarvis, Edward Whitaker, Daniel Thurber, and Nathaniel S. Prentiss, had added their names to the subscribers. This brought out a reply from Dr. James Jackson, Professor of Theory and Practice, in behalf of the medical institution at Cambridge, as it was generally understood that a new medical school would be connected with the proposed establishment.

On the next day the committee reported, by a bare majority, so far in favor of the petitioners that they should have leave to bring in a bill, which report was accepted in the Senate. The proceedings of the House on February 13, 1812, in regard to it are found in the *Columbian Centinel*, February 15, and are as follows:—

"The report of a joint committee which had given leave for the introduction of a bill to incorporate a College of Physicians, and which report had been accepted in the Senate, was taken up in the House yesterday, when the House non concurred the vote of the Senate; and refused leave to bring in a bill.

"This day, Mr. Cannon moved to reconsider the vote of yesterday. This motion, which involved all the merits of the question, was advocated by the mover, Messrs. Martin of Marblehead, Austin of Charlestown, Green of Berwick, and others; and opposed by Messrs. Childs of Pittsfield, Mr. Kittridge, Messrs. Foster, Fay, Russell, Davis, and others, and was negatived. For it, 195; against, 211. The debate on this subject was animated and interesting, and lasted three hours. The gentlemen of the committee which reported the leave stated, that in the examinations before them, they found nothing to support nor justify the numerous insinuations and reports which had been circulated in print and in out-door conversation, tending to implicate and injure the existing Medical Society; but that the Society has stood, and now stands, on high ground for usefulness, impartiality, and respectability. It was clearly demonstrated—though attempts were made out doors to make it a party question—that the institution asked for is unnecessary, and that if granted would produce great dissensions among the faculty, and be highly injurious to the community."

Thus happily ended one of those unpleasant controversies which never lead to good results. The petition for the Massachusetts College of Physicians, as well as the remonstrance against it, are found in Dr. Bartlett's address delivered at the annual meeting of this Society, June 6, 1810, which was published "with alterations and additions to January 1, 1813," in the first volume, second series, of the Massachusetts Historical Collections. This edition of the address contains ten pages of matter more than the one printed in the second volume of the Medical Communications.

The Massachusetts Medical Society is now the oldest state organization in the country, of a similar character,

that has held its meetings continuously and regularly from the date of its incorporation. Since its foundation it has borne on its rolls the names of 3,700 persons; and to-day its membership includes 1,350 physicians from all parts of the Commonwealth. These members represent every section of the State, and their influence on one another is as immense as it is incalculable. The average attendance at the annual meetings of late years is not far from 750 members; these meetings last through two days, and with few exceptions have been held in Boston.

The charter of the New Jersey Medical Society antedates that of this Society by some years, but there have been breaks in its regular line of descent. During the Revolution there was a suspension of its meetings from the year 1775 to 1781, which was due to the interruption of the war; and then again from the year 1795 to 1807, this time owing to a general anæmic condition of interest, on the part of its members.

We now stand on the dividing line between two centuries, and we can look forward only so far as the light of the past illumines the vision. We see enough, however, to know that new ideas in the profession will be established, and new methods adopted. The physician of the coming period will have a broader knowledge of preventive medicine. The laws of infection and contagion will be better known, and the daily conditions of health and disease more thoroughly understood. The subtle connection between cause and effect will be more accurately defined; and what is now obscure will be made clear. The great fact is to be emphasized that everything in this life is related to what has gone before, and that we are what we are in consequence of antecedent circumstances. We may approach even to the curtain which nature drops over all vital action, but there we must stop; though in other directions the finger of Discovery points down endless paths. Yet with all the knowledge that the human intellect can master, the great problem of living organism will be as far from solution as it is to-day. Groping in the dark in respect to first causes, we must confess that life is an impenetrable mystery, and something more than chemical action, and something beyond protoplasmic development. For our purpose it is enough to know that the science of medicine will continue to the last point of measured duration; and, like a planet plunging on through the immensity of space, in its untiring and unending course, it will shed its rays of light and consolation wherever the atoms of humanity are found.

LETTER FROM DR. WIL. DOUGLASS TO THE ASSESSORS OF BOSTON, ASKING AN ABATEMENT OF HIS TAX, 1747.¹

APPENDIX A.

THURSDAY, April 23^d. 1747.

GENTLEMEN ASSESSORS OF THE TOWN OF BOSTON.

I am sorry for the necessity of giving you trouble from time to time of my complaints as being aggrieved in my Rate bills: last year you abated me sixty six pound old Tenor: which tho not a sufficient abatement, that I might ease you of the trouble of further application I acquiesced with the same.

The true, just and legal reasons of my complaint you may gather from the annexed Schedule of my

¹ The original is in the possession of Dr. John T. H. Fogg.

Estate. Further I may observe to you that I am or Soon must be in the Decline of Human life: therefore do not endeavor to increase my Fortune, having no family to provide for: but shall yearly lessen it, by doing charities in my life time by donations and bounties. This year I have Sold my garden in Atkinson Street to Mr. Thos: Goldthwait, and some lands in the country to several towards settling five hundred pounds O. T. upon a free school in Douglass, formerly New Sherburn, and of Fifty pounds p^r an. for the first seven years to their Minister, besides several other bounties to particular families. I contract the business of my Profession, because considering long outstanding debts and bad pay, it is an affair of more labour than profit.

If not relieved I can not be blamed, in applying further to the Quarter Sessions as the Law directs: where upon producing your Books, I shall make it appear that I am assessed more than my proportion with others (which the Law expressly calls a grievance) by comparing with some of the Assessors, with some of my own profession, and with some Merchant and Shop-keepers in Boston.

I have not inserted my Books and Instruments because they are the Tools of my Profession. I have not inserted my wearing apparel or furniture of two Rooms, as being of little value. I have no Plate, no Equipage. There is no legal Tax upon a man as a Bachelor, and for frugality in every thing excepting charities and an almost continued employ of tradesmen and labourers.

WIL. DOUGLASS.

Dr. Bulfinch who has by much the best business of the profession in Boston is assessed only 45£ O. T.

Dr. Kennedy I. Perkins & Sprague who follow more business than I do are assessed only 25£ to 35£ O. T.

Left it may appear invidious I shall not mention the proportional under-rates of some Merchant and tradesmen.

Mr. Clark the Hatter deceased worth 30,000£ to 40,000£ O. T. Estate was rated 38£ O. T.

Deacon Parker the Top Mason in Town full employed, 11£ O. T.

A schedule of the income of the real estate and of the personal Estate and faculty of Dr. Wil. Douglass for 1796 Real Estate under his own Improvement. Two chambers in Green Dragon value 35£ p^rann. O. T.

Personal Estate, viz.:

Income of real Estate. Old Tenor.

Green Dragon (the above 35£ O. T. is deducted) p^ran. £ 165 0 0

Jarvis in Roxbury and appurtenances. 100 2 0

Widdow Stoddard. 100 0 0

Pitson: half of late Capt Steels 60 0 0

Fowle: late Walkers near Orange. 50 0 0

House Mill-creek lane, Sundry Tenants. 50 0 0

Barnet: late Capt: Steels. 35 0 0

Major Sewall: a warehouse late Capt: Steels. 20 0 0

Money at Interest not exceeding 3 0 0

Income by faculty not exceeding 5 0 0

A Borne Negro boy purchased some time since for £ 17 12 O. T. 1 0 0 0

My outstanding Debts in Practice I will make over to any man for 1,000 0 0
My running Cash to defray incident charge, variable at a medium 100 0 0

Old Tenor. 2,615 2 0

BOSTON, April 21, 1747.

Suffolk Js.

Doct^r. William Douglass personally appeared & made solemn Oath that the above Schedule is a just & True estimate of the Income of his Real Estate, & of the Personal Estate & Faculty of him the said William, the whole amounting to two Thousand six hundred & fifteen Pounds two shillings old Tenor.

Jurat Coram. H. HALL, *Juss: Pacis*.

DOCUMENTS RELATING TO THE FOUNDATION OF THE MASSACHUSETTS MEDICAL SOCIETY.

APPENDIX B.

LETTER TO E. A. HOLYOKE FROM N. W. APPLETON.

BOSTON, Sept. 19, 1781.

HON^d. SIR,—The long intended Medical Bill has at last passed the two Houses & ordered to be engrossed. I understand Mr. Lowell has given you the outlines of it. I shall inclose you a list of the members & a few particulars respecting it. This will be handed you by my Parents, who are just setting out for a short Visit to Salem. I hope that whenever the first Meeting of the Society shall be appointed we shall have the Pleasure of your Company. With best Regards to the Family, I remain your obliged Friend & Servt.,

N. W. APPLETON.

A LIST OF THE MEMBERS OF THE MASSACHUSETTS MEDICAL SOCIETY AS ALPHABETICALLY ARRANGED IN THE ACT.

A. Appleton.	S. Prescott of Groton.
H. Baylies of Taunton.	S. Pyncheon of Springfield.
p. Curtis.	S. Rand, Sen., Cambridge.
p. Danforth.	p. Rand, Jr.
p. Dexter.	S. Sawyer Newbury Port.
p. Erving.	H. Sprague, Sen., Dedham.
H. Frink of the County of Worcester.	S. C. Stockbridge of Plymouth Co.
p. Gardner.	S. Swett of Newburyport.
S. Holden of Danvers.	S. Tufts of Weymouth.
S. Holyoke of Salem.	p. Warren.
S. Hunt of Northampton.	p. Wells.
p. Jarvis.	p. Whipple.
p. Kaff.	H. Whiting of Concord.
H. Kellog of Hadley.	
p. Linn.	
p. Lloyd.	
S. Orne of Salem.	
p. Pecker.	

Those with a p. fixed before the Name are the Petitioners. Those with an S. were nominated by the Society. Those with an H. were put on by the House of Representatives. Those with no Town after their Names are of Boston.

No fine of the Society is to exceed £20.

The sum to be recovered by a Candidate in Case the examining Committee refuse to examine, £100.

The Annual of the real Estate not to exceed £200.
The Annual of the personal Estate not to exceed £600.

APPENDIX C.

TO E. A. HOLYOKE.

BOSTON, October 31, 1781.

HON. SIR,—I am very happy in the Pleasure of informing you that the General Court have this day enacted the Medical Bill, & have appointed you to call the first Meeting; it is sent up to the Governor for his approbation, which no doubt will be given. The Gentlemen in the Town are desirous of having a Meeting as soon after you have received official Information as can be with convenience, previous to the setting in of Winter. This Appointment gives me Pleasure on several Accounts, one is that I hope thereby to have the Pleasure of seeing you in Town & I shall depend upon the Happiness of your Company to dine with me on the day you shall fix for your first Meeting. I think at present that the County Court House would be a good place; we can, doubtless, have a fire in the lobby (in case the court is not setting) which will be large enough to accommodate as many as will probably be at the Meeting. I remain, with Respect Your obliged Servt,

N. W. APPLETON.

APPENDIX E.

MINUTES OF THE FIRST MEETING OF THE MEDICAL SOCIETY.

At a Meeting of the Massachusetts Medical Society, agreeably to a Notification of Edward Augustus Holyoke, Esq. (for the original see the Files), at Boston, November 28th, 1781—

Present, Doctrs Appleton, Baylies, Curtis, Danforth, Gardner, Holyoke, Hunt, Jarvis, Kaft, Linn, Lloyd, Pecker, Rand, Rand junr, Sprague, Tufts, Warren, Welsh, and Whipple.

Voted, That the officers to be chosen at this meeting be *pro tempore*.

Voted, That a President, Secretary and Treasurer be chosen by Ballot.

Voted, That Scrutineers be chosen for the purpose of counting the Ballots.

Voted, That the number be three and Doctrs Sprague, Jarvis, and Rand Sr. be Scrutineers.

Voted, That a majority of the members present is necessary to constitute a choice. Upon the Ballots being taken, it appeared that the following gentlemen were chosen: Edward Augustus Holyoke Esq. President Doctr Isaac Rand Junr Secretary Doctrs Thomas Welsh Treasurer.

Voted, That a Committee be chosen to form a Code of Laws for the future Regulation of this Society, and make report at the next Adjournment.

Voted, That this Committee consist of seven. Viz. Doctrs Tufts, Lloyd, Holyoke, Warren, Danforth Rand Junr and Jarvis.

Voted, That the Secretary be directed and hereby is directed to procure three hundred Copies of the Charter, printed, for the Use of the Society.

Voted, That the Committee appointed to form a Code of Laws and be empowered to call a Meeting of this Society thro' the Secretary when they are ready to report.

APPENDIX G.

LETTER TO THE PUBLIC UPON THE INSTITUTION OF THE MEDICAL SOCIETY.¹

The design of the above Institution is to promote medical and surgical knowledge, Inquiries into the Animal Economy, and the Properties and Effects of Medicines, by encouraging a free intercourse with the Gentlemen of the Faculty throughout the United States of America, and a friendly correspondence with the eminent in those Professions throughout the World, as well as to make a just discrimination between such as are duly educated and properly qualified for the Duties thereof, and those who may ignorantly and wickedly administer Medicines, whereby the Health and Lives of many valuable Individuals may be endangered, and perhaps lost to the Community.

In so laudable and useful an Intention the Massachusetts Medical Society feel the most solid Encouragement in calling upon the wife and observant of the Faculty and upon the curious in every Profession, to communicate whatever may appear to them conducive to this great undertaking. They would wish that the most trifling Observations, if pertinent, may not be withheld.

Every communication will be gratefully received and treated with the utmost Candour.

For the Purpose of enabling the People at large (who might otherwise be incapable of properly discerning the Qualifications of Candidates for Practice) to distinguish the Persons upon whom they may rely, they have upon the principles of their Charter, appointed five Censors, whose Duty as assigned them is, to examine all Candidates for the Practice of Physic, and Surgery, who shall offer themselves, therefor, and to give Letters, testimonial of their Approbation, to those whom they shall find worthy of public Confidence. Such gentlemen as would present themselves Candidates for Examination will be seasonably notified of the stated meetings of the Censors in the weekly News-Papers of the Town of Boston.

APPENDIX H.

DRAFT FOR A LETTER FROM DR. HOLYOKE.

SALEM Oct. 3^d, 1768.

SIR,—I rec^d a Line by your son, desiring to be inform^d of the Terms upon which I should be willing to

&^d by a Line just rec^d by your son you Desire to be inform^d of y^e Terms upon w^{ch} I should be willing to Undertake Instructing him in y^e Study & Practice of Physick. To which I would answer £20. Ster^l a Year. to be paid annually.

That he Bed & Board at my House, & live conformable to y^e Rules & Orders of my Family.

That He attend upon & prepare Medicines for the Shop.

That He attend the Sick & Wounded under my Care.

That He write in & Post my Books of Account.

Collect Money, in short attend.

On my Part I promise to give Your son advice & Instructions, according to y^e best of my Capacity & Opport^y in the Theory & Practice of Physick Surgery & Pharmacy.

¹ Original in handwriting of Dr. John Warren.

APPENDIX D.

FAC-SIMILE OF DR. HOLYOKE'S SUMMONS FOR THE FIRST MEETING.

Salem Nov^r. 9th 1881

Whereas the General Assembly of this Commonwealth, hath by an Act passed ^{the last Session} ~~this present Session~~, incorporated the several Gentlemen whose Names are as follow Viz^t: Nathaniel Walther Appleton, William Baylies, Benjamin Curtis, Samuel Danforth, Aaron Dexter, Shirley Ensign, John Frink, Joseph Gardner, Samuel Holden, Edward Augustus Holyoke, Ebenezer Hunt, Charles Jarvis, Thomas Keft, Giles Crouch Kellogg, John Linn, James Lloyd, Joseph Orr, James Peck, Oliver Prescott, Charles Pyrchon, Isaac Rand, ~~Isaac Rand jun~~, Micajah Sawyer, John Sprague senior, Charles Stockbridge, John Benedict Sweet, Cotton Tufts, John Warren, Thomas Welch, Joseph Whipple, William Whiting, into a Body politic & corporate by the Name of the MASSACHUSETTS MEDICAL SOCIETY — and hath by said Act empowered the Fellows of said Society to choose a President, Vice-President, & Secretary, with other Officers as they shall judge necessary & convenient &c — and hath empowered said Fellows to have a common Seal &c — hath empowered them to sue & be sued — to Elect, suspend & expell Fellows of the Society — to make Rules & bye Laws, & to annex reasonable Penalties & Fines for the breach of them, not exceeding the Sum of £20. — to establish the Time & Manner of choosing the Fellows, & also to determine the Number of Fellows that shall constitute a Meeting of the Society — and hath also enacted that the Number of said Society who are Inhabitants of this Commonwealth shall not at any one Time ~~exceed~~ be more than 70, nor less than 20. — and that their Meetings be held at Boston or such other Place as the Majority shall judge fit — that the President & Fellows, or such others as they shall appoint shall have Power to examine all Candidates for the Practice of Physic & Surgery, who shall offer themselves for Examination, & shall give Letter testimonial of their Approbation under their Seal &c —

and if the Persons appointed to examine, obstinately refuse, they are subjected to a Fine of £100. — This Act also empowers the Fellows of said Society to hold & take in Fee Simple or any Land, Tenements or other Estate real or personal; provided the annual Income of the real do not exceed £200, & the annual Income of the personal do not exceed £600 — it is also thereby further enacted that the first Meeting of the Society be held in some convenient Place in the Town of Boston, & that Edward- Augustus Holyoke Esq. be authorized & directed to fix the Time for holding said Meeting, and notify the same to the Fellows.

1. and hath granted to said Society, their Powers & Immunities ~~as~~ by said Act may appear, &

In Pursuance therefore of the above Direction, I do hereby notify the Fellows of the Massachusetts Medical Society, whose Names are mentioned in ^{the} Act as above recited, to Meet at the County Court-House, in Boston, on Wednesday the 28th Day of this Instant November at 10 o'clock A.M. for the Purpose of Choosing Officers of the Society, & transacting any other Matter, (which by this Act they are empowered to do,) as they shall think proper.

E. A. Holyoke.



APPENDIX F.

FAC-SIMILE OF A LETTER FROM DR. HOLYOKE DECLINING A NOMINATION TO THE
PRESIDENCY.

Doct. Isaac Rand Junr?

Secretary
to the Massachusetts Medical Society
Boston.

To be communicated.

To the Massachusetts Medical Society

Gentlemen

I am highly obliged by that favourable Opinion which led you to confer such an Honour upon me, as that of President of the Medical Society — but as I feel myself so indifferently qualified to fill that Office, with the Dignity becoming it; — and as by the remoteness of my situation from the Capital, I shall not be able to attend the Meetings of the Society; I should be wanting in what I owe to myself, as well as in my Duty to the Society, if I did not waive the Acceptance of that Office, and with Gratitude for the Honour already done me, beg you to vote for some more proper Person to fill the Chair, as it is impossible for me to accept it.

I am Gentlemen Your much obliged

Salem April 15.
1882.

Your very humble Servant

E. A. Holyoke

FAC-SIMILE OF TWO PAGES FROM DR. HOLYOKE'S DAY BOOKS, 1750-1828. WITH EXPLANATIONS.¹

[illegible]

¹ The professional account books of Dr. Holyoke in the possession of the Essex Institute comprise 123 vols. of 90 pages each, and on each page is the entry of 30 visits, making on the average 12 visits daily for 75 years. Historical Collections of the Essex Institute, vol. xv. They bear date from 1749 to February, 1829. En.

2 Capt. John Crowninshield was the son of Dr. John Caspar Richter von Cronenshilt, German physician, who came to Boston from Leipsic about 1688. He came to Salem and was a successful merchant.

³ Jonathan Phelps, blacksmith, m., 1729, Judith Cox: their second daughter, Rachel, m. Daniel Hathorne, of Salem, and these were the grandparents of Nathaniel Hawthorne.

⁴ Capt. Nathaniel Andrew, of Salem, mariner and merchant, m. Mary, daughter of Nathaniel Higginson, a lineal descendant of Rev. Francis Higginson; their son, John, was grandfather of John A. Andrew, governor of Massachusetts 1861-66.

5. Madam Turner and family. She was the widow of Major John Turner, a noted merchant of Salem, long of the provincial council; b. 1671, m. Mary Kitchin 1701. Their son, John Turner, m. Mary Osborn, of Boston, 1738, whose daughter, Mary, m. Daniel Sargent, from whom sprang Lucius Manlius Sargent and descendants, of Boston.

The Kitchens and Turners were prominent families in Salem during the provincial period. H. W.

Medical and Surgical Journal.

WEDNESDAY, JUNE 9, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,

No. 4 PARK STREET, BOSTON, MASS.

THE JOURNAL'S COMPLIMENTS AND GOOD WISHES TO THE SOCIETY.

THROUGH the appreciative encouragement of the committee of arrangements of the Society, and by advancing one day its regular publication, the JOURNAL is able to dedicate to the Massachusetts Medical Society the present number, which the editors hope will not be found altogether unworthy, either in matter or form, of the centennial anniversary of the oldest surviving medical society in this country. The JOURNAL is glad to avail itself of so auspicious an occasion to congratulate the Society upon having completed a first century of existence and usefulness, which it can do the more sympathetically, having itself already experienced the emotions coincident to a semi-centennial anniversary. The Society is to be congratulated, not merely upon being mature, but also upon being vigorous, and there is every reason to anticipate, from a useful past, a no less useful future.

In our modest effort to bring before the minds of our readers, to some extent, the social and professional conditions amid which the Society was born, it seemed eminently appropriate that the JOURNAL should group its material around the picturesque figure of the first president of the Society, Dr. Holyoke, whose own busy and prolonged career, marked as it was by a true temperance and prudent moderation, may not unfitly typify a destiny which it is to be hoped awaits through a longer cycle and in a larger sphere the body over which he first presided.

The JOURNAL takes this opportunity to thank the Essex Institute of Salem, and individual members of the Medical Society, for kind contributions to this anniversary number.

BIOGRAPHY OF DR. EDWARD AUGUSTUS HOLYOKE, FIRST PRESIDENT OF THE SOCIETY.¹

EDWARD AUGUSTUS HOLYOKE was the second of eight children of Edward and Margaret Holyoke, of Marblehead, County of Essex, Mass. His father was born in Boston, educated at Harvard College, where he was afterwards tutor, settled as pastor of the Second Congregational Society in Marblehead, April 25, 1716, installed President of Harvard College 1737, and died June, 1769, aged eighty. His paternal ancestor came from Tamworth, on the borders of Warwickshire, England, and was among the original grant-

ees of the town of Lynn, where he settled at Sagamore Hill, in 1638. President Holyoke was three times married; the first time to Elizabeth Brown, of Marblehead, the second to Margaret Appleton, daughter of Colonel John Appleton, of Ipswich, and the third time to the widow of Major Epes, of Ipswich Hamlet. The subject of this memoir was the offspring of the second marriage, and was born August 1, 1728, Old Style. In 1742 he entered the freshman class at Harvard University. He has preserved an account of his examination, and the sentence which was given him as a theme upon that occasion seems to have been the motto of his future life: *Labor improbus omnia vincit*. From this period to the end of his life he was characterized by constant diligence and assiduous attention to his duties. In 1746 he was graduated, and in the following year he spent six months at Roxbury in teaching a school.² In July, 1747, he commenced the study of medicine under the care of Colonel Berry, of Ipswich.³ This gentleman was the most distinguished practitioner of his neighborhood, although his being universally known by his military title does not speak highly for the estimation in which medical honors were then held. He finished his studies in April, 1749, and came to Salem in June of the same year. . . . For the remainder of his life he scarcely left the town, unless on business connected with his profession, and during his life he never wandered so far as fifty miles from the spot on which he was born. His longest journey was to Portsmouth, in 1749, at which time he was absent five days. In 1755 he was married to Judith Pickman, daughter of Colonel B. Pickman, of Salem. This lady died in her nineteenth year, in 1756, soon after the birth of a daughter, which did not long survive her. In 1759 he was again married, to Mary Viall, daughter of Nathaniel Viall, merchant, of Boston. Upon this latter occasion he was absent from Salem a week, which is believed to have been the longest visit he ever made from home, except in 1764, when he went to Boston to be inoculated for the small-pox. The length of this visit was occasioned by a custom which then prevailed for newly-married persons to devote a week to receiving the visits and congratulations of their friends, or, as the phrase was, "sitting up for company;" a ceremony which Dr. Holyoke declared to one of the committee was "very tedious and irksome." By his second wife he had twelve children, most of whom died in infancy. Two daughters only survive,—the widow of the late Mr. William Turner, of Boston, and the wife of Joshua Ward, Esq., of Salem. Dr. Holyoke was perhaps led to select this town as his place of residence in consequence of the death of Dr. Cabot, which occurred just at the time of his finishing his studies; but so little were his expectations of employment realized that after two years' trial he appears to have had serious intentions of abandoning the place in despair of success, and to

² For which he received eighty-four pounds old tenor, — \$38.50, — out of which he paid his board at sixty-seven cents per week.

³ "Thomas Berry, Esq., was born at Boston, the latter end of the seventeenth century, and was graduated at Harvard College, 1712. He received his medical education under Dr. Thomas Greaves, of Charlestown. He settled at Ipswich, Essex County, where he had a remarkable run of practice in his profession, and was considered the most eminent physician in that vicinity. But in the latter period of his life he was more attentive to politics than physic. He represented the town in the legislature, and afterwards was of the council several years, was judge of probate for the County of Essex, and justice of the court of Common Pleas, and colonel of the regiment. He died August 10, 1756, aged seventy-two." (From a memorandum of Dr. Holyoke's.)

¹ Taken from a memoir prepared by a committee of the Essex South District Medical Society, published 1829.

have remained here only through fear of distressing his father if he returned home.

No man probably ever entered upon the business of his profession with more settled resolution and perseverance than Dr. Holyoke. He had youth and health, a constitution of mind and body eminently calculated for endurance of labor and fatigue, was reputed a good scholar for his time; he read the Latin language with great fluency, and he subsequently attained a familiar acquaintance with the French; he had as many opportunities of learning his profession as were common at that time, and was respectably connected and advantageously known. But notwithstanding these advantages the medical profession abounded in discouragements which, to say the least, are greatly lessened in our day. The standard of medical education was totally unsettled. Every one who chose to prescribe for the sick was admitted to the rank of physician; the higher points of medical character and the value of medical studies were totally unappreciated by the bulk of the people, and the compensation for medical services was exceedingly small.¹ The periodical press did not then, as now, issue its regular current of observations and intelligence, and it was not till Dr. Holyoke reached the declining period of life that this species of medical literature had given that impulse to the profession which is so sensibly felt at the present day. It was rare, in the period of his meridian life, for any man to devote himself to medicine as a science, and pursue the profession without reference to other advantages than those which appertain to medical and scientific character. During almost the whole period of Dr. Holyoke's life the spirit of commercial adventure was the characteristic trait of almost all around him. There were many ways of rapidly attaining to wealth and distinction which looked more inviting than the one he had chosen; and it shows his steadiness of purpose, and his characteristic contempt for mere money, that during his whole life he never appears to have been enticed to engage in any of the enterprises which were undertaken by others in pursuit of wealth, or for a single day to have laid aside his character of a practitioner of the healing art. . . .

The characteristics of mind most essential to form the practical physician are a talent for observation, a readiness to take cognizance of the phenomena of nature, and curiosity to investigate the causes of these phenomena. These characteristics distinguished Dr. Holyoke from his outset in life. He had a good memory, and although his incessant calls prevented his devoting much time to writing, he seldom passed a day, for the first sixty years of his practice, without noting down some fact or observation calculated to augment his professional knowledge. His meteorological observations were recorded daily, almost without an interruption, for eighty years.

The study of the book of nature has been the occupation of the enlightened physician in all ages, and a more complete method of pursuing this study can hardly be imagined than that of Dr. Holyoke. If his attendance upon professional practice had ever allowed him to have fully completed this plan, and prepared the general results of all his observations for publication, he would have furnished a most valuable treasury of medical knowledge. He kept a memorandum upon

his table in which was minuted down the name of every disease the moment he returned from making his call, the more remarkable being the subject of further memoranda, as their interest required or his leisure allowed. At some stated periods, as at the end of the year, he made out a summary from these daily memoranda, in which he ascertained by computation the number of cases of every disease. He also was diligent in obtaining correct bills of mortality. He was thus enabled to inform himself most completely of the changes which take place in the frequency of occurrence and the fatality of diseases.

Although for reasons which have been mentioned he did not often appear before the public as an author, he was not indifferent to the cultivation of medical science among its professors. As soon as the Medical Society of this State was formed² he contributed his full share to their published transactions. He wrote the preface to the first volume, and the first paper of that volume is his interesting account of the state of the weather, diseases, operation of remedies, deaths, etc., in Salem for every month of the year 1786, and shows that he must have been in habits of close observation and of noting down the occurrences he met with in practice. Observations of the same kind were communicated for the years 1782, 1783, 1784, 1785, 1787, and 1788. Every physician engaged in full practice, as was Dr. Holyoke at this time, will admit this to have been no small labor.

By this method of increasing knowledge, and by more extensive reading than was common at that day, he was, in the early part of his career, in advance of most of his professional contemporaries. He acquired the authority of a master; and without being the leader of a sect his opinions were adopted, his prescriptions copied, and his practice imitated. His treatment of dysentery may be taken as a specimen of his early practice; a practice which he found successful, and which is still held in high repute by many practitioners of this neighborhood.

The terrible epidemic of sore throat of 1734-35, which almost totally destroyed the infant population of the north part of Essex County, was keenly remembered for many years afterward, and the attention of physicians was directed to the inflammatory affections of the throat and lungs, and the operation of remedies the most efficacious in these dreaded and dangerous attacks. Hence originated a more complete acquaintance with the mercurial practice than elsewhere obtained. . . .

Although, as has been observed, Dr. Holyoke was a cautious practitioner, he was not a timid one, and never neglected to make himself acquainted with the reputed powers of new articles which were from time to time introduced into the *materia medica*, and with the new modes of practice which were recommended by others. In the use of the digitalis, of the gum acaroides, of the muriate of barytes, and of many medicines of later date, he was one of the earliest and most careful experimenters. His use of acetate of lead in restraining hemorrhages, of the oxymuriate of mercury in the treatment of serofula and some forms of cutaneous disease, of small doses of calomel in the ulcerous oris of children, have led to the establishment of

¹ In 1780, when Dr. Holyoke was charged at five shillings a day, equal to about \$12.50, he received for his services only one shilling, equal to about \$2.50. He was at a time when the value of the dollar was about its present price, and other necessities were at a low rate.

² Dr. Holyoke was one of the founders of the Society, and was most punctual in his attendance at the stated meetings of the Society at large, as well as those of the District Society in which he was included. To this latter body he was a generous benefactor during his life, and bequeathed to their library some of his most valuable books.

modes of treatment attended with the highest degree of benefit. There are several medicines which owe their introduction into use entirely to him, and may, in fact, be said to have originated with him, as he was the first to settle their best mode of preparation and administration. The article so well known by the name of the "white balsam drops," or "fennel balsam," is a strong solution of subcarbonate of potass with the addition of a little of the essential oil of sweet fennel, and is a valuable diaphoretic and carminative, especially to children. This was a favorite medicine during his whole practice. He obtained his first knowledge of it from a Mr. Wigglesworth, of Malden. Of a cheap method of preparing the saleratus or supercarbonate of potass he wrote an account for the Massachusetts Medical Society. This article has in this neighborhood nearly superseded the common carbonate, both in medicinal and culinary preparations.

Dr. Holyoke's prescriptions were, for the most part, put up under his own inspection, either by himself or his pupils. This practice was nearly universal, even in large towns, till the commencement of the present century, and if there were obvious disadvantages in the necessity which called for so much of the valuable time of the physician there were undoubtedly some benefits derived from connecting practical pharmacy with his more dignified duties. . . .

Dr. Holyoke was intimately acquainted with the qualities and preparations of all the drugs he was in the habit of using, and was extremely neat and skillful in compounding them. Although, perhaps, he used a greater number of remedial agents than enter into the prescriptions of the present day, he was by no means infected with the polypharmacy which was the prevailing fault of the physicians of his time. The following anecdote, related by one of his pupils, exhibits the simplicity of his practice: "When I first went to live with him, in 1797, showing me his shop, he said, 'there seems to you to be a great variety of medicines here, and that it will take long to get acquainted with them, but most of them are unimportant. There are four which are equal to all the rest, namely, mercury, antimony, bark, and opium; of these there are many preparations, however. Of antimony I think I have used thirty.' These are his words substantially. He ought to have added cantharides, but he was thinking of internal remedies." The same person adds, "I can only say of his practice, the longer I have lived, I have thought better and better of it."

In 1777 Dr. Holyoke applied himself to the business of inoculating for small-pox. He had himself been inoculated in April, 1764, by Dr. N. Perkins at Boston, and his careful minutes of this occurrence¹ illustrate the customs and practice of that day. In March, 1777, he took charge of the hospital which had been erected a few years before for small-pox inoculation, and conducted through the disease three classes, amounting in all to about six hundred, with only two

¹ This business was in those days considered a very weighty affair. Dr. Holyoke first wrote to Dr. Perkins at Boston, where in consequence of the small-pox having been for some time spreading, the selectmen had given leave for a general inoculation, to engage his attendance and receive his directions for the proper preparation of the system. By Dr. Perkins's directions he took a pill at night of five or six grains of calomel with antimony, and lived low. After some days of this process he was reduced sufficiently to receive the disease in the most favorable manner, and accordingly, *having executed his will*, he went to Boston, April 6th, and first went abroad after the small-pox April 23d, having had the disease in the most favorable manner.

fatal cases occurring. But the loss of these two, less than the average number, one of which occurred in his first class of two hundred, affected his sensitive mind with so much anguish as almost to occasion self-reproach and a resolution to abandon the undertaking. During most of the period of his patients remaining in the hospital he passed his whole time with them, night and day, and many persons in Salem, who were at that time under his care for inoculation, testify to his assiduous and skillful attentions. . . .

Dr. Holyoke was an early vaccinator. He was in the common practice of it in the beginning of 1802, if not sooner.

As a surgical operator Dr. Holyoke had more than a mediocrity of talent and skill. He never appeared to have any extraordinary preference for this branch of his profession, but as a matter of necessity held himself qualified for all the usual demands for surgical treatment. In fact, the opportunities for a display of surgical address are much less frequent in the population with which Dr. Holyoke has resided than might be expected from its number.

As an obstetric practitioner he was greatly esteemed, and upon this branch of his business he seems to have bestowed extraordinary attention. On his first coming to Salem this department of the healing art was entirely in the hands of ignorant midwives, and the physician was only called in extraordinary cases, or to rectify some of the blunders of these practitioners. He has preserved an account of the first forty-five obstetric cases which occurred to him. The first one which he "was persuaded to engage in" occurred 1755, after he had been six years in practice, and it was not till four years afterwards that he makes the record of a case which was the first "common easy birth which ever came under his management."² . . .

He received pupils during nearly all the period of his active practice, and some of the most distinguished physicians of New England were educated under his care.³

² LIST OF BIRTHS. The following is a list of births, occurring in ten years of his practice, from 1790 to 1801, and is a memorandum of some interest to medical men:—

Years.	Boys.	Girls.	Total.
1791	35	49	84
1792	53	54	87
1793	52	33	90
1794	45	51	96
1795	59	48	107
1796	47	53	100
1797	54	43	97
1798	53	47	100
1799	48	54	102
1801	46	35	81
	494	452	946

³ LIST OF PUPILS:—

Isaac Atherton,	came 1762, remained 3 years.
Joseph Orne,	came 1795, remained 5 years.
David Jewett,	came 1766, remained 3 years.
William Paine,	came 1768, remained 4 years.
William Clarke,	came 1772, staid few months.
Edward R. Turner,	came 1772, remained 3 years.
William Goodhue,	came 1772, remained 3 years.
Nathaniel W. Appleton,	came 1774, remained 3 years.
Francis Borland,	came 1774, remained 1 year.
Edward Barnard,	came 1774, remained 3 years.
Daniel Kilham,	came 1778, remained 1 year.
B. Lynde Oliver,	came 1778, remained 3 years.
Isaac Osgood,	came 1777, remained 3 years.
Nathaniel Parker,	came 1779, remained 3 years.
Thomas Farley,	came 1782, remained 4 years.
Abiel Pearson,	came 1782, remained 3 years.
James Griffin,	came 1786, remained 2 years.
Ebenezer Learned,	came 1788, remained 3 years.
Nathan Read,	came 1787, remained 1 year.
William Harris,	came 1788, remained 1 year.
J. D. Treadwell,	came 1788, remained 3 years.

The period of the Revolution was a trying one to the subject of this memoir, and he never loved to dwell upon the recollection of it. His feelings in the spring and summer of 1775 were intensely painful. In referring to that period, he said to one of his family he thought he should have died with the sense of weight and oppression at his heart. He had sent his family to Nantucket, and the loneliness of his home increased the feeling of desolation. Most of his intimate friends and near connections favored the royal cause, and his own education had attached him to the established order of things, and his peaceful temper shrunk from the turmoil of a revolution. He thought this country destined to be independent, but believed the proper period had not arrived, and that weakness and dissension were likely to follow what he considered a premature disunion. But in after times, when referring to these opinions, he was wont, with his usual ingenuousness, to say that the event had proved he was wrong in his prediction. He imputed to the Revolution a change in the manners of the people which will not be reckoned among its good effects. He thought there was a falling off in domestic discipline, and a relaxation of wholesome subordination among children, since the freedom of the colonies.

During this trying period he kept steadily occupied in his benevolent duties, and such was his prudence, his inoffensive manners, and the universal respect for his virtues that he did not meet with so much trouble as might have been expected from the unpopularity of his opinions. Although most distinguished men who had adopted the royal cause found it expedient to leave the country, it does not appear that he was ever impeded in the prosecution of his business or studies for a single day. Once only he committed himself, by signing an address, in common with a number of the most distinguished citizens of the town, complimentary to Governor Hutchinson, who was about leaving the country. He afterwards felt himself obliged, as well as most of his associates, to publish a sort of apology for this act, which recantation, as it was called, contained nothing that was servile or disgraceful.¹ It does not appear that his practice was ever injured by the part he took in politics. He held a commission as a magistrate both before and after the Revolution. . . .

Edward Wigglesworth,	came 1790, remained 1 year.
Nathaniel Lee,	came 1791, remained 2 years.
Thomas Peckman,	came 1791, remained 3 years.
John Preston,	came 1791, remained 3 years.
James Cook,	came 1795, remained 3 years.
John Jackson,	came 1797, remained 2 years.
Nathan Badstreet,	came 1798.
Samuel Gorsh,	came 1799.
Melchor Spalding,	came 1800.
Samuel Hildway,	came 1801.
Samuel Frost,	came 1804, remained 2 years.
— F. A. G.,	came 1804.
John B. Brock,	came 1808, remained 1 year.
Edward A. Hildway,	came 1817, remained 1 year.

Enclosed, &c.

RECANTATION OF FORBISM, SALEM, MARCH 30, 1775. When as we, the undersigned, had on the 20th inst. signed an address to Governor Hutchinson, who, though prompted to by the best intentions, has nevertheless, in our opinion, committed an offence to our country. We do now declare, that we were so far from desiring by that action to show our approval of the acts of parliament, so universally and justly reprobated by America, that on the contrary we hoped we might in that way contribute to their repeal; though, in view to our sorrow we have been disappointed. And we now further declare that we never intended to show such a tribute to his excellency, and that if we had been apprized of the nature of the address, we should never have signed it; as we were well aware, that we contributed thereby to the injury of our country. We now, therefore, withdraw our names from the address, and in the fullest manner disavow it, and we are, as we have said, rejoiced with the revocation of it.

Signed by twelve persons.

The circumstance of his arriving to be an hundred years old,—an occurrence so unusual to happen to any man,—and of which it does not come within the knowledge of the committee that there are many authentic accounts of its having happened before to eminent physicians, was looked upon by the doctor and his friends as an era of very great interest. Upon this occasion his medical friends of Salem and Boston united to pay their respect to him by inviting him to a public dinner. At this period he appeared in perfect health, and his firm and elastic step, his cheerful and benevolent looks, his easy and graceful manners, the model of the old school of gentlemen, his nicely-powdered wig, his dress arranged with studied neatness, and just enough of antiquated fashion to remind one that he belonged to the generation gone by, but not outraging the proprieties of the present mode, his accustomed nosegay slipped through his button-hole, and his affectionate and grateful greeting of those who had assembled to do him honor, will never be forgotten, or remembered without delight, by those who witnessed them. He partook of the hilarity of the occasion with an evident zest, and when called upon for a toast, offered in his own hand-writing a sentiment perfectly appropriate and professional, accompanied with a paternal and touching benediction upon the medical brethren who were present. At the same time the District Medical Society testified their respect for him by requesting him to sit for his portrait, to be placed in their library. . . . The anniversary of his birthday was on the 13th of August, and on the 18th of September, the centennial anniversary of the settlement of the town, he was again induced to take part in the public celebration. . . . The excitement of these occasions appeared rather to invigorate him than otherwise, and he afterwards visited Boston and Cambridge, and the place of his birth; upon all which occasions he enjoyed much gratification. This was, however, the last lighting up of the spark of life, and in about a month he began to feel the approach of that disease which terminated his life. . . .

In seeking for the causes of his length of life and enjoyment of health, it seems obvious that he owed these to a rare combination of natural advantages with the habits of life best calculated to preserve these advantages. He was a happy example of a sound mind associated with a sound body, neither of which was matured or maintained at the expense of the other. . . .

He required and sought but little relaxation from professional occupations, and these of the simplest kind. Occasional short visits to the neighboring towns where his connections resided, a weekly evening conversation club,² and the culture of his garden were his principal resources for amusement. As an indoor recreation he was fond of the sober game of chess, which was the only game of skill he was accustomed to play at. He now and then indulged in a party upon the water in summer, and for many years of the early part of his life, in his favorite exercise of

² Dr. Holyoke took great pleasure in the meetings of his Monday night club. Their object was improvement in philosophy and literature by reading and conversation. Some of the most amiable and distinguished individuals who ever belonged to this town were associated in it. Their meetings were interrupted by the breaking out of the revolution, and commenced again in 1779. During the period of their suspension, or at least a part of it, so strong were the Doctor's attachments to the memory of his friends that he was accustomed to devote the usual evening of their meeting every

skating upon the ice in winter, in which exercise he was well skilled. He sometimes, too, upon festive occasions, till he thought his age rendered it unbecoming, mixed in the sprightly dance, of which he was said to be fond. . . .

Of his temperance there is one remark which we think it of consequence to make, since it shows the error of those who think that temperance consists in relinquishing some articles of food or drink, while they indulge to an injurious excess in others. His was a temperance of *moderate desires*, that never led him to err in *quantity*, and thereby rendered him less solicitous about the *quality* of his food. The following letter, written last autumn, in answer to one he received from a gentleman, who had addressed to him some inquiries concerning his habits and mode of life, gives a satisfactory and interesting account of these matters. . . .

SALEM, Oct'r — 1828.

To — — —, Williamsville, Person County,
North Carolina.

SIR,—I received yours of the 20th ult. on ye 30th, wherein you wish me to give you some Account of my Mode of Life, &c. — In answer to which I would first mention that I was providentially blessed with an excellent Constitution — that I never injured this constitution by Intemperance of any kind — but invigorated it by constant Exercise, having from my 30th to my 80th Year walked on foot (in the Practice of my Profession) — probably as many as 5 or 6 miles every day, amounting to more than a *million*¹ of miles, and tho' sometimes much fatigued, the next Night's refreshing Sleep, always completely restored me. In early life, between 20 and 30, I used to ride on Horse back, but being often pestered by my Horses slipping their Bridles I found it more convenient to walk.

As to my Diet, having been taught to eat of any thing that was provided for me, and having always a good Appetite, I am never anxious about my food, and I do not recollect any thing, that is commonly eaten, that does not agree with my Stomach, except fresh roasted Pork, which tho' very agreeable to my Palate, almost always disagrees with me; for which however I have a remedy in the Spirit of Sal Ammoniac. Eight or Ten drops of Aqua Ammonia pura in a wine glass of Water, gives me relief after Pork, and indeed after any thing else which offends my stomach. As to the Quantity, I am no great Eater, and I find my appetite sooner satisfied now than formerly; — there is one peculiarity in my Diet which as it may perhaps have contributed to Health I would mention; I am fond of Fruit, and have this 30 or more years daily indulged in eating freely of those of the Season, as Strawberries, Currants, Peaches, Plums, Apples, &c. which in summer and winter I eat just before Dinner, and seldom at any other time, and indeed very seldom eat any thing whatever between meals. — My Breakfast I vary continually.

week to conversing about them with his family, who were assembled for the purpose. . . .

Among the names of the persons who constituted Dr. Holyoke's club and his intimate acquaintance, in those days, were those of Andrew Oliver, Judge of the County Court, Nath. Ropes and Benj. Lynde, Judges of the Superior Court, Rev. Wm. McGilchrist, of the Episcopal Church, who was educated at Oxford and distinguished as a mathematician, Rev. Thomas Barnard of the First Church, Rev. Dr. Barnard of the North Church, Dr. Ernestus Plummer, Dr. Putnam, who was cotemporary with Dr. Holyoke, Mr. Wm. Pyncheon, an eminent lawyer, Col. Pickman, Col. Frye, Col. Browne, afterwards Governor of Bermuda, Col. Eppes Sargent, Col. Ichabod Plaisted, Mr. Stephen Higginson, Mr. Thomas Robie, and Mr. Samuel Curwen. More than half a century ago an eminent Boston divine used to say there was no pulpit in which he should not choose to preach an ordinary sermon sooner than that of Mr. Thomas Barnard of the First Church in Salem, to whose parish most of these men belonged. Many of them were men of accurate literary attainments, great critical acumen, and of considerable research in theology.

¹ This seems to have been a slip of the pen; the following is his own calculation, made in 1823, and which from his great dread of exaggeration falls short of half the actual amount. "If from my age of 20 to 80 years I have walked 5 miles a day, which is a moderate calculation, I must have gone in that 60 years

	109,500 miles.
And in the first 20 and last 15 years . . .	38,325
In 95 years probably, total . . .	147,825"

Coffee, Tea, Chocolate, with toasted bread and butter, Milk with Bread toasted in hot weather, but never any meat in my Life — seldom the same breakfast more than 2 or 3 days running. Bread of Flour makes a large portion of my Food, perhaps near 1-2. After Dinner I most commonly drink one glass of Wine — plain boiled rice I am fond of — it makes nearly 1-2 of my Dinner perhaps as often as every other Day — I rarely eat Pickles or any high seasoned Food — Vegetable food of one kind or other makes commonly 2-3 or 3-4 of my nourishment — the condiments I use are chiefly Mustard, Horse radish and Onions. As to Drinks, I seldom take any but at meal times and with my Pipe — in younger Life my most common draft was Cider, seldom Wine, seldom or never Beer or Ale or distilled Spirits — But for the last 40 or 50 years, my most usual drink has been a Mixture, a little singular indeed, but as for me it is still palatable and agreeable, I still prefer it — The Mixture is this, viz. Good West India Rum 2 Spoonfuls, Good Cider whether new or old 3 Spoonfuls, of Water 9 or 10 Spoonfuls — of this Mixture (which I suppose to be about the strength of common Cider) I drink about 1-2 a Pint with my Dinner and about the same Quantity with my Pipe after Dinner and my Pipe in the Evening, never exceeding a Pint the whole Day; and I desire nothing else except one glass of Wine immediately after Dinner the whole day. I generally take one Pipe after Dinner and another in the Evening, and hold a small piece of pigtail Tobacco in my mouth from Breakfast till near Dinner, and again in the Afternoon till tea: this has been my practice for 80 years — I use no Snuff — I drink tea about sunset and eat with it a small slice of Bread toasted with Butter — never eat any thing more till Breakfast.

I have not often had any complaint from indigestion, but when I have, abstinence from Breakfast or Dinner, or both, has usually removed it; indeed I have several times thrown off serious Complaints by Abstinence. — As to Clothing, it is what my Friends call thin; I never wear Flannel next my Skin tho' often advised to it, and am less liable to take cold, as it is called, than most people — a good warm double breasted Waist-Coat and a Cloth coat answers me for winter, and as the season grows warmer I gradually conform my Covering to it. — As to the Passions, Sir, I need not tell you that when indulged, they injure the Health; that a calm, quiet self possession, and a moderation in our Expectations and Pursuits, contribute much to our Health, as well as our happiness, and that Anxiety is injurious to both.

I had a good Set of Teeth but they failed me gradually, without Pain, so that by 80 I lost them all.

Thus, Sir, you have, blundering and imperfect as it is, an answer to your Requests, with my best wishes that it may be of any service to the Purpose for which it was made — But must rely upon it that Nothing I have written be made public in my Name. Wishing you long Life and many happy Days,

I am yours, &c.

E. A. H.

P. S. I forgot to speak of my repose. When I began the practice of Physick, I was so often call'd up soon after retiring to Rest, that I found it most convenient to sit to a late Hour, and thus acquired a Habit of sitting up late, which necessarily occasioned my lying in bed to a late Hour in the Morning — till 7 o'elk in Summer and 8 in Winter. My Business was fatiguing and called for ample repose, and I have always taken care to have a full proportion of Sleep, which I suppose has contributed to my longevity.

In summing up the character of our venerable friend, it is not too much too much to say, he was a perfect model of the general practitioner of medicine. His manners were equally removed from servility and arrogance. Free from dogmatism, and trusting to the mild dignity of his manners to enforce his precepts, nothing excited his displeasure more than the swaggering, *Radcliffe* style assumed by some men to impose an idea of their consequence upon the vulgar, who are sometimes prone to believe that excessive rudeness is a mark of genius, and that consummate insolence is, not unfrequently, coupled with consummate skill. These people he used to term "medical bucks."

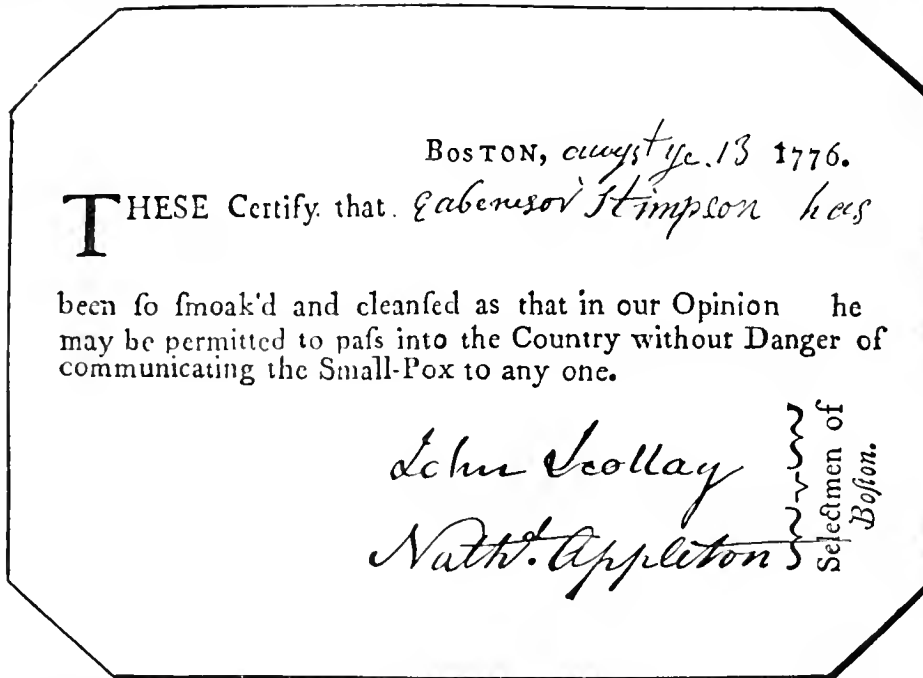
His regard for truth was scrupulous and sincere, and this was obvious in his reasoning upon facts, for he was never known to form a deduction which required the sacrifice or modification of an important fact in the premises; but he rather suffered his judg-

ment to remain suspended, and waited for a farther insight into the operations of nature. From the same cause, a letter of recommendation or introduction coming from him, even in behalf of the most valued of his friends, was sure to contain not one word more than came within the scope of the author's personal knowledge and observation.

His generosity and the moderate competence with which he contented himself prove this. Still more peculiar was the perfect simplicity and singleness of heart which marked his moral conduct. There was no effort, he acted right because he felt right, and every one could see that the kindness of his manner was a sincere expression of the kindness of his heart. It was the perfect confidence which every one had in the habitual rectitude and purity of his intentions that induced persons of all ages and of all classes to look upon him as a sympathizing friend to whom they might safely intrust their most important interests.

His sickness and expected death were the most common topics of inquiry with the citizens of Salem for some days previous to his decease; and when this event took place, it was announced by the tolling of all the church bells of the town, a mark of respect never known to have been shown to any others than the late Presidents of the United States. All classes of persons thronged to his funeral to pay their tribute of respect to his memory, and the eulogy pronounced over his remains by his pastor and intimate friend, the Rev. Mr. Brazer, was a chastened effort of genuine and touching eloquence, and a delineation of his moral and religious character, which was recognized as faithful and just by the crowded assembly before whom it was pronounced. . . .

The accompanying fac-simile of a certificate of fumigation serves to show that our ancestors took such precautions as the knowledge of the time allowed them.



As a fitting accompaniment to the certificate of fumigation we are enabled to publish a letter addressed to Dr. Parker, a practitioner of Virginia, transmitting vaccine virus. The letter is interesting as containing in few words directions which are just as applicable to-day as at the time they were written, and as illustrating the efforts of President Jefferson to favor vaccination.¹

LETTER FROM MR. J. W. EPPES (SON-IN-LAW OF THOMAS JEFFERSON) TO DR. PARKER OF VIRGINIA

J. W. Eppes with his best wishes forwards to Doct^r Parker a phial of Genuine Cow pox matter.

It has been taken from subjects inoculated from matter forwarded by Doctor Waterhouse of Boston to the President. It has been fairly tried by Waterhouse who has inoculated several hundred with the small pox matter after their having gone thro' the cow pox,

¹ The letter is furnished for publication by Dr. Parker of Plymouth.

without the small pox infection taking in a single instance.

One peculiarity attends the disease. The virus must be taken from the pustule for inoculation while quite clear and transparent. If taken after complete puffs is formed it gives a bad fore without communicating the disease. The 7th or 8th day is as late as the matter can be taken for inoculation with safety.

Accept for your health the best wishes of a friend.

Endorsed on back. *J. W. Eppes*, Son-in law to Thos. Jefferson, M. C. & was chairman of the committee of ways & means in Congress.

Endorsed in another corner. Cow Pock.

From the Independent Chronicle and the Universal Advertiser, Jan. 1781.

A young Woman with a good Breast of Milk would take a Child to suckle.

Inquire of the Printer.

PORTION OF THE DIARY OF MR. PYNCHON OF SALEM, COVERING THE PERIOD OF HIS STAY IN BOSTON FOR THE PURPOSE OF INNOCULATION.¹

[Day 1.] July 15, 1776. The weather fair and fine. Went to Winesmet from Salem with son John driven by Billy — Arrived at Boston in good season — We were inoculated at Dr Loyds house at ten o'clock in ye even'g — he gave me six powders to be mixed wth Moll^a & taken one each night & morn'g — three for John for Monday Wednesday & Friday nights.

[Tuesday, 2.] July 16th. Johns powder operated o(nce) — mine 3 times — very moderately — went to see Mr. Vassals fine garden also Mr Lowells — eat our fill of fine fruit A. M. — visited ye Salem patients in K & Q Streets & find yt they take powders but once in 2 days yt I am fav^d as to medicine but expect to pay for it in pocks — dined at our lodgings.

[Wednesday, 3.] July 17th. (Dr.) Putnam took ye bandage &c off my arm this morn'g — was satisfied yt ye incision &c. were effectual — went to Dr. Loyd & he was of ye same mind. Visited our friends, patients &c in K Street & Q street — also Dr Pemberton & Dr. Mather — dined at M^r Thos. Ruffels with Dr Putnam Mr. Sparhawk & Mr. Coleman —

P. M. eat fruit at Mr. Sheriff Greenleaves fine Garden — I mean S. Greenleafes esq^r — wrote to M^{rs} Pyn. by Cap^t Peale for some currants &c. Dr. Putnam & bro Sargent at my lodgings ye eveng — drank Tea at Dr Putnam's.

[Thursday, 4.] July 18th. Took a glass of fenna this (morn'g) instead of ye powder — ye . . . having had no effect since last Monday P. M. — John took half a glass of it also — & within 2 hours each of us took another glass of it also — wrote to M^{rs} Pyn — by M^r Johnston & by M^r Sparhawk for Currant Syrup instead of ye fruit — our Physick affects both this morn'g — met Dr Goodhue riding out — he is break'g out & is relieved by it — his symptoms have been very high these 3 days — yt appeared ye 9th day from ye inoculatⁿ.

At noon the Congress Declaration of ye Independence of the Colonies on G. Brit. was read in ye Balcony of T^o house — A Regim^t under arms & artillery C^o in King street & ye Guns at the sea batteries were fired — 3 Cheers given Bells ringing &c. &c. afternoon ye Kings arms were taken down & broken to pieces in K street & carried off by ye people.

[—.] July 18th. ano. glass of fenna. Dr Loyd came to see me — ordered me to continue taking ye powders of fenna. John to go on with ye fenna but to omit ye powders till Sat'y night.

In ye eveng recd letter from Mrs. P. & a box of Jellies &c per Mr. Knox.

Fryday 5. [July 19.] Took another glass of fenna. . . .

John took one also — it being . . . was affected with yesterdays Physick. At 12: took a powder.

Mr. Hunt's at Tea — Met Mr. Otis & was introduced by him to Mrs. Otis in ye street he left us telling her that I was once a handsome fellow.

On Saty. eve at Dr. Loyds I met Mrs. Otis & she urged me to come and see him.

[July 20.] We took each of us a glass of fenna before breakt — at 11 I took a powder wrote to Mrs. Pyn. by Mr Sanders.

A. M. Was at Mr Bromfields and at Mr — in Q. street, also at Mr. Sparhawks.

P. M. We went over to Bunker hill, met Mr Barrett & wife at ye ferry w^o had been at my lodgings to see me & was going to Salem on Monday. On our return from C-town found yt Dr Loyd had been to see us in ye even'g I went to advise with him as to medicine for to night & to morrow but c^d not see him.

At 10 Jno. took his powder & I, a glass of fenna Billy this afternoon brot us some curr^t fyrrup & currants & a p^r shoes for Jn^o & returned — My medicine operated once & Johns to day.

[July 21.] John complains of swelling (of) his arm & in his gums & — Toothach each of us took a glass of fenna at 9 at 1 Dr. Loyd called & left 6 more powders for me & some salts for John — the powders to be taken even'g & morn^g as before — ye salts at twice 2 an oz. at a time.

P. M. A Transport of — tons laden with Beef Butter & — from Ireland was convoyed into Nantasket by a fisherman, on discover^s ye imposition w^d have gone off but was prevented by ye Fort at 1st on her comg to ye wharfe Guns were fired & three cheers were given.

[Monday, 8.] July 22^d. Wr. fair. [It i]s a very hot day — The militia being mustered for procuring — men this Town's proportion for Canada & N. York drew us all into ye Common & ye great heat brot on John's symptoms to wit headach & fever, took away his appetite — the dose of salts wth he took in ye morn'g soon fet him a vomiting then took a glass of fenna & was affected but once by any of his med^{co} dozed all ye rest of ye day — at Night took a small dose of nitre dissolved in water — went to bed havg but one dish of Tea & a little p^{ce} of cake since breakfast My med. affected me but once to day it being a glass of fenna & a powder in morn'g & eveng — was at M^r Brimmer's, P. M. — Jno. was very feverish & restless at Night.

Jno. was shiverg & somew^t cold, A. M.

[Tuesday, 9th.] July 23. W^r cloudy & cool.

Each took his glass of fenna. I took my powder as usual — twice — attended ye court of inquisition. Johns fever very high all night — vomited in ye even'g.

July 24th. headach & loss of appetite early yet assisted & gave directⁿ to Mr Elliots Comand^{rs} of y^e Privateers — walkd only to y^e ferry this morn — both languid & weak — effects of medicine 4 times — drank to day only 2 dishes of Tea & about 4 spoonfulls of milk porridge being sick at ye Stomach — puked once.

John continues to breakfast — Mrs Pyncheon came with Billy & brot some fruit.

[Thursday, 11.] July 25th. W^r warm — sicknefs & headach contin[ues] Jno. is easier yⁿ yesterday & continues to break out — eat to day about a gill of milk & water & a little p. of milk biscket — ye like at night headach & pains in my Limbs abates in ye cool of ye Even^g & I rested well — Dr. Loyd had his Trial this afternoon before ye Court of Inquisition — began to shave myself in ye morn^g but being obliged to desist thro' weakn^s & faintnefs was shaved by Barber P. M. —

¹ A portion of this diary was written in cipher, which has been translated for this number of the JOURNAL by the kind permission of the owner, Dr. F. E. Oliver, of Boston.

Miss Sargent Lowell W. F. & Lad^s & Dr Elliot & Neighb^r Giles & Misses Orricks made us visits.

[Friday, 12.] July 26th. headach & pain in my bones return without any appetite — eat only some broth at noon a dish of tea & one of coffee P. M. sleep well.

[Saturday, 13.] July 27th. W^r moderate.

Symptoms continue [—eat some milk & water with Jonee cake for breakfast on searh Dr Loyd finds some pustules in my neck & on ye shoulders — Dr Loyd much affected wth ye illn^s of his children hav^g. ye throat diltemper — hear from Salem yt Derbys prize was retaken near Newbery barr.

feet in warm water this eve'g.

[Sunday, 14.] July 28th. W^r Fair. — early — symptoms continue — rose & walked about ye house till sunrise — then walked to Charlestown ferry eat some whitpot for breakfast also a cup of coffee & cake Dr P. says my fever is much abated more pustules come out had a stool at noon M^r W & Caty came to see us.

broth for dinner — Jno. eat in additⁿ to his broth a little Lamb & cucumbers notwithstanding my object. had 2 more stools — moderate. in ye morn^g Mr. Lowell brot me some gooseberr^s & cherries.

feet set in warm water.

[Monday, 15.] July 29th. Waked & rose at 3. head[ache] walked to Ch-ferry — 1½ dish of coffee for breakf^t Pudding for dinner — Jno fever increaseth & his pustules very fore — Dr Loyd here — Mr Wetmore & lady set out for Salem abt. 9 o'clock just before ye shower Johnny's fever & fores increaseth Dr Loyd & Dr. Putnam came in ye even^g & proposed med to open his bowels & he had a costive stool in ye N^t.

drank 1 dish of Tea — this & fruit was all yt I eat after Dinner.

[Tuesday, 16.] July 30th. W^r fr. pain in my head not entirely gone — for breakfast 1 dish of coffee 2 dishes of milk & water with milk biscuit & a bun Jno took electuary — Dr Loyds trial finished — his condemnation

I eat for dinner pudding & some butt^d peas M^r Sargent went with me to see Judge W. Cushing whose pork was about turn^g —

I slept ill this night by reason of gt costiveness and this I am now satisfied to have been owing to a large quantity of Genison pairs which I eat some days past wth I find by experience to be very binding, tho ye Drs. seem doubtful of it.

[Wednesday, 17.] July 31st. Had a stool early — rose with my headache as usual. Billy came from Salem — brot some fruit & dined with us.

Dr. Loyd here to see us.

[Thursday, 18.] Aug. 1st. fast day — W^r fr. & warm — rose with headach — had 2 plentiful stools — Dr. Loyd came & allow^d of eatg meat oylers & mol^d. P. M. — went with Dr. Putnam to hear Dr. Elliot — coddled apples & milk sup^r

Thun^rered & rained in ye night

Aug. 2d. go to bed but cant sleep rise agn. & walk ye room some hours — took elect^y. twice to day.

[Saturday, 20.] Aug. 3d. W^r fr. rise with ye headach — had 1 stool early — took elect^y twice — ch^d for breakf^t. walked up to K Street Mr Low^e & N^t. by way of Dr Putnam were ask^d to Dr Loyds this afternoon but were not well en^o to wait on him — letters from Caty at Salem Took elec

tuary at going to bed — supped on Coddled apples & milk

[Sunday, 21.] August 4th. W^r fr. & fine. slept well last N^t my usual headache — for breakfast. rode in Dr Pemberton's chaise to ye fortification & back wth son Jno. w^{ch} almost cured my headach — took electuary this morn^g dined on w. berry pudding Butter sauce, stringed beans & peas & roast pigⁿ & eat heartily without inconvenience & drank a Baker of wine & water

Tea at home M^{rs} Pyn. & Jno. at Miss Gunther Dr. Loring & ye Miss Hunts spend ye eveng with us — Took elect^y. at even^g. Suppr. W. & milk.

[Monday, 22.] August 5th. [Rose] at 6 — almost free of headach — cho. for breakf^t at 8 went over ye neck with Mr Coborns horse & chaise — a glass of fenna before breakf^t Mutton Squash & Turnips for Dinner wth a little slip at Landlady desire & it did no harm — Tea at D^r Loyds where were D^r Pemberton &

Chocolate for Supper — took electuary — first — N. Ropes came with chaise for D^r Putnam & Eben.

[Tuesday, 23.] August 6th. rose without headach to Ch-ferry with Dr Putnam Took a glass of Senna. Choc for breakf^t. rec^d a present of fermons from D^r Pemberton — at eleven took electuary Billy & Sally came & dined wth us at two tarried ye night.

[24.] August 7th. chocolate for breakfast — Billy & Sally tarried at breakfast & Dinn^r & they with John set out for Salem after dinner with S. Cabot & Deb. Higginson abt 4 o'clock from W^t. P. M. Electuary I was at Dr Clarkes P M & eat fruit in his Garden.

[Friday, 25.] August 9th. W^r cloudy — rose at 7. being first well washed all over in Rum & Water — put on clean Linen & Clothes — Mr Wetmore dined here.

August 10th. I rose at 1-2 after 8 o'clock too late to breakfast at M^r Elliots w^o invited Mr W. & myself we all dined at Mrs Chadwells & about 2 set out for ye ferry. Mr. W. & Mrs Pyn. for Charlestown myself & Billy for Winn^d. & we all met at Newhalls & baited & reached Salem abt 7 o'clock

Fryday, Aug. 23d. after — several poultices the scabbs — difficulty was pulled — arm & was buried —

From the Chronicle and Advertiser.

The Boston Medical Society having taken into consideration the general wish of the inhabitants that an annual settlement of their accounts might establish a custom in this Town. — Resolved, that the following Vote be published viz.

That every Member of the Boston Medical Society shall exhibit his accounts for settlement annually.

Per Order

THOMAS KAST Sec^y, Jan. 8, 1784.

Last Wednesday Se'nnight departed this Life Mrs. Hannah Davis, the amiable Consort of the Honorable Caleb Davis, Esq: of this town — Her Remains were Entomb'd on Friday Evening being followed to the silent Mansion by a numerous and mournful Procession of Relatives and Friends, whose unaffected Sighs and Tears feelingly Evinc'd that she died greatly lamented.

Nov. 7, 1782.

Original Articles.

MEDICAL SOCIETIES: THEIR ORGANIZATION AND THE NATURE OF THEIR WORK.¹

BY J. COLLINS WARREN, M. D.

"THIS may be considered the birthday of medical honors in America," wrote the provost of the University of Pennsylvania, in recording the first medical commencement held in its college hall on June 21, 1768, and the occasion did mark the beginning of a new era for medicine.² Two years before a State medical society had been formed in New Jersey,³ but with this and one or two trivial exceptions, no attempt had been made to organize or instruct medical men on this side of the Atlantic. Previous to this period, those who desired a medical diploma were obliged to seek it in the mother country; but out of the three thousand physicians then in practice, it has been estimated that not over four hundred had received the degree of M. D. from a medical college.⁴ Many of the practitioners of medicine were also clergymen, taking charge of the bodies as well as the souls of their patients.⁵

But the incubation period of two centuries was nearly over, and the work of organization and teaching had already begun. All classes in society were beginning to feel the quickening influence of the infant republic, which was soon to be added to the family of nations. In New England we were less fortunate than elsewhere; the means of obtaining a knowledge of medicine were more limited and deficient than in the middle and southern provinces;⁶ but with the Revolutionary War came a demand for medical services, out of all proportion to that which had previously existed, while the establishment of military hospitals afforded an opportunity to study disease. As the tide of battle swept towards the South, and the period of war was drawing to a close, the new order of things began to shape itself in this part of the country. The military combinations, which finally culminated in the surrender of Cornwallis, were already in course of development, and the final scenes of the military drama were rapidly following each other, when medical science in this State first crystallized into definite form.⁷

The Massachusetts Medical Society was organized by the better educated portion of the physicians of the State, for the purpose of establishing a standard of

education⁸ in the midst of the then existing chaos. No system of medical education had previously been observed in the State, and no means whatever existed of ascertaining the qualifications of candidates for the profession. A young man might pursue his studies in such a manner and for such a length of time as he saw fit, and then enter upon practice without examination or license of any kind. It necessarily followed, from such a state of things, that a considerable number came into the profession who were altogether unqualified for its high responsibilities. Every new practitioner was an object of suspicion. The original plan contemplated the organization of an examining body, to determine the skill in their profession, and the fitness to practice it, of all candidates who should offer themselves for examination. It was intended that the successful candidates should receive the "approbation of the society," in letters testimonial of such examination. The members of this body, consisting originally of but thirty-one, and limited to seventy,⁹ were termed Fellows, whereas those who passed successfully its examinations did not become, as now, members, but were simply licentiates, or men announced by the society as fit to practice medicine. An election into this body was made honorary, and only conferred upon those who had arrived at some distinction in the profession. Some of the Fellows were distinguished members of other professions. It was formed somewhat after the model of the English educational bodies of that day, such as the Royal College of Physicians.¹⁰ This arrangement did not prove popular; there was an unwillingness, on the part of those already in practice, to submit to the examination of the society or to acknowledge the supremacy thereof, without enjoying professional equality with the Fellows. Such distinctions not being "in accordance with the spirit of the institutions" of the young republic. Accordingly, in 1803, the number of professional men in the State having greatly increased, a radical change was made in the constitution of the society, an extensive correspondence having been instituted among its members in order to devise the best means of increasing its usefulness.¹¹ The plan was to embody the whole of the regular profession in the State, and, by means of the authority derived from the legislature, to regulate the requirements of a medical education, so as to elevate the general character of the whole profession. For this purpose the limit of numbers was taken off, and every physician after three years of practice was entitled to enrollment as a member.

In the acts authorizing this important change we find the first public mention of the Councilors, although they constituted the working body of the society from its beginning.¹² To them, at all events, were intrusted many functions previously performed by the Fellows. It was evidently intended by those who wrought this change that the governing body, although all members

⁸ "That a just discrimination should be made between such as are duly educated and properly qualified for the duties of their profession and those who may ignorantly and wickedly administer medicine." (Act of incorporation 1781) (in italics in the original).

⁹ Acts of 1781, section 6.

¹⁰ Founded by Linacres, who died 1520. "That illiterate and ignorant medicasters might no longer be allowed to practice the art of healing." College of Surgeons incorporated March 12, 1800. The Royal Society was founded in 1645. An attempt was made about the year 1812 to incorporate a college of physicians in Boston, but, being vehemently opposed, both by the society and the medical school, it did not succeed.

¹¹ Communications Mass. Med. Soc., vol. v., Appendix, p. 27, 1831; vol. vii., Appendix, p. 142, 1848.

¹² See vol. i., Comm. M. M. S. Officers for the year 1789.

¹ An address delivered at the centennial meeting of the Massachusetts Medical Society, June 8, 1881.

² Extracts from the Life and Correspondence of Rev. William Smith, D. D. By Horace Weymss Smith, Philadelphia, 1880.

³ The Delaware State Medical Society was not organized until 1776.

⁴ Contributions to the History of Medical Education and Medical Institutions in the United States of America. By N. S. Davis, A. M., M. D., Washington, 1877.

⁵ The Medical Profession in Massachusetts. By Oliver Wendell Holmes, M. D.

⁶ American Medical Biography. By James Thacher, M. D., Boston, 1828.

⁷ "These societies were the principal agents in fixing the standard of medical education, and although, after the establishment of medical schools, the diploma of one in good repute was accepted in lieu of an examination, this was by courtesy rather than by law, and made it necessary that the standard of the schools should be at least equal to that prescribed by the societies." A Century of American Medicine. By John S. Billings, M. D. American Journal of the Medical Sciences, vol. lxxii. The American Academy of Arts and Sciences was established the year previous.

were now equal, should maintain that parental attitude towards the members throughout the State which the Fellows previously held towards their licentiates. They were chosen at the annual meeting, and exercised a general supervision over the affairs of the society. The election of all officers was in their hands, and it was left to their discretion to establish subordinate associations in such districts of the commonwealth as they might think expedient, or to subdivide or alter any them whenever the public good might seem to require it, and it was expressly provided in this early act that "the members of such subordinate societies be holden to report to the Councilors of the general society all such cases as may be selected for their importance and utility," showing the purpose for which these societies were to be formed, and the correlative duties which thus devolved upon them. The business of determining the qualifications of any individual who might apply for membership was delegated to a board of Censors, but the Councilors were permitted to elect those in practice at the time of the act and for some time after, and also honorary members.

The Censors consisted at first of a single board of five members.¹ We find them mentioned in the list of officers under the original plan of organization. As new district societies were formed additional boards of Censors were appointed.² In early time the Censors had great responsibilities forced upon them, for in 1817-18 general laws were passed by the State compelling the society to examine candidates for a license to practice, and depriving all who were not graduates of a school or licentiates of the society from legal privileges in collecting fees. In 1831 the clause requiring a successful candidate to practice three years before becoming a member was rescinded,³ and in this year, also, the Legislature compelled the society to accept the graduates of Harvard as members, but subsequently, in the acts of 1836 and 1859, it was provided that the society should not be allowed to discriminate in favor of any institution, and that all applicants should be treated alike.⁴ In the mean time, however, the State largely relinquished direct control over the practice of medicine, and as in the other professions gradually left it to take care of itself; since then the society has exerted its power for good in this direction solely through its influence upon public opinion and in maintaining a high standard.

The district societies owe their existence to the parent society. Their status was defined in 1803, as already indicated in speaking of the powers of the Councilors.⁵ "Before 1850 there were district societies only here and there in the State established at irregular intervals. In 1850 the Councilors divided the whole State into districts, in each of which they established a society. An addition to the charter of that year gave to the dis-

trict societies the privilege of choosing Councilors and Censors."⁶ This reorganization, as it were, of the districts was preceded in 1831, and again in 1848, by considerable discussion as to the relations of the districts to the parent society. One of the more active and powerful and at the same time one of the most distant subdivisions of the society was in Berkshire. It was apparently felt by certain members of this district that heavy burdens were imposed upon them, and that for obvious reasons they were unable to participate in the privileges of the society. The different portions of the State were at that time far less accessible to one another than at present. It was a much more difficult matter for a member to attend the meeting of the society, or to avail himself of the advantages of the library which it then possessed. As the meetings were held in Boston, and the funds and library were also there, it was evident that there was a growing feeling of discontent in a section of medical activity at the western end of the State, forgetting that Boston is nearly the geographical centre of the State, and in accessibility quite so, and this eventually found expression in the presentation of a memorial to the Legislature in 1831. No legislative action having been taken, it was finally brought up in a memorial to the society in 1848. The proposition of Dr. H. H. Childs and others contemplated that the State society should be constituted by delegates annually chosen by the county associations agreeably to the principle adopted in most of the States, thus making the basis of the society local or county associations. The petitioners claimed, in urging the measure, that the objects for which the society was first brought into existence had been completely overturned, a license being no longer required for the practice of medicine; no laws of the State or of the society were now of avail in guarding the entrance of the profession. In order to obtain such united action from the profession as could best protect and advance its interests a new plan should be devised, which would bring in a good many respectable men who were not members. The plan which was to smooth out all these difficulties was somewhat vaguely stated as "associated union."⁷ The majority report of the committee to whom this whole matter had been referred was presented to the Councilors by Dr. Pierson, of Salem,⁸ and showed clearly that the simple and efficient plan of the society had accomplished all that was ever intended by its organization in 1803; that it would be unwise to desert a system which had worked well for half a century; that it was regarded by physicians in other States and countries as a most desirable model of medical organization; and that nowhere in our country, if in any other, could be pointed out a more respectable body of practitioners, or one more highly estimated by the community. Experience since that time has amply justified the views expressed by the committee, and the society now presents an organiza-

¹ Act of 1803, section 3.

² Although the Censors had power to admit, the "letters testimonial" must have upon them the seal of the society and the signature of the president and secretary. Act of 1803.

³ About the same time the law allowing none but members to collect fees by legal process was repealed, a feeling existing in the society that such a special law worked to the detriment of the profession.

⁴ Boston Medical and Surgical Journal, vol. vi, new series, p. 311.

⁵ Discussion on having arisen of the right of the districts to send delegates to the American Medical Association, it was decided that the Councilors should be restricted not to have the society represented by delegates, but in 1852 it was decided that the Councilors should be elected by district societies must be signed by the president of the society, and the general society, and that the delegates be elected by the district societies.

⁶ Boston Medical and Surgical Journal, vol. ix, new series, p. 19, District Societies, Their Purpose, Powers, and Limitations.

⁷ M. M. S. Comm., vol. vii, p. 150, Appendix.

⁸ M. M. S. Comm., vol. vii, Appendix, p. 112. The committee consisted of two from each district society, and two from each county or part of a county in which no society had been formed; in all 32 members. The majority stood 20 to 8. It is interesting to note both in this and a previous report (vol. v., Appendix, p. 26) the stress laid upon the importance of maintaining a high and uniform standard of qualifications demanded of the candidates, which it was claimed was the chief means by which the harmony of the profession and the security of the public against unqualified practitioners were promoted. And again it was expressly stated that "the primary objects of the society are to effect a system of adequate and uniform education, and to elevate the standard," etc.

tion less cumbrous in form and in better working order, probably, than any other in the world.

It was at first supposed that the society would become a scientific body, which could discuss and diffuse medical information and improvements, and take rank among the institutions of learning and science.¹ Later, when it embraced the whole profession, the professional and scientific work was in a great degree delegated to the districts, and the general society became more especially a regulator, in conjunction with the State, of the practice of medicine, although at the annual meetings the amount of professional work is yearly increasing, and the society encourages original work on the part of members by the offer of annual prizes. Its most distinctive feature has always been the establishment of an educational standard, and in this it was aided by the government to protect the public against the introduction of improper persons to the practice of medicine. It should be distinctly understood that it was in no sense intended for the mutual protection of physicians, for individual practitioners can get on very well without the society, and the number of those whose incomes are encroached upon by irregulars is exceedingly small.² Its objects were effected first by the diffusion of medical knowledge among physicians. Prescribed courses of study³ were laid down for those who proposed to undergo the examination of the Censors. The society was, in fact, equivalent to a medical school,⁴ and at the time Harvard began to issue medical degrees the society protested against this supposed encroachment upon its privileges. The medical literature of the day was made available to members. The first Pharmacopœia published in this country was prepared for their use, and the society had no small share in forming the first Pharmacopœia of the United States. To the community it lent its valuable aid from time to time, as occasion required it. Questions of great importance were investigated by its committees, from whom many valuable reports emanated. A striking illustration of this kind of work is afforded in volume I. of the Communications, where we find an elaborate report on vaccination, read at the annual meeting, June 1, 1808. The almost complete immunity of the city from small-pox for nearly a third of a century following shows how faithfully the profession of that day performed its task. During epidemics of spotted

fever and cholera the activity of the society was conspicuously displayed. Its salutary influence was exerted in behalf of the law to encourage the study of anatomy, this State being the first to set the example of such enlightened legislation. Among the latest achievements is the abolition of the antiquated coroner system and the substitution of the medical examiner, whose important duties are throughout the State performed by members of the society, who have lately formed themselves into an association for the purpose of medico-legal studies. It was under the shadow of the society's wing that the first Board of Health in the United States was organized. And last, but not least, the great boon of anæsthesia was given to the world through the agency of its members. The new code of ethics prepared last year by a committee of the Councilors should not be overlooked. It will undoubtedly serve as a model for all future codes, and has been most favorably commented upon throughout this country and in Europe.⁵

I will now call your attention to a few typical examples of national medical associations, and to certain of our State societies whose organizations present peculiarities worthy of study.

For a number of years medical societies assembled in various parts of Europe, Switzerland being the first to hold a meeting of medical men. France and England followed her example. Italy had a gathering of physicians as early as 1839 at Pisa. It was at the annual meeting of the French Medical Congress at Bordeaux, in 1865, that it was proposed to hold an International Congress at Paris during the great exhibition of 1867. Professor Brouillard, the president of the Congress at Bordeaux, was authorized on his return to Paris to organize an executive committee, to whom the preparation of the coming meeting should be intrusted. It was intended that these gatherings should be purely scientific in character, and that there should be no official recognition by the schools or government; that they should last two weeks, and be held biennially. Foreign nations were invited to join, and their representatives were received at Paris as guests, the expenses of the meeting being borne by the French members solely. Since that time a fee has been usually demanded from each member. The preparations for each meeting are perhaps more elaborate than those of any other association, each country vying with the others in the perfection of its arrangements. Circulars are first freely distributed by the committee some eighteen months in advance, and the coöperation of the journals and societies requested. Several subjects in the earlier meetings of the Congress were selected for discussion, and were printed with an outline of the general character of the discussion it was intended to have. These occupied the

¹ Comm. M. M. S., vol. vii., Appendix, page 149.

² In this spirit are framed the laws in relation to consultations with irregular practitioners, which is regarded by a portion of the public as so illiberal. A report of the committee on the infractions of by-laws (vol. vi., Appendix, p. 10) states: "There are many who affect to think, and there are perhaps a few who actually believe, that these laws are made for the benefit of the profession, when, in truth, as the least reflection will show, their sole purpose is to promote the good of the community, — to guard the public against ignorant, designing, and unprincipled pretenders. . . . Would it be right, by consulting with such individuals, to declare to the world, as we certainly do, that we believe them to be well educated, when, to say the least, we have no evidence of the fact? Who has a right to complain of our course? Not our fellow citizens, for they can employ whom they please; and the practitioners who will not conform to our rules as to a proper course of study cannot blame us if we will not receive them as associates and fellow-laborers."

³ "That it shall be the duty of the society effectually to answer the designs of their institution from time to time; to describe and point out such a medical instruction or education as they shall judge requisite for candidates," etc. (Acts of 1803, sec. 1.) Lists of desirable medical works are frequently seen in the publications of the society.

⁴ Israel Atherton, October, 1789, recommends five years of study to those who have not received a collegiate education. A thorough knowledge of Greek and Latin was thought necessary by Nathaniel Coffin. In a report by a committee, Cotton Tufts, chairman, June 6, 1786, it appears that preliminary requirements were expected of a pupil previous to his instruction by a physician.

⁵ Dr. S. E. Chaillé, of New Orleans, in a paper read before the American Medical Association, speaks thus of our society: "It manifests its appreciation of the *mens sana in corpore sano* by expending annually about \$1800 on dinners, cigars, etc., and some \$2300 on the publication of mental food. . . . In no less than six particulars the influence of this society on state medicine deserves special attention. Massachusetts is surpassed by no other State in the variety and excellence of its public institutions for the sick and infirm. The Massachusetts General Hospital has probably no equal in this country. The Harvard Medical College has been among the very first of such institutions to establish a three years' graded course, and is in all other respects one of the best medical colleges in the United States. . . . Massachusetts has the most satisfactory, however imperfect, registration of vital statistics of any State in the Union. . . . To the Massachusetts Medical Society is also due the greatest triumph yet accomplished in American medical jurisprudence, — a triumph which on this subject places Massachusetts in advance of every English-speaking people."

day-time at the Paris meeting, while the evenings were given up to miscellaneous papers and discussions.

The first day opened with communications on the Pathological and Physiological Anatomy of Tubercle. Other papers read at this meeting were, On the Influences of Climate, Race, and Condition of Life on Menstruation in Different Countries; The Accidents which cause Death after Surgical Operations; Prophylactic Measures to prevent the Propagation of Venereal Diseases. It was found that the difference of language was a great obstacle to the success of the meetings, and that the formal discussions were lengthy and tedious, many of the papers being read for the authors. The attractions of the city and the exhibition detracted largely from those of the Congress. The attendance was large; there was a fair number of celebrities, and all countries were represented.

The second medical olympiad, as it was termed by Professor Bronnillard, was held in Florence, in 1869, Professor Salvator being the presiding officer. The general plan of the meeting was similar to that held at Paris. The chief subjects of discussion were, Marsh Miasm; The Therapeutics of Cancer; The Treatment of Gun-Shot Wounds; Hygiene of Hospitals; The Influence of Railways on the Health of Man; The Conditions which favor the Production of Epidemics in Large Cities; The Rights and Duties of Medical Men in Relation to the Government and the Reforms which may reasonably be expected.

The third meeting was held in Vienna, in 1873, at the time of the great exhibition in that city, with the venerable Rokitsansky as its president. The subjects discussed included: Vaccination, Syphilis and Prostitution, Cholera and Quarantine, Freedom of Practice in all Countries for Qualified Men, Hygiene of Large Towns. A universal Pharmacopœia was proposed, and was further discussed at the next meeting in Brussels, without any definite plan having been arrived at. This Congress does not seem to have been so successful. There were about two hundred members, but the attendance was not satisfactory, the attractions of the exhibition being great, and especially of a very fine exhibit of military surgery. The physicians of Vienna do not appear to have attempted a publication of the proceedings, which came out in abstract three years later, under the auspices of their successors.

Brussels entertained the Congress in 1875. Dr. Henricke, its president, opened the proceedings in the presence of the king. At this Congress the work was for the first time handed over to "sections;" each department presenting questions to be heard and for debate. There was a general meeting at midday, and in the afternoon the various sections held their sessions, at which a large amount of work appears to have been accomplished. This plan of organization has been retained since.

The next year being the date of our centennial celebration an extra (but apparently unrecognized)¹ session was held in Philadelphia. I need not remind you how ably the committee having the work in charge carried out their programme. Although there were but few delegates from Continental Europe, Great

Britain furnished a large number of representatives, with whose names and writings we are all familiar. With the venerable and distinguished Dr. Gross as president, and such men as Lister, Tufnell, Barnes, and Adams to participate in the debates, the meetings could hardly fail to prove most interesting.

In 1877 the Congress met at Geneva, under the presidency of Dr. C. Vogt, and was largely attended. There were numerous agreeable social features, which the picturesque locality made additionally attractive. The volume of reports is by far the most elaborate, there being also a number of very fine illustrations. There was an exhibition of instruments.

The meeting at Amsterdam, in 1879, was notable for the attendance of many scientific men of eminence. Donders was its president, Virchow was among the members, and one of the general meetings was made memorable by a sort of ovation to Lister. The social features, as usual in Continental towns, were an attractive feature.

The next meeting of the Congress is to be held this summer in London, and English physicians have certainly thus far left nothing undone to make it the most brilliant of the series. Work began over a year ago, circulars being freely distributed to all journals and societies. In this way coöperation has been obtained from foreign countries on all sides, and the organization of the various sections and the preparation of the work have been greatly facilitated. The session will open August 2d, and continue through August 9th. All legally qualified practitioners will be received on the payment of one guinea; membership will entitle one to a copy of the Transactions. It has been decided not to admit female physicians to the meetings of the Congress, but ladies will be invited to attend the social gatherings. Arrangements have been made to hold a medical exhibition at the South Kensington Museum, on a scale which has never before been attempted; it will be opened a fortnight before the meeting of the Congress.

The work has been divided up among no less than fifteen sections, which will occupy the mornings, and in the afternoon there will be a general meeting, when addresses by Huxley, Volkmann, Billings, and others, and communications of special interest, will be listened to. This and the meeting of the British Medical Association in the Isle of Wight, this summer, will prove a great attraction to American physicians.

The organization of the International Congress is of a very simple character, each meeting being completely independent of its predecessor.

The British Medical Association was founded in 1832, by Sir Charles Hastings, of Worcester. It was designed by the founder to remove the disadvantages under which provincial medical practitioners labored, owing to their isolation and want of coöperation. It is a scientific, a benevolent, and an ethico-medico-political association.² Its objects are attained by means of periodical meetings, by the publication of a weekly journal, and occasionally of transactions and other papers, and by the appropriation of certain sums of money for the promotion of the medical and allied sciences. It was at first a purely local association, but gradually extended so as to include London, Scotland, and Ireland. In 1874, the association was incorporated under the Board of Trade, in accordance with the

¹ The Congress at Philadelphia found that the meeting at Paris, after a single session, had so few of its members that there would be no larger than the subsequent price of meeting in Europe would be gained by its termination. It was also maintained, but the Congress was held peacefully, and Switzerland was accordingly appointed as the next point of meeting.

² Carmichael Prize Essay for 1879, Walter Rivington. London: Longmans & Co.

"Companies Act of 1867." The governing body is a board of directors, called the committee of council, which is composed of twenty members, elected by the council, and includes certain officers, who are *ex officio* members. The council consists of the president and other officers and representatives, elected by the various branches of the association, each branch electing one for every twenty, together with an honorary secretary. In addition to its duty of electing the committee of council it prepares an annual report of the state and proceedings of the association, proposes the place of meeting for each year, and nominates a president. Practically, however, it has little power, being generally satisfied with registering the decrees and nominations of the committee of council, which has complete control, the management of the affairs of the association being thus kept in the hands of a few men. The number of branches of the association is between thirty and forty. They embrace 7500 members, being one third of the registered members of the profession in the United Kingdom. At the annual meetings addresses are delivered by the president and the presiding officers of sections, when discussions on special subjects take place. There are sections of medicine, of surgery, of obstetric medicine, of public health, and of physiology. Committees are appointed at the annual meeting to carry out the wishes of the association and advance professional interests. These are the medical reform committee, the parliamentary bills committee, and the scientific grants committee. The last was appointed in 1874, to distribute the £300 annually voted by the association to forward original research. The second committee was appointed in 1863, and has rendered valuable service by considering all bills introduced into Parliament in any wise affecting the interests of the profession or touching the public health; amendments suggested by the committee are often adopted by the government. It also watches over the interests of the medical departments of the army and navy and the marine service.¹

The medical reform committee was appointed in 1852, and has for its special duty the advocacy of improvements in the law regulating the practice of medicine; and in order to understand the attitude of the association towards the question it will be necessary briefly to allude to the license law, or, as it is termed, "registration," in the United Kingdom. This system is supervised by a body known as the General Medical Council, composed of representatives from the different examining bodies throughout Great Britain and Ireland, and several members appointed by the Crown.² These are the bodies whose diplomas are recognized by the council for registration, and no man can be a legal practitioner unless he is entitled to be placed on the medical register. It must be remembered that these licensing bodies, seventeen, or as is more lately stated nineteen, in number, such as the Royal College of Physicians of London, of Edinburgh, of Ireland, and the universities, are not necessarily charged with the teaching of medicine, which function is performed by the medical schools, of which there are in London alone a large number, attached to the several hospitals. Registration is not made compulsory, nor can any penal-

ties be inflicted upon an unregistered person who, having obtained a diploma, practices in accordance with such qualification; but without being upon the register no one can recover fees in a court of law, nor hold a government position, nor sign medical certificates; he is wholly shut out from official medicine. Those who practice without a diploma can be prosecuted in case they assume a title recognized on the register, and are then liable to a fine of twenty pounds for each offense. The eclectic and homeopathic practitioners are not sufficiently numerous or influential to secure a representative in the council; no such effort has, at all events, been made.

Although all the diploma-granting institutions are thus united under one controlling body which secures a minimum of requirements, the standard of excellence is a very varying one, and attempts have been made to form an examining board which would represent all these bodies, and also to institute a state diploma which should be compulsory for all students before their names could be placed upon the register, but as yet without success. The constitution of the council is apparently not satisfactory to the profession, as both the association and the prominent journals have favored a reorganization upon a basis which would represent the profession at large, rather than the diploma-granting bodies which it is intended to control.

It will thus be seen that the organization of the association is such that it is able to exert a great deal of influence, not only in matters pertaining to the welfare of the profession itself, but also in legislation bearing upon state medicine.

There are several prizes: the Hastings medal; two triennial prizes, being the interest on certain sums presented by members of the association; and a medal for "distinguished merit," awarded to any member of the profession for heroic conduct or special services to the association.

The management of the British Medical Benevolent Fund, which has an annual income of over three thousand dollars, has been in the hands of the association since 1835.

The special feature of the association, to which is due in a great degree its brilliant success, is the *British Medical Journal*. This weekly periodical had its origin in the volumes of Transactions, nineteen of which have been published in twenty-one years. It was first started in 1840 as *The Provincial Medical and Surgical Journal*. In 1844 it became the official journal of the association, and was at first controlled by a committee. This was not a very successful arrangement, and the journal was transferred to Worcester, where it was issued once a fortnight. In 1853 it was again taken to London, and published as the *Association Medical Journal*, under the editorship of Dr. John Rose Cormack. In 1856 the present title was adopted, and ten years later Mr. Ernest Hart, the present editor, assumed charge. Under his able direction the circulation, and with it the membership of the association, increased from twenty-five hundred to over seventy-five hundred, and additions to this number are constantly being made. The magical effect of the influence of the journal upon the association is graphically described by Dr. Sayre in his address delivered, last June, before the American Medical Association, wherein he advocated a similar experiment in this country. The proceedings of the association appear promptly; every address or article, with the discus-

¹ Through the influence of the committee numerous acts have passed Parliament dating back to 1843, which have established an efficient system of public hygiene, with 15,000 sanitary districts and the requisite number of sanitary officers.

² In the Medical Directory for 1874 seventeen members represent these bodies, and five are appointed by the government.

sions to which they have given rise, appear in the pages of the journal; and as work is going on the year round there is a constant supply of material, and the interest is kept alive. As Dr. Sayre truly remarks, "Certainly in this way the British Medical Association has become the most powerful medical association in the world."¹

(To be continued.)

THE EARLY DIAGNOSIS OF PROGRESSIVE PARALYSIS OF THE INSANE.²

BY CHAS. F. FOLSOM, M. D.

A CAREFUL study of progressive paralysis or general paralysis of the insane embraces the whole range of mental pathology; it includes almost every perversion of the intellectual faculties, every moral obliquity known in the various forms of insanity, under the influence of a single disease, and, so far as we know, with scarcely varying pathological changes in the structure of the different parts of the brain, such unlike symptoms are produced that if grouped together there is no type of mental disease the prominent points in which would not be represented. There may be simple melancholia, hypochondria, suicidal or homicidal impulse, mania of all degrees, from the simple type to the most violent delirium, monomania, stupor, dementia, and finally gradual mental decay without other prominent symptoms—all this with such definite and well-marked physical indications successively of slightly imperfect action, ataxia, and paralysis that no two cases can be said in the latter respects to be essentially unlike.

A knowledge of the relation of pathological changes in the brain to perversion or loss of mental function in general paralysis would imply a full understanding of the intimate sources of intellectual action. The fact that with such uniform morbid anatomy of the parts there is found such a vast range of entirely differing affections of the mind indicates that at present we know next to nothing of the real pathology of insanity.

One may expect to meet the disease most commonly in men of the lower classes, next in order in men of the more favored classes, then among women of the low orders, and very seldom among the upper circles of women. It is calculated that one in thirty of all persons reaching the age of twenty may be expected to become insane in the older States; from one in six to one in twenty of insane men will be general paralytics, and that disease occurs six to eight times as seldom in females as in males. It is much less prevalent in new and fresh places than where population is centralized; it is more common, for instance, in our eastern cities than in those of the West, and least often met in the farming districts of our new States. Its frequency has undoubtedly become more and more marked during the last twenty-five years.

General paralysis is to a less extent directly hereditary than any other form of insanity. While it is to be looked for chiefly in robust men in active life, between the ages of thirty and fifty, now and then it is found under twenty or over sixty, and more rarely still in weak, debilitated persons. Its causes are thought to be, for the most part, in exhaustion from prolonged

strain, mental or physical, or both. When from mental strain, the overtaxing of the system is very likely to have begun in early youth, especially if too little sleep and inadequate food have also combined to lower the tone of the system. That purely intellectual overwork is not the chief source of general paralysis is evident from the fact that the disease is not most prevalent among brain workers. It is a disease of physical degeneration rather than of advanced civilization. Sexual excess, especially if added to over-indulgence in alcohol, begun in early life and prolonged, with underfeeding, seems to me one of the most common causes of general paralysis; and it should be borne in mind that sexual excess is most likely in married people, with whom the temptation and opportunity are more common than in single life. Syphilis, so far as I am able to judge, is rather an accidental complication of general paralysis than a necessary feature in its causation. Thoroughly licentious persons are more apt to have both syphilis and general paralysis than those who are temperate in all things. Given a boy who makes his way in life against poverty and opportunity by overwork, underfeeding, and hardship from his earliest years, who keeps up the strain in later life to gain by his unaided efforts an ambitious position, and at thirty or forty begins to live in unaccustomed luxury, indulgence, and excess, if he inherit an unstable cerebral organization, or anything but a vigorous constitution, and one has a typical case for the possible development of general paralysis. Some stress has been laid upon the importance of what has been called an emotional shock in the production of the disease, but I doubt whether the intense emotion does more than render the accustomed self-control impossible, and thus conspicuously show in a marked manner symptoms which previously were so slight as not to have been noticed.

Unlike the phenomena of many other forms of insanity, those of general paralysis depend upon morbid conditions, which are, as a rule, slow in manifesting themselves. There is commonly a long first stage of the disease, which lasts for a year or two, or even longer, when the only definite symptoms are very nearly the same as those in some of the forms of simple prostration and cerebral exhaustion. There is apt to be more or less headache followed by a certain slight blunting of the moral sense and perception of the proprieties of life, decreased capacity of prolonged or sustained attention, more or less irritability, an occasional outbreak of temper from trivial causes, some excitement of the emotions more than is characteristic, with perhaps melancholia, hypochondria, or even no more than a rather disagreeable feeling of self-distrust. There is also the slightest approach to hesitation in speech, when wearied, which is neither ataxic nor paralytic, and which depends simply upon the inability of the brain to act with its usual rapidity, promptness, and force. There may be even a little unsteadiness in the handwriting, particularly if the individual be one of naturally emotional temperament. Now and then there is a transient feeling of lightness about the head hardly to be called dizziness, but occasionally amounting to epileptiform attacks, which may be analogous to the transient passionate outbreaks that are observed, and as inexplicable to the friends of the patient as they are unnatural to him. All these indications may be present, and the forgetfulness of the nicer proprieties of life may be quite marked, while the judgment

¹ *Lancet*, vi. Jan. 10, 1879, p. 15, and 1879, p. 15.
² Read before the Suffolk District Medical Society.

and mental acuteness remain without noticeable change. Up to this point there is no positive way of differentiating in diagnosis general paralysis of the insane from simple cerebral exhaustion, although the latter should not fail to be suspected. In the case of the former, however, the chances are that the body would be well enough nourished, the sleep pretty good, the appetite fair, and that there would be no functional disturbance of the heart, neuralgia, or excessive unsteadiness of the nervous system, all of which would be expected where no organic disease is present.

This stage may last for several months, possibly a year or more; and the attention of the friends may be called for the first time to an inaptitude for work, which they cannot explain, or to an actual offense against the customs of society, decency, or the laws. As the disease advances, the melancholy or lack of self-confidence disappears; instead of feeling that there is something the matter with him, the patient begins to have an unusual satisfaction in his condition and prospects — says he was never better in his life. This is the rule, although the depression sometimes lasts to the end. If there has been, as may be expected, exaggerated sexual inclination, it persists for a while; otherwise it makes its appearance, generally to be soon lost again and reappears in the later stages; there is often an increased disposition to the frequent excessive use of alcohol. The occasional light feeling in the head is apt to increase to vertigo or epileptiform attacks, which latter may be so prominent as to give rise to the diagnosis of epilepsy. There is a seeming loss of memory, which really consists chiefly in a diminished power of attention, and in failure rather than inability to fix recent events in the mind. There is a marked weakness in the intellect which shows itself in the unusual unwisdom of plans proposed, the readiness with which cherished objects can by tact be driven out of the mind, and an almost childish willingness to be led by a practiced hand. There is commonly an extraordinary feeling of comfort and contentment, which now and then amounts to a violent sense of personal power, but is oftener one of most expansive egoism, without dangerous proclivities, although suicidal and homicidal or other violent impulses now and then occur. The emotional feature is, as a rule, very prominent. These psychical symptoms may be varied, as already stated, still so as to present almost any of the characteristics of the various forms of insanity; and a positive diagnosis may for a time be impossible.

The purely physical symptoms are more pronounced, and as soon as they are once recognized beyond a doubt, the unfortunate patient's death-warrant is as good as signed. A few recoveries have been reported, very likely due to erroneous diagnosis. The men recorded as having got well under the use of Calabar bean, in one of the English hospitals, are long since dead, and illustrate the error which occurs of failure to discriminate between a remission and a recovery. Quite early in general paralysis, one may expect to find oftener than not a narrowing of the pupils of the eye, more commonly of one eye than of both, and more frequently of the left than of the right; but this is not an unvarying nor a diagnostic sign. The slowness or hesitancy in the action of the finer muscles, due to cerebral sluggishness, is succeeded by ataxia, which is commonly first observed in the muscles of articulation, chiefly of the lips and tongue. This can be detected quite easily in long sentences and is a much later symptom than

the fine fibrillar tremor which so early appears in the tongue and upper lip. If the progress of the disease is rapid, the muscular tremor may amount to marked spasm and incoördination, so as even to produce stammering or stumbling in speech, especially in the pronunciation of several long words together. Indeed, a markedly defective articulation or "thick speech" may be the first symptoms observed by the patient or his friends. The handwriting becomes unsteady and tremulous; and there may or may not be omissions of letters, syllables, or whole words in writing.

The ophthalmoscope gives no assistance in diagnosis except possibly sometimes to differentiate the disease from suspected tumor of the brain, while thus far the sphygmographic tracings have offered nothing distinctive or definite in the early stages. The morning temperature is nearly normal, where the progress of the disease is slow, and is elevated above the normal in pretty uniform ratio to the rapidity of the progress of the pathological changes in the brain; it rises also in a corresponding manner from a half degree to a degree and a half at night.

Very rarely, indeed, progressive paralysis of the insane runs its complete course with extreme rapidity, the whole duration of the disease, from the appearance of the first slight indications until death, being only two months or even less. In the only case of this kind which I have had the opportunity to observe, the first symptom which I could detect, on the most rigid scrutiny of the friends of the patient, was an extraordinary exhilaration after drinking an amount of wine which was customary and which had never before produced any noticeable effect. From that time till death only seven weeks elapsed. In this case the temperature was at first a full degree below the normal, and the duskiness, almost suggesting lividity, of the skin marked a striking failure in the innervation and circulation of the system.

The weakness or shuffling in the gait in uncomplicated general paralysis is so late a symptom that it seldom appears until long after the diagnosis may be settled upon other indications. It can best be detected early by the attempt at some such complicated movement as the right-about-face of the military drill, or in walking rapidly up and down stairs with high steps; and this may be quite noticeable when the patient can walk, run, dance, stand with his eyes shut, rise up in a chair, etc., tolerably well. Not seldom, however, the ordinary history of posterior spinal sclerosis is associated with general paralysis, and then the symptoms of progressive locomotor ataxia are early detected: this affection of the gait is quite different from the uncertain step due to cerebral disease and succeeding descending degeneration of the lateral columns of the spinal cord, as observed in pure general paralysis. Indeed, the tabic symptoms may be the sole indications of disease for several years before the characteristic features of general paralysis of the insane appear; and I saw a year ago a case in which one of the possible errors of diagnosis seemed natural, namely, that the malady was bulbar palsy, although on full investigation it proved to be clearly general paralysis. There is present now and then cutaneous hyperæsthesia, either slight, moderate, or excessive, but more commonly a certain degree of anæsthesia is found. There is almost always increased muscular tension, indicated by a decidedly increased knee phenomenon.

It is not my purpose to occupy your time with the

pathology, clinical history, and full account of the later stages of paralysis, dementia, and death, which are sure to follow in a shorter or longer time the first positive signs of general paralysis of the insane. It is worth while to call attention to the importance and not infrequency of the disease; to show that its early symptoms may easily be misinterpreted, and to indicate, in passing, that the complaints not very uncommon among men who have been exhausted by prolonged strain, and who simply need rest to become well, not seldom so resemble the early features of general paralysis that a positive diagnosis must be deferred to await the results of time and treatment. Whether the pathological changes in the two conditions are so nearly identical as to allow of our hope that both may be cured by early treatment, the future must decide.

THE PRESENTATION OF THE PORTRAIT OF DR. J. B. S. JACKSON TO THE BOSTON MEDICAL LIBRARY ASSOCIATION.¹

DR. O. W. HOLMES'S REPLY.

MR. PRESIDENT AND GENTLEMEN OF THE SOCIETY FOR MEDICAL IMPROVEMENT. — In the name of the Boston Medical Library Association I receive this portrait of our late honored and beloved friend, to be faithfully guarded and reverently cared for, so long as it shall remain in the keeping of the Association. In these well-remembered features we see the outward semblance of a character which we have long looked upon as one of the truest and purest that ever adorned the ranks of the medical profession.

Our late associate had some right of inheritance in the virtues which most distinguish the physician. Dr. James Jackson, whose son was taken away in the freshness of his early promise, found no unworthy representative in the nephew whose memory is in all our minds and hearts. Their course of life differed widely, yet they had many of their finest traits in common. The elder Dr. Jackson was born for a practitioner. There is an art of healing as well as a science of medicine. Dr. James Jackson admirably represented the former. The bedside was his place of study; the stethoscope performed his living autopsies; his laboratory was the patient's organism; his microscope sagacious insight; his thermometer the skillful touch of long experience; and better than all the rest he carried with him the *biometer* of a *visus eruditus*, that well-trained faculty, above all others, which measures the life movement and the forces behind it, and knows when and how to check, to urge, to sustain it in its efforts, or to change their direction.

To this task our friend could not be said to have devoted his main energy. He practised to some extent, but he did not surrender himself to the exacting demands of professional labor in a crowded city. Had he attempted this one more wise practitioner would have been added to the many whom we have enrolled upon our record. But how much would have been lost to the science which helps to make whole schools

of wise practitioners! How much to that spirit of harmony and union in the profession, for which our city has long been distinguished! For the pursuit of *science*, that is of true knowledge, is one of the strongest cements that bind men together. Nature enlarges, illuminates, ennobles the minds of the votaries who listen to her oracles, and lifts them above the region of personal feuds and petty jealousies.

Dr. Jackson, the pathologist — morbid anatomist, he would have modestly called himself — was an enthusiast in the study of Nature in one of her least attractive aspects, but one in which she reveals herself as in no other. Age could not subdue the boy-like vivacity with which he followed the scent of a pathological fact, under conditions to most persons the reverse of alluring. His senses were very delicate; he loved fair sights and sweet harmonies, and the fragrance of garden-walks, but he would leave the landscape, the concert-room, the flower-garden, to glean one little fact left to be gathered in the field which had been reaped by successive generations of pathologists.

Science is never false, but scientific men have not, it must be owned, always been truthful. Who was ever more absolutely to be depended upon as incapable of saying the thing that was not, than he whose features live upon this canvas? I would not quote irreverently the question of the Roman governor, and the anagram in which it has been answered, but truth is sacred alike whether the lips that utter it are human or divine.

"*Quid est veritas?*" said jesting Pilate,"

and ingenuity has transposed the letters to the answer,

"*Est vir qui adest.*"

So would those who best know our friend have told him to answer if he had been upon the witness-stand and Pilate's question had been asked him.

This is not the occasion for telling the long story of Dr. Jackson's life and labors. Nor is this the audience that needs to be reminded of them. I cannot help recalling the noble words of Ulysses in the *Iliad*: —

Tydidēs, praise me not too much, nor blame.

Thou speak'st to Argives, all these things who know.

More especially is it needless to discourse at length to the members of the Society for Medical Improvement on what they owe to the labors of Dr. Jackson. I can speak from my own knowledge of this society in its earlier period, for I was then a constant attendant at its meetings, and have an impression that I acted for a time as its secretary. I recall the days in which, with at least as much truth as there was in Louis Fourteenth's saying he was the throne, it might have been said that Dr. Jackson was the Society. He was its support, its main pillar, untrifling and untrifled as a marble caryatid — say, rather, its vertebral centre, around which all its limbs and organs were disposed. Did others fail to appear, he was always present; were others silent from lack of material for discourse, he was always ready with the story of some new and interesting case; had others brought no specimen to show, he was sure to unwrap some embryonic *jeu d'esprit* of Nature, or some fragment of unenviable personal property not mentioned in the late owner's will or codicils. He has left the memory of all this in the two imperishable fluids, ink and alcohol; in his minute and thoroughly trustworthy records, partially reproduced in his two monumental printed catalogues, and in the jars

¹ In the issues of the *JOURNAL* for May 26th and June 24, pages 460 and 544 respectively, appeared the report of the committee appointed to prepare a portrait of Dr. J. B. S. Jackson for the Boston Society for Medical Improvement, and a report of the presentation of the portrait to the Society by the Boston Medical Library Association. The secretary, Dr. O. W. Holmes, accepting the offer for the Library Association, regretted that he could not appear in these reports, and we are glad to be able to present them to our readers now. — EDITOR.

where the liquid which destroys the organs of the living confers a kind of immortality on the viscera of the dead.

Dr. Jackson lived in and to the close of that era of pathological anatomy, which began with Morgagni and finished with the labors of Louis and his contemporaries, to give place, or rather to yield precedence, to the dominant study of pathological histology. He would never meddle with the microscope; he was always contented with his natural lenses of ten inches of focal distance. And thus, whatever he lost, he escaped one of the not infrequent effects of over-reliance upon the instrument to which we are under such almost infinite obligations, but which is breeding a generation of intellectual myopes as one of its natural products. His honest eyes were naked and not ashamed, even in the days of Tolles and Beek and Hartnack. But what he saw with those honest eyes was seen clearly, and what he told was related faithfully. There is nothing more genuine in all medical literature than the records he has left of what he observed and has bequeathed to those who come after him.

We will give his portrait a conspicuous place upon these walls, and by and by, those who come after us will replace it upon the walls of that larger edifice which will, in the fullness of time, spread its roof over these accumulating stores of knowledge. No companionship it will ever find will be too good for it. Call up in counterfeit-presentment the great masters of every age and every land: the Father of Medicine from his island in the Ægean; the friend and physician of Marcus Aurelius from his Mysian sepulchre; the restorer of anatomy from the rock where he perished by shipwreck; the great English practitioner who dared to bring common sense to the bedside where tradition and superstition had long reigned paramount; the discoverers, the inventors, the scholars who have built up medical science and art; Paré and Harvey, and Jenner, Hunter, and Haller, Bichat and Louis; summon the men illustrious in our friend's chosen specialty, Morgagni and Cruveilhier and Rokitsansky; nor forget those who have honored our own country, our own New England, our own Boston, where inoculation was first introduced and vaccination first practised on these Western shores; where etherization first came to lift the curse of Eden from Christendom; among all these not one pursued his branch of science with more enduring enthusiasm, with more single-hearted determination to learn what Nature had to teach him, or with a more modest estimate of his own achievements; not one has left a memory embalmed in more grateful and kindly recollections than JOHN BARNARD SWETT JACKSON, whose face we look upon no more, save as Art has preserved it for us and our posterity.

Therapeutic Memoranda.

THE USE OF OLIVE OIL AS AN EXTERNAL APPLICATION IN DISEASES OF THE CHEST.

BY W. THORNTON PARKER, M. D., PLYMOUTH, MASS.

WHILE a student in Professor von Gieth's Physical Diagnosis Class in the Munich General Hospital I frequently had occasion to notice the use of olive oil as an external application in diseases of the chest. This, if I remember rightly, Professor Gieth preferred to all other external applications, such as Indian meal, cotton

wadding, flannel, or rubber jackets. Of course I am not considering the stage of those cases where counter-irritation would be necessary.

Professor Gieth used a double fold of common cotton cloth, large enough to completely surround the body, the cloth he thoroughly saturated with warm olive oil. I think the Professor considered this generally sufficient without the addition of flannel. I have never seen this treatment recommended in any of our medical works, but in private practice very often since then I have had occasion to be grateful for this valuable suggestion, and find the use of the olive oil excellent in almost all diseases of the chest. It is certainly very agreeable to the patient, besides being, as Professor Gieth suggests, the best means at our disposal for *retaining a steady amount of heat*. The oil softens the skin and is probably more or less absorbed, which is of itself beneficial. This application is renewed from time to time as required.

The objection to the Indian-meal jacket is that it rapidly cools and is liable to wet the bed-clothing and chill the patient, thereby defeating the desired results.

I am induced to mention this treatment in the hope that those who are unfamiliar with its use may give it a trial at this season of the year, when lung diseases are so prevalent.

Reports of Societies.

ANNUAL MEETING OF THE CONNECTICUT MEDICAL SOCIETY.

THE ninetieth annual convention of the Connecticut Medical Society was held at the Common Council Chamber, City Hall, Hartford, May 25-26, 1881. The attendance was large, every section of the State being well represented. The business of the society is transacted on the first day by Fellows, so called, chosen by the eight county societies which unitedly form the State Society. These were all present except four, forty-two out of a possible forty-six; two of the absentees were in Europe; one of these was the president, so the vice-president, Dr. Deming, presided.

There was an unusual amount of business before the society and in reality two days ought to have been devoted to it; an evening session was rendered impossible also, as the society were then invited to a reception by Dr. Mann, the well-known gynecologist, formerly of New York, now a resident of Hartford.

After the usual routine business the society listened to a carefully prepared and well-studied report by Dr. G. W. Russell, of Hartford, chairman of the committee on Expert Medical Testimony, appointed the previous year. The inherent right of the accused to confront the witnesses against him was presented as a bar to any radical changes in the present system. The other obstacles could be readily overcome by changes in the statute law; for instance, the court has no power to summon experts nor have the judges except under one or two very unusual circumstances, but a law could be passed giving the court power to summon one or a council of experts, but the first objection is an insuperable one. The only progress that appeared at all possible lay in improving the character and tone of the medical profession itself, so that no reputable practitioner would sell his opinion to the highest bidder. Already the courts are beginning to discriminate between the professional witness, whose fee is conditioned

upon the amount of damages secured, and the non-partisan witness, who presents the facts in the case clearly and simply; and a skillful lawyer readily finds methods to bring into discredit the mercenary witness, whose only thought is gain. The evils of the present system, as recently exposed in our courts, were freely admitted, but the difficulties in the way of any radical change are insurmountable. The paper bore evidence of careful study, and was backed by the best legal talent in this State.

The special committee on the sale of poisons reported through their chairman, Dr. Rufus Baker, of Middletown, that the list of poisons whose sale should be recorded ought to be increased, and others should be guarded by special marks and clearly labeled "Poison." A list of the two classes was presented, and further legislation advocated. Some discussion followed both of these reports, but no resolutions concerning them were presented.

Dr. M. White, of New Haven, then read the report of the Committee on Vital Statistics, recommending that a better execution of the laws be insisted upon, but suggesting no new legislation.

This report was followed by considerable discussion by Drs. Hubbard, Cleveland, Burke, Mayer, and Chamberlain. Complaints were made that names of physicians and patients were published by local papers to the detriment of the public interest.

The discussion showed that the present laws were sufficient, for the most part, if well executed. It was a common right to consult public records, and difficult and, indeed, impossible, to deny this.

The Board of Health checked and prevented all such abuses as were brought to their notice. On motion of Dr. Burke the secretary of the State Board of Health was requested to pay special attention to these abuses, and secure, if necessary, additional legislation to prevent them.

Dr. A. M. Shaw, of Middletown, read a report on the Expediency of Lunacy Commissions, presenting a very able and exhaustive résumé of the whole subject; the history of the aims and results of such agencies on foreign countries, and in different States of our own country, was fully described and on the whole the system was commended, especially for the larger States. The paper was a general defense of the asylum system of treating insanity, and, with some reservations, endorsed the prevalent methods and plans for the treatment of insanity.

Dr. D. A. Cleveland presented a minority report dissenting almost entirely from every conclusion of the majority report; in general it was in accordance with the well-known views and methods of Dr. W. A. Hammond and his school.

As it was becoming late and much essential business required to be done, on motion of Dr. Chamberlain both the reports were laid upon the table; they were afterwards ordered to be printed, but no time being afforded for their discussion later they go to the next convention as unfinished business.

The report of the treasurer was presented, showing a healthy state of the finances of the society and an increasing amount of honesty among the members in paying their just dues. In Hartford, Middlesex, and Loudon counties there were no delinquencies, two members in Windham and two in Litchfield had neglected to pay, while in the other counties the delinquents were many. The largest income is received

from Hartford County, although that is the second in size; but there is but little difference between it and the largest,—it has one hundred and two members and New Haven one hundred and seventeen. The report shows a balance of nearly four hundred dollars in the treasury.

The nominating committee reported the following list for officers for the ensuing year, and they were all chosen unanimously. Dr. Edgerton resigned, but his resignation was not accepted; he has made a very efficient officer.

President, Dr. William Deming, of Litchfield.

Vice-President, Dr. William G. Brownson, New Canaan.

Secretary, Dr. C. W. Chamberlain, Hartford.

Treasurer, Dr. Francis D. Edgerton, Middletown.

Committee on Matters of Professional Interest in the State, Dr. W. A. M. Wainwright and Dr. S. S. Wilcox, of Hartford, Dr. G. F. Lewis, Bridgeport.

Delegates to Massachusetts Medical Society, Dr. D. A. Cleveland, Dr. M. V. B. Dunham. The report of the committee to nominate professors at York Medical Department was presented by Dr. R. S. Goodwin.

With the advice and concurrence of the President and Faculty of Yale College the following gentlemen were elected professors in the Medical Department of Yale College: Dr. F. M. Prudden, Dr. F. E. Beckwith.

Dr. Pliny Earle, of Northampton, was nominated as an honorary member; by rule this goes over until next year for action.

The reports of various standing committees were presented, and after other routine matters of business the society adjourned.

In the evening a pleasant reception was given to the members of the society by Dr. M. D. Mason, lecturer on gynecology at Yale Medical School. This was well attended, and proved a very enjoyable occasion.

The annual convention mass meeting was held Thursday at the City Hall, commencing at half past nine, A. M., President-elect Deming in the chair. The secretary's report showed a continued state of prosperity. The society now numbered four hundred and thirty. There were thirty-two new members and seven deaths; the net gain was about fifteen, taking the removals into consideration as well as the deaths. The growth of the society had been steady for the last five years; this was most marked in Fairfield County, which had increased from forty-five to seventy-one members. The report of the committee on matters of interest was then read by Dr. Wilcox. The history of epidemic diseases, as presented in the report of the State Board of Health, was commended, and a further account of the manifestations of small-pox was also given. The subject for discussion was consumption, especially with regard to its contagiousness. The general opinion was that it is contagious from person to person by long and close association, for example, occupying the same room. A paper on the Transmission of Bovine Tuberculosis to Man was expected from Dr. Cressy, but he was unavoidably absent.

Dr. Robert Dixon, of Maine, and Dr. T. W. Perry, of Rhode Island, were present as delegates, and briefly presented the greetings of their respective societies. Dr. E. C. Seguin, an honorary member, and Dr. Paul F. Mundé, of New York, were present; also Dr. A. R. Smart, of Michigan.

After the reception of delegates, reports of delegates to other societies were received.

The society then listened to an able and exhaustive essay from Dr. Seguin, the celebrated neurologist, upon the Early Indications of Epilepsy. Any attempt at analysis of this masterpiece would fail to do it justice; it must be read to be appreciated.

Dr. S. B. St. John read a very interesting essay upon Sympathetic Ophthalmia, and at the close exhibited a magnetic apparatus for removing particles of steel or iron from the eye by the power of magnetic attraction. The power of so small a magnet seemed almost incredible. An electro-magnet for the same purpose was also shown, an inferior instrument on account of the trouble from the wires.

Dr. Fleischner read an essay on Non-Pharmacological Therapeutics, in which he showed the value and power of many remedies and processes not official.

Interesting papers on The Influence of Temperature in Disease, by Dr. C. B. Newton; Treatment of the Third Stage of Abortion, by Dr. J. H. Grannis; and Treatment of Lacerations of the Cervix, by Dr. M. D. Mann, were read; the latter was discussed by Dr. Mundé and others, and elicited a great deal of interest. The society, after listening to several voluntary papers, adjourned to dinner at the United States Hotel, which proved a very pleasurable occasion.

During the session of the society there was a very fine exhibition of drugs by Parke, Davis & Co., the Trommer Malt Company, Phillips & Co., and of surgical instruments by John Reynders & Co., and S. Hernstein & Co. These attracted considerable attention. On the whole, the session was as interesting and profitable as any ever held. The papers were of unusual interest, and were much better listened to than is the rule. The next session will be held at New Haven, May, 1882.

ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE Massachusetts Medical Society, in the programme of exercises of its one hundredth annual meeting, made a decided innovation upon its time-honored practice, by the omission of all strictly scientific papers, and set before its members a variety of entertainments, which were entered upon with zest.

It did not, however, put aside entirely its professional character. If it did not attempt didactic instruction, it presented a series of object lessons, from which even the wisest of its members, who only lent his eyes, could not fail to draw some slight lessons.

The first entertainment upon the programme was the visit to the Abattoir. A special train started from the Albany depot punctually at the advertised time, carrying nearly a hundred men. The visitors were shown the various processes, and given as clear an idea as possible of the workings of this model establishment. As soon as the number of visitors to the Abattoir was known, or immediately on the starting of the special train, word was transmitted to Cambridge, where the proper number of barges were sent to Brighton, and the visitors transported to Harvard Square.

Meanwhile, in accordance with the programme, the various collections at Harvard were thrown open, and were visited by various members. It was an opportunity never before offered to the society, and they gladly availed themselves of the privileges.

At eleven o'clock precisely the oration by Dr. GREEN was delivered in the Sanders Theatre (the public lect-

ure room of the college, so recently the scene of the Greek play). This oration formed the nucleus of our last number.

At twelve o'clock exactly the lunch was served in Memorial Hall. The society was welcomed in a few graceful words by PRESIDENT ELLOR, in behalf of the corporation and professors of the University, to which Dr. WILLIAMS replied as follows:—

"Mr. President, Gentlemen of the Corporation, and Professors of the University. — In behalf of the Massachusetts Medical Society, *quoniam contra dicente*, I offer thanks for the large and graceful hospitality with which Harvard College has welcomed us. Your invitation was interpreted as a flattering token of honor and of sympathy; that it was thus intended has been most amply shown, in the manner of our reception, and, Mr. President, in your kind and courteous words.

"Many of our Fellows, recalling their early years, spent under the benignant sway of Alma Mater, mark with filial joy the evidences of her prosperity; not only in these sumptuous and convenient buildings, but in the immense increase of facilities for instruction, for study, for comfort, and for health. Others of us, coming to this ancient university for the first time, cannot but be impressed by the wealth of resources, in learning and in science, here offered for selection to their votaries; even Celestials, in shining raiment, lending their aid to the aspiring student.

"It is a privilege to visit these magnificent museums, so nobly founded and so generously endowed, which will be enduring monuments of the wisdom of their benefactors; to view the rich stores of the vast and commodious library; and to find in the splendid gymnasium the means which secure to the educated man a healthy body for the abode of a sound mind. From this hall we shall carry with us reminiscences which will remain in our hearts.

"As Fellows of the Massachusetts Medical Society, as members of the medical profession, we owe much to the college. Most of our original corporators were graduates of Harvard. Less than two years after the incorporation of the society its officers were invited to attend the public induction of the gentlemen elected as the first medical professors, and to dine, on that occasion, with the corporation and overseers in the hall. At a later period, to avoid any semblance of interference with the chartered privileges of the society, the college authorities agreed to expunge from the diploma any words implying the right to *practice* medicine; and not to examine for a degree such candidates as the censors of the society had rejected.

"It is due to the fostering care and willing coöperation of the college with the society that the standard of education in the medical school has been kept so high as to place its graduates far above the level of charlatans and pretenders.

"It is therefore most fitting that this university, and the society which to-day comes to greet its elder scientific sister, should continue in the future, as in the past, to strengthen each other's hands. The honor and welfare of the profession of medicine is committed to their joint keeping.

"Having regard to our quality as guests, you have forbore, Mr. President, to set forth, in persuasive words, the needs of the university. Nevertheless, we propose to follow the example of the apostles; and, of such as we have give we thee. The Fellows of the society have wealth of olive branches, present and prospective.

These shall we send for your acceptance; sure that they will thrive in this congenial soil; and hoping that when transplanted to the larger field of the world they will do credit to the nursery in which they were trained."

The lunch was evidently enjoyed by the members of the society, and the hall presented peculiar facilities for serving so large a number. At the close of the lunch horse-cars were in attendance to convey the visitors back to Boston, and landed them at Bowdoin Square, where were waiting a long line of stages, to which they were quickly transferred and conveyed to Rowe's Wharf, where the steamer Governor Andrew was waiting for the harbor excursion. Embarking at two o'clock, it passed first in view of the navy yard, steamed by the piers of East Boston down the harbor, along by Deer Island, by the forts and the lower light, several miles out toward Minot's. Turning about, they came part way back, took the inside route and landed at Nantasket soon after four. Here a standing lunch was served, which the sea air made doubly welcome. The music was furnished by the Cadet Band, which also played while on the boat. At half-past five they started on the return, and came alongside the wharf five minutes after the time appointed. There was much fun and singing on the trip, and the enjoyment of the sail was greatly increased by the opportunity afforded for social enjoyment and the renewal of old friendships, which was evidently appreciated by the seven hundred doctors. The only delay in the execution of the programme for the day, as originally planned, was in the arrival five minutes late at the wharf on the return. About seven hundred members of the society enjoyed the harbor excursion.

At four o'clock the adjourned meeting of the society took place.

ADJOURNED MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY IN HORTICULTURAL HALL, JUNE 7, 1881, FOUR P. M.

The meeting was called to order at four p. m., the president, DR. WILLIAMS, in the chair.

DR. GOSS read the records of the last meeting, which were accepted.

DR. WILLIAMS said that the contingency for which this meeting provided no longer existed. Therefore there was no business before it.

DR. S. CAROL said this meeting was called a year ago, and we have nothing to do with the reasons given at that time for holding the present one.

DR. CHARLES P. PUTNAM said that as the society voted at its last meeting to discuss the question of the admission of women he moved that it adjourn to eight o'clock for that purpose. Seconded.

DR. HOSMER said that the meeting was not necessary. It was unfortunate, unwise.

He would not say anything about the legality of it. He would not discuss that. It was under the circumstances unnecessary. The contingency for which this meeting was to provide had not arisen, therefore there could be no business before it. It was unfortunate, because it interfered with the harmony of the day. It had been hoped that the time might be devoted to pleasure. The adjournment seemed to him also unwise and unfair, because many members would be unable to attend. It was discourteous to Fellows because it interfered with their attendance at the reception of the president. It was discourteous to the council, which would then be in session. The council was expected

to attend to its duties, yet the meeting was to be adjourned to an hour which interfered with those duties. It was discourteous to the president, for he would have to leave his guests to be present. Dr. Hosmer, therefore, moved to adjourn. The motion was lost by a vote of twenty-one to twenty.

DR. C. P. PUTNAM said that at the last annual meeting it was moved by Dr. Bronson that the society adjourn for a particular purpose. It was well known then that this would be the centennial anniversary and that much time would be taken up in its celebration. It was moved that the discussion should be left for another year, and the society voted to have it this year. All provision for this meeting had been omitted in the programme. The officers of the society had said that they knew of no such meeting. The manner in which it had been left out was what he objected to. The president had maintained that there was no business before the society. It did not seem to him that because the question, for which Dr. Bronson's motion provided, had not been acted upon by the council, the society had, therefore, no right to discuss it. The society was paramount on such an occasion. There were cases where the society had framed by-laws before the council. Then the council had given its concurrence. It seemed to him that if the fact of the council having declined to adopt a by-law were to prevent the society from adopting it then inaction on the part of the council might indefinitely prevent action on the part of the society.

The by-laws stated that any change in them required the concurrent action of both society and council. There was no reason why it was necessary that the council should act first.

The last speaker had made a point of the question of courtesy. It seemed to him that the rule of courtesy should work both ways and that the society should be treated with as much courtesy as any one else. Those who had signed the notice had selected the hour they did because there was no other during the day, and because any amendment to the by-laws must be acted upon at an adjourned meeting. He believed this to be a legal meeting of the society. It seemed to him very important that the society should know its position. It had responsibilities and duties as well as pleasures. One of these duties was to attend to its business. He thought that when the society adjourned it should be for the purpose of discussing the question postponed from the last year.

DR. WILLIAMS said that by general consent it had been admitted that there was no necessity for a meeting because the matter lay on the table of the council. Till the publication of the notice in the Medical Journal only two gentlemen had expressed themselves as desirous of holding a meeting. The general consent was that there was no necessity, and therefore the meeting had been dispensed with.

DR. G. C. SHATTUCK said there was no reason why a meeting should be held. That was not a natural reading of the records. The society had adjourned in view of some action of the council; that action not having been taken, the thing fell through. Were it not so, this was not the time nor place. It would be impossible to discuss the matter fairly. If it had rested during a hundred years, why should it have been brought up at a time when it could be neither fairly nor freely discussed? He would not have it put on anything but its merits. He was ready to go into the question fully.

DR. H. J. BOWDITCH rose to a point of order. The question was not of the admission of women, but of adjournment.

DR. SHATTUCK. "It is a question" —

DR. BOWDITCH called Dr. Shattuck to order.

DR. WILLIAMS thought Dr. Shattuck was right.

DR. BOWDITCH. "The question is whether the society shall have a meeting or not."

DR. SHATTUCK said it seemed to him a question whether there should be a meeting at eight for a purpose. He was discussing whether that purpose could be accomplished. He took the ground that there then would not be time for a full discussion.

DR. C. P. PUTNAM made a correction with regard to the preamble to Dr. Bronson's motion. It was not a preamble but merely Dr. Bronson's reason for his own vote.

DR. WILLIAMS said that the society voted to meet for that purpose, and for no other.

DR. C. P. PUTNAM said the preamble gave the reason for making the motion, but not members' reasons for adopting it.

DR. PUTNAM asked permission to read the following legal opinion.

DR. S. CABOT, AND OTHERS:

Gentlemen, — Our opinion is asked as to the effect of the vote of the Massachusetts Medical Society at its last annual meeting, that when this meeting adjourns it does so to meet at the place of annual meeting, on Tuesday preceding the annual meeting of 1881, at four P. M.

We have no doubt that the meeting stands adjourned in accordance with the terms of the vote, and, the annual meeting for this year having been fixed for Wednesday, June 8th, that the adjourned meeting should be held on Tuesday, June 7th, at four P. M. The fact that the mover of the vote stated that he made the motion in view of a contingency which has not arisen has no bearing whatever on the effect of the vote when passed. Other members may have voted for his motion from wholly different motives, and their motives and his are alike immaterial. If the officers of the society are not present, a *pro tempore* president and secretary should be appointed, in accordance with By-laws XXIII. and XXVI. Very respectfully yours,

RUSSELL & PUTNAM.

DR. WILLIAMS said that the contingency was stated and that the society voted to meet if that contingency arose. Perhaps the society would have voted in some other way, had any other motive been presented.

DR. CHADWICK did not see what the motive had to do with the question. His own motive might have been very different from that of others. The vote was all the society adopted. Nothing else was binding. He therefore could see no reason and no legal right why the society should be told that it cannot discuss the question. With regard to time of the meeting, if there was any discourtesy it was not on the part of the men who called it, for it was the only time available for the passage of an amendment to the by-laws. To show that there was no discourtesy on the part of the friends of the meeting, he would say that he had gone to the president and asked him if there could be no other time appointed. He had declined to consider the question. There was no discourtesy whatever; if any, it was in disregarding the desire of the society expressed at the last meeting.

DR. HILDRETH did not understand the condition of this question in the council.

DR. WILLIAMS said it lay upon the table of the council. Usage requires that the council should act first and that the larger body confirm. The society would have met if the council had taken any action. Therefore there is nothing for the society to act upon.

DR. HILDRETH said he understood the chair to say that, as the matter was on the table of the council, that precluded any action of the society, now or at an adjourned meeting at eight.

DR. CHADWICK said he would like the president to point out any by-law that gives precedence to the council over the larger body. There was such a provision in the old by-laws. The present left out that clause. Therefore the change was made for the very purpose that the society might have the right to act first. That the society has the power to do this was shown on two occasions, when action having been taken in the society, the matter was referred to the council for concurrence.

DR. WILLIAMS read from the records the report of the proceedings on the two occasions referred to, and showed that the first had been wrongly quoted. On the second it was shown by a late part of the record that the society had been in much confusion. He asked if the society was willing to be guided by such precedents.

DR. CHADWICK then asked if on the second occasion the by-law had not been adopted by the council, and become thereby a by-law of the society.

DR. WILLIAMS replied that it had been, after much discussion.

DR. CHADWICK asked if it had not thereby become a by-law of the society.

DR. WILLIAMS replied that it had.

DR. WILLIAMS then read By-law XL. of the edition of 1850, to the effect that any amendment of the by-laws must originate in the council.

DR. C. P. PUTNAM asked why that by-law was not in the present edition.

DR. WILLIAMS said it was not in the present by-laws, but it had never been repealed. The matter had been regulated by usage.

DR. HILDRETH asked whether the present by-laws were defective.

DR. WILLIAMS said the vote which established the present by-laws repealed all previous ones which were inconsistent or superfluous. The present edition did not contain them all.

DR. HILDRETH said that either the edition of 1850 was correct, or the later one is not. If the by-laws of 1850 were good this meeting was useless. The question seemed to him to be whether our present by-laws are correct or not.

DR. J. J. PUTNAM said that men had come with one preëminent interest in view. It had been stated by certain members that they went to the president, and were told by him that no such meeting as this could legally be held. Many feared that such a meeting as this would have unpleasant consequences. It would not have been done had it not been felt that this was a serious matter, — more serious than the question of the admission of women. The trouble was that many felt that the centennial anniversary of this society should not be marked by such a precedent as this. The ruling of the officers that measures can only originate in the council he did not believe to be just. They had looked up the subject, and thought that their position was correct.

This was the opinion with many who did not especially favor the admission of women, and who nevertheless wished to have this meeting. It seemed to him important to know just where the matter stood, and to determine whether it was in any one's power to declare that an adjourned meeting cannot be held because the meeting was supposed to be called for a certain purpose.

DR. HILDRETH said that in order to find out whether or not the society has a right to originate a by-law he moved that the chair appoint a committee of three, to report at some subsequent meeting of the society, to consider the question whether the society has the power to originate a statute *de novo*.

DR. CUTLER, of Charlestown, said that the by-laws of 1850 contradicted the by-laws of 1874; they were inconsistent.

DR. WILLIAMS said he took the view of Dr. Putnam. The chair never said that the meeting could not be held. He merely said, that by general consent the meeting had been dropped. He knew of no other business. Two gentlemen did not seem to him enough. Had a quorum desired it he would have arranged for the meeting. He had no desire to suppress it. It might have been held with no member present. This was all he felt accountable for. There was no inconsistency in the by-laws. It was absurd to say that the council should be able to nullify the acts of the whole society.

DR. J. J. PUTNAM. The council was for the convenience of the larger body merely, and whenever the latter wished to take action it could freely do so. On the question of the admission of women it was peculiarly adapted to the discussion of the larger body.

DR. CHADWICK moved, as an amendment to Dr. Hildreth's motion, that the council be requested to appoint a committee of three to act with the committee appointed by the chair, and take legal advice. Dr. C. P. Putnam withdrew his motion.

DR. S. CABOT said this was a regular meeting of the society, and it should have been the duty of the president and secretary to call a meeting.

DR. WILLIAMS. It is an adjourned meeting, and adjourned meetings do not require to be notified.

DR. WILCOFF of Cambridge moved a further amendment, that the committee report at the October meeting of the council.

DR. CHADWICK moved an amendment to the effect that the committee report whether it is necessary to reprint by-laws. Motion put and carried.

DR. A. T. CABOT said: When this adjourned meeting was ordered at the last annual meeting many who favored the admission of women to the society looked forward to it as the first opportunity the society had had for the full discussion of this question. A full meeting at this time had been made impossible by the arrangement of the harbor excursion for this hour. When it was seen that this would be the case, the plan was formed of adjournment to the evening, that as full an attendance as possible might be had, it being felt that so important a question should be acted upon by the full society. It seemed now unlikely that even this evening's meeting could be a full one, as a number of attractions were offered to the Fellows for the same hour. This meeting had accomplished one of the objects for the sake of which it had been insisted upon, and which had been mentioned by Dr. J. J. Putnam, namely, that it had prevented the establishment of the precedent that the Fellow can be prevented from hold-

ing an adjourned meeting at the time determined on by them. This question, considered in its legal aspect, was perhaps more important than that other object for which this meeting was desired.

As it was wished that there should be a full meeting for the discussion of so important a question as the admission of women, and as it seemed unlikely that there would be a full attendance this evening, he would ask Dr. C. P. Putnam, who offered the motion to adjourn to eight o'clock, and who felt, he knew, as he himself did, to move an adjournment *sine die*.

DR. C. P. PUTNAM said he agreed with Dr. Cabot in saying that they did not wish to spring the subject upon the society. It must not be forgotten that the secretary had answered in writing a note inquiring about the meeting, and said he knew of no such meeting. The president had answered a similar note that he had called no meeting except those of the printed programme. Dr. Putnam said this was undoubtedly true, but it was equivalent to saying that there was to be no adjourned meeting. Dr. Williams said that the question had been whether he had called a meeting, and he had answered that he had called no meeting. Dr. Putnam then moved to adjourn *sine die*. Carried.

MEETING OF THE COUNCIL OF THE MASSACHUSETTS MEDICAL SOCIETY.

The usual meeting of the Council was held at the Medical Library, Boylston Place, on Tuesday evening, June 7th, at seven o'clock, the president of the society, Dr. Williams, presiding.

The secretary read the names of new and deceased members.

The annual report of the treasurer was presented; the auditing committee reported the accounts to be properly vouched and correctly cast and the report was accepted. The receipts for the current year have been \$8160.74; the expenditures \$6617.50; the balance, \$1543.24, remains in the treasury. The funded property of the society has remained without change, the amount being \$31,420.17.

The committee on finances recommended that ninety per cent. of the balance in the treasury, being \$1388.92, be distributed among the several district societies.

The committee on membership reported the several lists of names of members to be retired, allowed to resign, and to be dropped from the roll.

The following were elected to honorary membership: William Bowman, F. R. S., London; Professor Franz Cornelius Donders, Utrecht; Professor George Rolleston, M. D., Oxford; Sampson Gamgee, F. R. S. E., Birmingham.

DR. GEORGE C. SHATTUCK, for the committee on publication, reported that no essay was presented in competition for the society's prize.

DR. LANGMAD, of the committee on the library, reported that proper examination of the library of the society was made and the books found in good condition and properly cared for; he also read, in the absence of the librarian, the report, which gave a list of the additions made during the year.

The special committee which was appointed to appear before the legislature to attempt to obtain proper legislation on the commitment of lunatics to asylums, reported through the chairman, Dr. CUSHING, that the act proposed they were unable to carry through, but a modified form of the act proposed was passed, which was far from satisfactory, and it was to be hoped that

farther legislation would be obtained. It was voted by the Council that the committee be continued and empowered to take such action as they may see fit.

The committee appointed, on petition of the censors of the Suffolk District, to obtain greater uniformity in the examination of candidates for membership, reported, through their chairman, Dr. Hosmer, that the by-laws of the Massachusetts Medical Society fix with precision the conditions under which any board of censors may grant or refuse such application. Said by-laws enumerated at length the qualifications necessary for membership. The committee suggested that in addition to the questions now contained in the certificate of qualification of candidates the following should be added: Have you ever been examined by any board of censors of the Massachusetts Medical Society? If so when and where? It was suggested that names and residence of men rejected by one board should be reported to all the other boards, and that the secretary of the censors of the Suffolk District invite all the censors of the different districts to meet, either by full board or by delegates, to arrange for a conference of censors of the different districts at stated intervals to discuss questions in which they have common official interests. A suggestion was also made for the appointment of a standing committee of the Council on medical diplomas, whose duty it shall be to propose and submit a list of those American medical colleges which deserve to be recognized for purposes set forth in By-Law I. of the society.

The report was accepted and committee appointed to carry out the last suggestion. Drs. C. W. Swan, J. Spaulding, and J. Crowell were appointed.

The joint committee, in accordance with the request of the society at the afternoon meeting, was announced. On the part of the society, Drs. J. L. Hildreth, W. Cogswell, and Alfred Hosmer; on the part of the council, Drs. H. I. Bowditch, S. D. Presbrey and S. E. Stone.

The treasurer reported that he had received from Dr. Cotting the offer of an additional one thousand dollars to be added to the Cotting Fund, the income of which was to be devoted to the provision of lunches at the councilors' meetings, and also the gift from Dr. Cotting of a silver pitcher presented to him by the late Dr. George Heywood for faithfulness as a student under Dr. Heywood.

In accordance with report of committee on nominations the following were elected officers for the ensuing year:—

Dr. Henry W. Williams, Boston, president; Dr. T. H. Gage, Worcester, vice-president; Dr. Frank W. Draper, Boston, treasurer; Dr. Charles W. Swan, Boston, corresponding secretary; Dr. Francis W. Goss, Roxbury, recording secretary; Dr. David H. Hayden, Boston, librarian; Dr. Pliny Earle, Northampton, orator; Dr. George S. Osborne, Peabody, anniversary chairman.

The following standing committees, nominated by the president, were appointed by the council:—

Of Arrangements: Drs. F. C. Shattuck, E. G. Cutler, E. H. Bradford, C. E. Wing, A. T. Cabot, H. C. Haven.

On Publication: Drs. G. C. Shattuck, R. M. Hodges, B. E. Cotting.

On Resignations: Drs. J. Ayer, F. Minot, D. W. Cheever.

On Finances: Drs. C. D. Homans, W. W. Wellington, B. S. Shaw.

To Procure Scientific Papers: Drs. C. W. Swan,

F. W. Paddock, G. S. Stebbins, J. R. Chadwick, R. H. Fitz.

On Ethics and Discipline: Drs. R. L. Hodgdon, G. J. Townsend, G. E. Francis, A. H. Johnson, C. Howe.

The time and place of next meeting were fixed for Boston, the second Wednesday in June. Adjourned.

In the evening, by the courtesy of the trustees, the Museum of Fine Arts was open to members of the society and their lady friends. The rooms were brilliantly lighted, and were visited by a large number of the members. General Loring received the guests, but the visit was entirely informal, the visitors coming and going from time to time at their own pleasure.

At half-past eight a reception was tendered to the society by Dr. H. W. Williams, the president. His house, No. 15 Arlington Street, was brilliantly decorated with flowers, and was crowded. The doctor's hospitality was accepted by a very large number of physicians. Among those present were: Mr. Harrison, of Liverpool, England; Dr. McCuen, of Chester, England; Dr. Giddings, from South Carolina; Dr. Jacobi, of New York; Dr. Fordyce Baker, of New York; Dr. Pillsbury, of Newark; Dr. Goodnow, of Quebec; Dr. Cann, President of the New Hampshire Society; Dr. Caswell, President of the Rhode Island Society; Dr. Horr, of the United States Navy; and Dr. Lawrence Turbull, of Philadelphia. There was no speech-making, and the evening was devoted to conversation and the interchange of professional reminiscences.

WEDNESDAY (second day). In the forenoon there were the usual surgical visits at the Massachusetts General Hospital and the City Hospital; the Carney Hospital and the Children's Hospital were also open to visitors. By courtesy of the officers in charge there were also open to the doctors the Museum of Fine Arts, the Institute of Technology, the museum of the Natural History Society, the Warren Museum at the medical college on North Grove Street, and the Warren Museum of Natural History on Chestnut Street.

The usual trade exhibits of drugs and surgical appliances, which have of late years become a feature of medical society meetings, were this year replaced by an exhibition of a more elevated character. In the lower Horticultural Hall was a comparative and historical collection of medical books, surgical instruments, and curious and useful objects belonging to the past and present times. On one side were the drugs in use more than one hundred years ago, and which still retain their ground; drugs introduced within the past century,—a large collection; discarded remedies, drugs, and chemicals; new remedies, not officinal, about fifty. A very extensive and complete collection of surgical instruments and appliances occupied the centre of the hall. Nearly two hundred botanical specimens from the botanical gardens, Cambridge, adorned the walls, and a most interesting feature of the exhibition was the botanical models, made in Paris, for the college or pharmacy. A rare department of the display was the large and brilliant collection of illustrated medical works. This collection was a most noticeable feature of the meeting. It was continued during a part of Thursday, and the large attendance on that day showed the appreciation in which it was held. We dismiss it for the present with brief mention, hoping to be able to refer to it again at greater length in some future number.

At eleven o'clock the society was called to order for

the one hundredth annual meeting. The record and names of new and deceased members were read; eighty-two members have been admitted and thirty members have died during the year.

The record of the trial of Dr. C. S. May was read, and in accordance with the recommendation of the board of trial he was expelled by the society.

The treasurer's report was then read.

Dr. JEFFRIES then read the following preamble and vote, and moved its adoption:—

"Whereas, A petition has been presented to Congress, asking for the calling of an international commission to consider and agree upon standard methods of testing visual acuteness and color-blindness, and standard requirements of the necessary qualifications in the navies and merchant marines,

"*Resolved*, That the Massachusetts Medical Society heartily approve of this proposed international committee, and hereby direct the secretary of the society to transmit this vote to Congress when next assembled."

The vote, which was passed, is similar in effect to votes and resolutions adopted at the sixteenth annual meeting of the American Ophthalmological Society, and at the forty-eighth annual meeting of the British Medical Association, the resolutions adopted by the last-named society being indorsed by the sixth international congress of ophthalmology which met at Milan in September last.

THE PRESIDENT then introduced the following named delegates from other State societies: Dr. J. L. Boline, of Newton, N. J.; Dr. M. V. B. Dunham, of Greenfield Hill, Conn.; Dr. W. R. White, of Providence, R. I.; Dr. S. G. Wolcott, of Utica, N. Y.; Dr. J. D. Littlefield, of Titusville, Pa.; Dr. Lawrence Turnbull, of Philadelphia; Dr. T. J. W. Pray, of Dover, N. H.; Dr. S. Lawton, of Maine; and Dr. Cleveland, of Connecticut.

The president welcomed the delegates, and invited guests, and Dr. TURNBULL read a short address in which he gave the dates of various events in the early medical history of Pennsylvania. The first course of anatomical lectures in Philadelphia was delivered in 1762. The first medical school was established in 1765, with Benjamin Franklin president of its first board of trustees. Dr. Turnbull referred gracefully to the efforts of the daily press in Philadelphia, which had been successful in the destruction of the diploma mills of the city.

Dr. GROSS was especially introduced to the society.

Dr. HOBBS, of Arlington, moved that when the society adjourn it do so to meet on the Tuesday preceding the next annual meeting, at four o'clock P. M., the secretary to notify members of such meeting. The object of such meeting, it was explained, was the discussion of the amendment of certain by laws.

On motion of Dr. ENDS it was voted that the committee of arrangements be instructed to continue the exhibition in the lower hall during Thursday in order that it may be examined by all of the members of the society who desire to see it. The thanks of the society were tendered to the committee who had prepared this exhibition. Thanks were also tendered to the physicians of Boston and vicinity for the courtesies they have shown the visiting members of the society.

At twelve o'clock the doors were closed, and the society adjourned to the annual discourse by J. COLLINS WALKER, M. D., of Boston, a portion of which is published in the present number of the JOURNAL.

At the close of the orators' thanks of the society

were voted to the two orations of the centennial meeting and to the various bodies and gentlemen that have extended courtesies to the society. The members then adjourned to the neighboring Music Hall to partake of the annual dinner. The exercises at the dinner will be reported in the JOURNAL of next week.

Recent Literature.

A Practical Treatise on Fractures and Dislocations, By FRANK HASTINGS HAMILTON, A. M., M. D., LL. D., etc. Sixth American edition, revised and improved. Illustrated with three hundred and fifty-two wood-cuts. Philadelphia: Henry C. Lea's Son & Co. 1880.

This able work, which is fairly encyclopædic in character, is once more offered to the profession after thorough revision by the author. The section devoted to Fracture of the Patella has been entirely rewritten, and incorporates a study of one hundred and twenty-seven cases, which have been published in a single volume, and were reviewed in the JOURNAL some months since.

A new chapter on General Prognosis is added, and includes a consideration of the views held by Dr. L. A. Sayre on the treatment of fractures, as presented by him in 1874.

Dr. Hamilton has reviewed that series of cases with impartiality, but does not coincide with the author in his conclusions, on the ground that his evidence is incomplete. The point in question is the amount of shortening to be expected after fractures of long bones. It is safe to assume that the views held by the profession accord with those of Dr. Hamilton, and that it remains for Dr. Sayre to offer additional and competent proof in support of his theory. Dr. Hamilton states that "There is no danger, perhaps, that such extraordinary statements will affect the opinions of experienced surgeons in any part of the world, but they will be read, probably, by many inexperienced surgeons, and may with them have the weight of authority; and, indeed, they have already been quoted by the author of a treatise on Civil Malpractice, intended as a guide to jurists, and which is widely read by lawyers and medical men. The author has, however, modified the force of the authority by expressing his belief that, while such results might be possible with Dr. Sayre, they can hardly be expected from the "ordinary" surgeon; but how will it be with Dr. Sayre's peers, nearly all of whom, in every part of the world, and with the same appliances used by him, declare their inability to make all long bones unite without shortening, and who, indeed, affirm that with them union without some shortening is the exception and not the rule, a doctrine against which Dr. Sayre entered his earnest protest both at Detroit and Buffalo.

"Our personal interests, as well as the interests of science and humanity, demand that we shall know positively whether shortening can always be avoided, or even made the exception rather than the rule, but we need something more than mere assertion, however notorious may be the author's reputation for acuracy of observation and for truthfulness of statement."

The publishers deserve great credit for their enterprise in presenting this and others of their standard works in such attractive shape. The paper and printing are excellent, and the binding superb.

Medical and Surgical Journal.

THURSDAY, JUNE 16, 1881.

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THE CELEBRATION OF THE CENTENNIAL ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE announcements given to our readers from time to time for the last few weeks of the various steps proposed for the celebration of the one hundredth birthday of the Massachusetts Medical Society, gave promise of an unusually full and interesting occasion, and we knew we risked nothing in advising members to avail themselves of opportunities presented to them. The particularly successful realization of the plans proposed has unquestionably exceeded the most sanguine expectations.

Considering the state of moral turpitude to which the present month of June has reduced it, the weather was fairly favorable; we do not doubt, though, that the continued east wind is responsible for the incipient fog which threatened to envelop the society one afternoon, but which was dissipated by an irresistible centennial good humor.

The officers of the society, and especially the committee of arrangements, are to be heartily congratulated upon the results which they accomplished. The absolute punctuality and precision with which so large a body of men, from six to eight hundred, was transported from one point to another, from Boston to Brighton, from thence to Cambridge, and from a luncheon at Memorial Hall to the steamer at the wharf for an excursion down the harbor, each point being reached exactly on time except the final return to the wharf at Boston, which was delayed five minutes by an envious tide, could only have been achieved by a rare executive management, which makes it evident that the medical profession has absorbed a talent destined for the supervision of a granger trunk line.

The exhibition of instruments, books, drugs, etc., was not only a grateful successor to the jumble of advertiser's wares familiar to similar annual meetings, but proved so instructive and interesting that it was voted to keep it open an additional day. The JOURNAL will contain a careful account of this display. The different receptions were well attended, and much enjoyed.

About seven hundred and fifty members availed themselves of the excursion around the harbor, and eight hundred and seventy-three partook of the annual dinner, which was succeeded by the toasts and speeches.

in connection with which the word *usual* would be inappropriate.

It is not often that an audience so large and so intelligently appreciative is brought together, and it certainly is even more rare that any audience is fortunate enough to listen to such uniformly excellent speaking, to which was added a very brilliant and sympathetic poem by Dr. O. W. Holmes, read in his own admirable manner.

The only duty remaining to the JOURNAL to perform in connection with an anniversary upon which it has felt compelled to lavish so much praise, is to give its readers a full and accurate report of all that was said and done and seen, and such provisions were taken as will enable it to discharge this duty with satisfaction to its readers.

MEDICAL NOTES.

—If the proverbial success of a third trial does not fail them, we permit ourselves to hope that our columns will on this occasion do complete justice to the Latin inscription on Dr. J. B. S. Jackson's portrait.

JOHANNIS B. S. JACKSON, M. D.

Anatomiei Pathologiei Præstantis: Anatomie Pathologicæ Prof. Harv.:

Musei Pathologicæ conditoris:

Societatis pro Medicinæ Progressu constitutæ decoris et præsidii:

Hanc tabulam Sodales ejus grati in Memoriam dedicant.

A. D. MDCCCXXI.

—Two cases of small-pox appeared in Boston the week ending Saturday, June 11th, and seven cases in Fall River during the same period.

—Last April Dr. Doremus, the younger, obtained some milk from the female elephant who gave birth to a calf at Philadelphia last spring. This milk has been analyzed by Professor Doremus; it approached the composition of cream, but it did not have its consistency. It was pleasant in flavor and odor, and very superior in these respects to goat's milk, and fully equal to cow's milk. The elephant calf weighed two hundred and thirteen and one half pounds when born, March 10, 1880, and gained seven hundred pounds on this milk diet in a year.

—The *Philadelphia North American* is evidently not inclined to shut its eyes to coming evils. It says: "Doubtless a good many people failed to get vaccinated last winter because they thought the small-pox epidemic would disappear this summer. So far as this city is concerned, it is evidently going to remain with us far into the next year, but there is no occasion for alarm if the important duty of vaccination is attended to."

—The Chicago Medical Society has elected Drs. S. J. Jones and R. N. Isham as delegates to the international convention at London.

—According to the daily papers there is an "artist" physician in New York who makes a specialty of extracting the red bloom from topers' noses and making them of a virgin whiteness. Patrons are said to be plenty.

—Several of those unfortunate eases having re-

cently been reported in which persons suffering from illness have been treated for drunkenness, a correspondent of an English contemporary, makes the following suggestion, which, at any rate, has the merit of common sense. It is, that all members of the police force should be instructed to treat every case of insensibility as if it were of the gravest nature, and always to remove the patient as quickly as possible to the nearest hospital or medical man's house. It is urged that if this rule was strictly enforced among the police, it would do far more good than any amount of lectures concerning that most difficult question — differential diagnosis of cases of insensibility from drunkenness, apoplexy, poisoning, etc.; and in the end, if the case really resolved itself into one of drunkenness only, the delinquent might then be brought before the magistrate to be dealt with according to his deserts.

NEW YORK.

—The deaths from infectious diseases during the first five months of 1881 and 1880, respectively, were as follows:—

	1881.	1880.
Measles	167	404
Scarlet fever	884	176
Small-pox	212	2
Diphtheria	895	371
Croup	507	334
Typhus fever	91	334
Typhoid fever	139	72
Whooping-cough	82	124

—The eight free public baths belonging to the city were opened for the season on June 1st; Mondays, Wednesdays, and Fridays being reserved for females, and the other days of the week for males.

—Some time since Governor Cornell issued a proclamation requiring the proprietors of the oil refineries and various factories giving rise to injurious and offensive emanations on the Long Island side of the East River to abate the nuisances complained of in connection with them, and granting them till the 1st of June in which to accomplish this. Most of the establishments claim to have now applied efficient devices for suppressing the bad odors, but the people who live in the neighborhood state that they are unable to detect any appreciable improvement.

CHICAGO.

—The present appearances indicate for this summer an unusual measure of sickness. In the death reports cerebro-spinal meningitis and typhoid fever occur with unusual and very suggestive frequency. Latterly typhoid fever has caused about fourteen deaths each week, while cerebro-spinal meningitis has caused half as many more. Typhoid and remittent fevers are prevailing also in villages near Chicago. Small-pox still commands public attention, notwithstanding the warm weather. The small-pox hospital is full of patients and for this reason selected cases are allowed to remain at their homes. Two days of the past week witnessed the report at the health department of eleven cases of death from this disease.

—The rocky condition of our drinking water which existed during a few days following the spring flood of the Chicago River has given place to that of

the crystal clearness and purity of the Lake Michigan water in its unpolluted state. It is now a positive luxury to drink it. Now, also, we can calculate more nearly how much of the diarrhoeal disorders which existed in our midst during those days of swollen river was due to the bad water. As the turbid condition was due to admixture with our drinking water of the muddy water of the river, carrying with it some quantity of sewage, the drinking water could not be otherwise than unwholesome, and some of the many cases of diarrhoea were doubtless due to this fact, while many cases that otherwise might have occurred were doubtless aggravated by it. But the epidemic referred to cannot be charged in a wholesale manner to this cause, for a similar epidemic existed at the same time in most of the suburban towns about Chicago and in many villages of the Northwest at a distance. This shows that some cause residing with the atmosphere or the earth was mainly responsible for the epidemic here.

—The Illinois legislature, just adjourned, enacted several laws of interest to the profession. One was an act for the regulation of the practice of dentistry, another governs the practice of pharmacy. Hereafter no person may practice dentistry in Illinois unless he is a graduate of a dental college, or of a medical college, or has practiced dentistry ten years outside the State, or is a practicing dentist here at the date of the passage of the act, or unless, failing in all these qualifications he passes an examination before a board of examiners, appointed by the governor, and consisting of five practicing dentists. It will be seen, therefore, that, so far as the resident dentists, whom the law finds engaged in actual practice, are concerned, it does not disturb them, farther than to require them to take out a license from the board of examiners within six months after the passage of the act. Failing in this they are required to pass an examination before the board, the same as in the case of a beginner in the profession. Physicians must take out a license if they desire to pursue dentistry farther than the pulling of teeth. Violation of the law incurs a fine of twenty-five to fifty dollars for each offense, the fine to be paid into the common-school fund. Licenses must be registered with the clerk of the county in which persons practice within six months of the issuance thereof, or a forfeiture of the license results.

The pharmacy law is less plain and simple in its provisions. The law provides for the registration of all pharmacists, creates a board of pharmacy of five practical pharmacists to be appointed by the governor, whose duty it is to register the pharmacists of the State, to examine certain classes of them, and grant licenses to practice, etc. Pharmacists who were engaged in actual practice at the time of the approval of the law are registered on the proof of that fact. Drug clerks not less than eighteen years old who have had two years' actual experience in compounding prescription may be registered, on presentation of these facts, as "registered assistant," but this does not allow a man to engage in the business on his own account; for that purpose at least five years of practice is required. Graduates of medicine, graduates of reputable schools of pharmacy, and licentiates of the boards of pharmacy

are to be licensed and registered on these facts being shown to the board. All other persons are to pass an examination in pharmacy before the board in order to gain a license. The penalty for the violation of either of these laws is a fine for each offense.

The pharmacy law makes it an offense punishable with a fine of seventy-five to one hundred and fifty dollars for each offense to adulterate in any way drugs and medicines; it also makes it an offense to sell certain medicines known as poisons without attaching a label "poison," or to sell them to a person under fifteen years of age.

Both these new laws, it will be seen, are copied to a large extent from the law regulating the practice of medicine, which has been in force several years with good effect.

—Dr. H. M. Bannister, the junior editor of the *Journal of Nervous and Mental Diseases*, has been appointed an assistant to Dr. R. S. Dewey, superintendent of the Insane Hospital at Kankakee, Illinois, near Chicago. This hospital has just commenced to receive female patients, the new wing of the structure for that purpose having just been completed. Probably there is not a better managed hospital for the insane in the West than this one, and the addition to the medical corps of the institution of a man of the erudition, in the specialty of mental diseases, of Dr. Bannister is one at which all concerned should be congratulated.

Miscellany.

LETTER FROM ST. LOUIS.

Your reporter had the pleasure of attending the meeting of the Missouri State Medical Society held at Mexico, Mo., May 17th, 18th, and 19th. Mexico is a thriving "city" of some six thousand inhabitants (there is no other form of municipal organization in many of the Western States than that of the city), situated in the midst of a very fertile prairie country, which is rapidly filling up with an excellent population. The physicians and other citizens of Mexico are very enthusiastic as to the prospects for their city.

The attendance at the Association was said to be larger than has ever been known except when the sessions were held in St. Louis and Kansas City. The people of Mexico threw open their doors, and entertained most hospitably all who would accept the hospitality, while there was ample accommodation at the several hotels for those who preferred to entertain themselves.

The papers read before the Association were prepared with care, and the discussions in many cases were spirited and interesting. Among those of special value and merit were Dr. Lutz's paper on Gastrotomy, being the report of a case in which he had operated successfully for stricture of the œsophagus due to cancerous growth. The patient has lived comfortably for seven months since the operation was performed, and Dr. Lutz expressed a confident hope that, as the present indications are so favorable, his

patient will live longer than have any of those who have undergone the operation before. In the discussion which followed this case Dr. A. J. Steele, of St. Louis, gave some interesting details of the case of his own child, who is the subject of a cicatricial stricture of the œsophagus, due to having accidentally swallowed some lye. In treatment he has avoided the use of sounds or bougies except for the purpose sometimes of pushing on portions of food that had lodged at the site of the stricture. While for some years the child was dependent upon milk almost exclusively for nourishment, she has now improved so that she can eat much of the food which children ordinarily enjoy.

Dr. Willis P. King, of Sedalia, read a paper upon the Cooling Bath in Fever. He takes the ground that elevation of temperature is the chief danger to be averted in a large part of "the ills that flesh is heir to," and especially the flesh of children. He asserts that in all cases where there are convulsions, present or imminent, elevated temperature is found, and that the reduction of that temperature by means of cool water is the quickest, surest, safest, and readiest means of averting the danger of cerebral or spinal complications. He condemns the common practice of putting into water of high temperature, as high as that of the body itself, a child in convulsions, as being unphilosophical as well as useless, and claims the happiest results from the use of cool baths, say of a temperature of 90° F. lowered by the addition of cold water to 80° F. or 70° F. He uses this treatment, in conjunction with whatever medication may be indicated, in all diseases where the elevation of the temperature is such as to produce marked nervous disturbance.

Dr. J. M. Allen, of Liberty, the retiring president, detailed the results of the attempt made during the last session of the legislature to secure efficient action with reference to the establishment of a state board of health, and also with reference to the regulation of the practice of medicine. Though the attempt failed this time, he urged renewed efforts in this direction, and is sanguine of ultimate success. He urged the importance of requiring higher qualifications in those applying for admission to the ranks of the profession. He is deeply interested in the organization of county and district medical societies through the State, and spoke strong words as to the importance of such organized work to promote the best interests of the profession.

Dr. C. A. Todd, of St. Louis, reported a case of Asthma Dependent upon Nasal Polypi, and which was cured by removing the polyps. In the discussion that followed this paper an interesting case was related by Dr. A. W. McAlister, of Columbia, in which an attack of asthma could be excited at will by simply touching the external orifice of a urethral fistula.

Illusions, Hallucinations, and Delusions was the title of a paper by Dr. C. H. Hughes, of St. Louis, who, as a medical expert in cases where there is a question as to the sanity of an individual, has had occasion often to define these phenomena of abnormal mental action. He gave clear and lucid definitions

and illustrated the subject with practical cases of interest.

Dr. G. Hunt's paper on Hygiene was considered such a valuable contribution that the corresponding secretary was instructed to arrange for its publication in one of the daily papers, in order to secure its circulation as largely as possible among the laity, under the sanction of the Association.

Dr. B. F. Wilson, of Salisbury, read a paper on Diphtheria, which elicited a good deal of discussion.

The Relation of the Specialist to the General Practitioner, was the subject of a paper by Dr. Wm. Dickinson, of St. Louis.

The officers of the Association for the coming year are Dr. W. P. King, of Sedalia, president; Drs. B. J. Milam, A. E. Gore, G. Hunt, E. A. Waggoner, B. F. Wilson, vice-presidents; Drs. C. A. Todd and J. H. Duncan, secretaries; Dr. Wm. Dickinson, corresponding secretary; and Dr. C. A. Thompson, treasurer.

On Thursday evening a banquet was given to the Association and ladies by the physicians and citizens of Mexico. It was a most enjoyable occasion, and is spoken of by the local press as being one of the most brilliant and elegant entertainments ever held in that place. An interesting feature of the banquet was the absence of any stimulating beverages, and surely no one who attended this banquet will say that they are necessary to a thoroughly enjoyable occasion.

The next meeting of the Association will be held in Hannibal on the third Tuesday of May, 1882.

LETTER FROM NEW YORK.

SANITARY MATTERS IN NEW YORK.

MR. EDITOR, — The sanitary outlook in New York, it must be confessed, is not as encouraging as might be wished; and one of the most unpleasant features in connection with the present condition of the city is undoubtedly the utter indifference to the health of its inhabitants, as well as the entire lack of appreciation of the essential requirements of such a community, which has of late been shown by the majority of the members of the state legislature, by whom, under the existing system, the affairs of the metropolis are arbitrarily governed. As was recently remarked by the *Journal of Commerce*, no city in Europe is as badly governed as New York. No emperor or king dares to abuse a great city in his dominions as the Albany legislature abuses it, and if any European city were as shabbily treated by the governing power its citizens would rise in rebellion. The European ruler may be a tyrant, the article continues, but he is a benevolent one, while the Albany tyrants are malevolent in all they do to New York; and that city is much happier which is governed by a resident tyrant than by one living a hundred and fifty miles away, who never goes to see it except on a debauch.

The special matter in which the state legislators have recently been so derelict is, of course, that of the cleaning of the New York streets, about which there has been so much agitation; and the simple reason why this important object has been so shamefully neglected has been the fear of the loss of political patronage and spoils. As is well known, the garbage and filth have

not been properly and thoroughly removed from the streets for a number of years, and at last the demand for reform in this respect became so urgent that a bill securing the full accomplishment of the desired end was drawn up and presented to the legislature by a committee especially appointed for the purpose at an immense meeting of the very best citizens; the bill receiving in addition the full sanction and indorsement of the mayor, who pledged himself in the most solemn manner to carry out its provisions in such a way as to withdraw the entire matter from the field of party politics. As the rate of mortality had been increasing to such an extent that there were 2306 more deaths in the city during the first quarter of this year than in the first quarter of 1880 (representing about 65,000 more cases of sickness), and as it was the unanimous testimony of all the ablest New York physicians that this result was undoubtedly due, to a large extent, to the filthy condition of the streets, it might have been supposed that the subject would so appeal to the common sentiment of humanity, at least in the members of the legislature, that the bill would be passed at once and without a dissenting voice. But instead of this, it was promptly defeated, and for nearly three months the Assembly was engaged in devising some street-cleaning law by which the streets would still be left dirty and the enormous sums of money appropriated for the express purpose of cleaning them still flow into the hands of the partisan leaders or be dispensed for partisan purposes. As was forcibly remarked by one writer recently, "If Nero fiddled when Rome was burning, the spectacle is fairly matched by the heartless scheming of our representatives while the people of New York are dying. We say 'our representatives' from habit, for the existing situation does not justify the phrase. The people no longer have representatives: one ward politician, with his headquarters in a corner whisky shop, has more power with the men whom the people elect than any ten thousand voters." That the latter is literally true seems to be fully substantiated by the fact that the legislature kept on unconcernedly in its disreputable course in the face of the most urgent and indignant protests from vast representative meetings of all the most influential citizens, as well as from the entire press and the entire medical profession of the metropolis, assembled in mass meeting and in the various societies.

At last, in the latter part of May (after the high rate of mortality had still continued as in the earlier months of the year, and after small-pox and typhus fever had both been prevailing for some time), a very poor substitute for the original street-cleaning bill passed the legislature, and has now received the signature of the governor. There is no occasion to mention the various provisions of this wretched piece of jobbery here; it is sufficient to refer to the fact that both the mayor and the president of the board of health sent to Albany formal memorials against its becoming a law. The most severe comment that has yet been made upon the disgraceful action of the legislature, however, is found in the letter in which Lieutenant-Commander Goringe, who signified his willingness to accept the position of superintendent of street-cleaning under the provisions of the first bill, has now declined the office tendered him by Mayor Grace under those of the bill that finally passed, which leaves ample opportunity for the same corrupt and fraudulent practices which have so long prevailed in this depart-

ment, and which is altogether likely to result in the streets remaining in the same abominable condition as before. The great defect of the present bill is that it divides the responsibility for cleaning the streets among five departments: the mayoralty, the health department, the police department, the board of estimate and apportionment, and the department of street-cleaning (and thus among ten or twelve officials), while the superintendent, who will have to stand the brunt of public attack if the work is not properly done, has rather less effective power than any one of those among whom the legislature has parceled out the powers which the people of the city demanded should be concentrated upon one man. On the other hand, the one essential provision of the citizens' bill, as it was appropriately called, was that it combined entire control with entire responsibility, and placed them both upon the mayor, who was thus directly answerable to the people for the condition of the streets.

At the mass meeting of physicians held at Chickering Hall, in the month of April, the opinion was expressed in the resolutions that were unanimously adopted on that occasion that the neglect to remove accumulations of filth and garbage from the streets produces disease, renders a simple type of it malignant and dangerous, and acts injuriously in the following ways: (1.) Meats and other food exposed for sale are poisoned by the exhalations from the filth. (2.) The air-boxes of dwellings convey a poisoned atmosphere. (3.) The heavy rains and snow bring into solution the accumulations at the mouths of obstructed culverts, and aggregate and intensify morbid agencies. (4.) The irritating and poisonous dust from excrementitious substances and filth is of the greatest damage to the eyes and the air-passages. (5.) Malaria is created and fostered by the reeking sewers and gutters. (6.) The difficulties of maintaining cleanliness in the house and in the person are greatly increased. (7.) Persons are so disabled by living in the midst of these injurious influences that many are compelled to seek frequent changes of climate. (8.) The children of the poor, who live in tenement houses, under bad sanitary conditions, and attend school in crowded school-houses, have as their only play-ground the streets in which these accumulations from dwellings and from animals are producing their injurious effects. In short, as Dr. Willard Parker, who presided at the above meeting, remarked in the course of his address, no one who breathes such an atmosphere can be looked upon as perfectly healthy. It is true that small-pox, typhus fever, and other infectious diseases have decreased of late, but it is also true that the unusually high death-rate is still maintained as the hot weather comes creeping on, and there is every reason to expect that as the summer advances it will be materially increased, even if there should be no visitation of cholera or yellow fever, which is certainly among the possibilities on account of the presence in the city of so many conditions favorable to the development of disease.

But, of course, unclean streets do not constitute the only source of danger in New York from a sanitary point of view. Among the more obvious additional ones are the overcrowded condition of tenements and school-houses, defective sewerage, and defective house ventilation, drainage, and plumbing. Dr. Day, the sanitary superintendent, has also called attention, in a recent special report to the board of health, to the injurious effect of the scarcity of water upon the public

health. This scarcity began last autumn, and has continued to a greater or less extent to the present time. Its evil effects have been felt less in tenement-houses than in boarding-houses, flats, hotels, and private dwellings not provided with special apparatus for raising the water above the third or even the second floor. These have been pervaded by foul odors, and Dr. Day expresses the opinion that the insufficiently flushed traps and closets have been responsible for much of the sickness of the past season. He concludes his report as follows: "I am informed by the chief engineer of the Croton Aqueduct that it has been running to its full capacity during the winter, and it is evident that the carrying capacity will become less and less adequate as the growth of the city increases the demand for water. The sanitary welfare of the city requires a far more abundant water supply. I would respectfully recommend the introduction of tanks and pumps into houses where in the judgment of the inspectors sanitary considerations demand it." In an exhaustive report on the water supply made in the month of April, Mr. Isaac Newton, chief engineer of the department of public works, states that the city can receive through the present aqueduct no more than it now conveys, and hence, as the population increases, the average supply per head must decrease, and the pressure or height at which water can be delivered to consumers will constantly diminish. The time is not far distant, he says, when the supply will not, in many localities, rise above the basement, while in some situations the water will be almost wholly cut off. The demand, he believes, must be met by the construction of a new aqueduct, and he thinks that it cannot be urged too strongly that a city of such great and constantly increasing magnitude as New York should not rely upon an aqueduct; no other city of equal importance in Christendom being so dependent upon a single engineering structure. On the other hand, Colonel Waring, in his excellent paper on the sanitary condition of New York, published in the May and June number of *Scribner's Magazine*, shows that there is an enormous waste of Croton in the city, and holds that if a complete system of water-meters were introduced, the supply now furnished would be altogether ample for a number of years to come,—the average amount of water to each individual, with the present population, being about eighty gallons per day. Still, there can be no doubt that the present supply will eventually have to be increased, if even the saving recommended could be accomplished; and the matter should receive the most careful attention of the proper authorities at no distant date.

Although the present legislature has been such a disgrace to the State of New York, it has happily not refused to pass the bill requiring the registration of plumbers and the sanitary examination of all new plumbing, mentioned in a recent number of the *JOURNAL*. This will constitute an excellent supplement to the laws already in force providing for the improved construction of tenement and apartment houses; and in the passage of such acts from time to time there is to be found, at all events, some little encouragement for the future. There can be no doubt, also, that during the coming summer a very considerable saving of life will be accomplished by the various facilities for removing infants and young children for longer or shorter periods from the injurious influences of the heated city which have of late years been gradually multiplying.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 28, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	639	256	29.26	12.52	8.29	6.26	3.60
Philadelphia.....	846,984	317	106	25.87	4.73	3.79	6.31	.32
Brooklyn.....	566,689	218	94	23.39	8.72	11.47	5.50	1.37
Chicago.....	503,304	266	137	33.83	9.02	9.02	.75	7.14
Boston.....	362,535	123	39	10.57	12.20	6.50	.81	.81
St. Louis.....	350,522	102	39	22.55	6.86	.98	1.96	3.92
Baltimore.....	332,190	132	49	24.24	7.58	9.09	1.52	5.30
Cincinnati.....	255,708	95	40	20.00	5.26	—	2.11	5.26
New Orleans.....	216,140	165	78	29.70	1.82	1.21	5.45	20.00
District of Columbia.....	177,638	57	13	12.28	3.51	—	1.75	1.75
Pittsburgh.....	156,381	62	25	33.87	11.29	—	12.90	4.84
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	66	36	31.82	9.09	6.06	6.06	—
Providence.....	101,855	32	9	15.63	18.75	6.25	6.25	—
New Haven.....	62,882	16	7	25.00	18.75	6.25	—	12.50
Charleston.....	49,999	46	24	36.96	2.17	—	19.57	10.87
Nashville.....	43,461	22	7	13.64	4.55	—	—	4.55
Lowell.....	59,485	21	7	9.52	4.76	4.76	—	—
Worcester.....	58,295	20	7	30.00	5.00	—	5.00	15.00
Cambridge.....	52,740	25	11	28.00	4.00	20.00	—	—
Fall River.....	49,006	14	8	21.43	—	7.14	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	13	2	38.46	15.38	15.38	—	—
Springfield.....	33,340	11	2	18.18	9.09	9.09	9.09	—
Salent.....	27,598	14	1	14.29	21.43	—	—	—
New Bedford.....	26,875	10	3	10.00	10.00	—	—	—
Somerville.....	24,985	6	2	—	16.67	—	—	—
Holyoke.....	21,851	11	5	9.09	—	9.09	—	—
Chelsea.....	21,785	8	3	12.50	25.00	12.50	—	—
Taunton.....	21,213	6	1	16.67	33.33	—	—	—
Gloucester.....	19,329	5	2	40.00	—	40.00	—	—
Haverhill.....	18,475	2	—	—	50.00	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	7	1	14.29	14.29	—	—	—
Fitchburg.....	12,103	2	2	—	—	—	—	—
Twenty-one Massachusetts towns.....	160,766	38	8	13.16	5.26	2.63	2.63	2.63

Deaths reported 2571 (no report from Buffalo); 1024 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 663, consumption 389, lung diseases 223, diphtheria and croup 159, scarlet fever 117, diarrhoeal diseases 112, cerebro-spinal meningitis 67, small-pox 61, typhoid fever 12, measles 33, malarial fevers 31, whooping-cough 19, erysipelas seven, puerperal fever seven, typhus fever seven, malignant pustule one. From *cerebro-spinal meningitis*, Chicago 11, New York 13, Milwaukee 11, St. Louis eight, Cincinnati and Pittsburgh four, Brooklyn, Baltimore, Fall River, and Lynn two, Philadelphia, District of Columbia, Charleston, Nashville, and Worcester one. From *small-pox*, Philadelphia 29, New York 15, Chicago 13, Brooklyn and Pittsburgh two. From *typhoid fever*, Philadelphia 19, Chicago nine, Baltimore and Pittsburgh four, New York, Cincinnati, District of Columbia, and Salem two, Boston, St. Louis, Charleston, Worcester, New Bedford, Taunton, and Newburyport one. From *measles*, New York 16, Chicago five, Baltimore and Cincinnati four, Brooklyn, St. Louis, New Orleans and Nashville one. From *malarial fevers*, New York 12, Brooklyn five, New Orleans four, St. Louis three, District of Columbia two, Baltimore, Cincinnati, Milwaukee, New Haven and Charleston one. From *whooping-cough*, Philadelphia seven, Chicago four, New York two, Brooklyn, Boston, Cincinnati, Providence, Lowell, and Cambridge one. From *erysipelas*, New York three, St. Louis two, Philadelphia and Milwaukee one. From *puerperal fever*, New York, Philadelphia, Boston, St. Louis, Cambridge, Lynn, and Waltham one. From *typhus fever*, New York seven. From *malignant pustule*, Amherst one. The mortality from *cerebro-spinal meningitis* has increased from 53 for the week ending May 21st to 67.

Thirteen cases of small-pox were reported in Brooklyn, 29 in Chicago, one in Cincinnati; diphtheria 25, scarlet fever five, typhoid fever two, in Boston; scarlet fever 17, diphtheria 13, in Milwaukee.

In 15 cities and towns of Massachusetts, with a population of 1

1,022,504 (population of the State 1,783,086), the total death-rate for the week was 17.13, against 18.90 and 21.09 for the previous two weeks.

For the week ending May 7th, in 149 German cities and towns, with an estimated population of 7,575,425, the death-rate was 27. Deaths reported 3937; under five 1754; pulmonary consumption 587, acute diseases of the respiratory organs 399, diphtheria and croup 151, diarrhoeal diseases 110, scarlet fever 66, typhoid fever 54, whooping-cough 40, measles and röteln 40, puerperal fever 28, typhus fever (Königsberg five, Danzig two, Stettin four, Stralsund, Thorn two, Tilsit, Posen, Magdeburg, Brandenburg, Dessau) 19, small-pox (Königsberg three, Stuttgart, Berlin two, Koburg, Bremen, Aachen two) 10. The death-rates ranged from 16.7 in Metz to 40 in Augsburg; Königsberg 35.1; Breslau 31.7; Munich 31.9; Dresden 27.4; Berlin 23.8; Leipzig 23; Hamburg 27.9; Bremen 28.7; Cologne 28; Frankfurt 19.8; Strasburg 35.3.

For the week ending May 14th in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20.2. Deaths reported 2944; acute diseases of the respiratory organs (London) 251, measles 114, whooping-cough 74, small-pox (London) 69, 70, scarlet fever 55, diarrhoea 32, fever 27, diphtheria 24. The death-rates ranged from 14.5 in Plymouth to 26.5 in Wolverhampton; Bristol 15.6; Birmingham 17.7; London 20.1; Sheffield 20.7; Liverpool 21; Leeds 22.6; Manchester 22.8. In Edinburgh 21.7; Glasgow 22.3; Dublin 29.9.

In the 21 chief towns in Switzerland, for the week ending May 14th, population 479,934, there were 39 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 14, diphtheria and croup 10, whooping-cough five, measles five, typhoid fever five, small-pox three, scarlet fever one, puerperal fever one. The death-rates were: Geneva 24.3; Zurich 29.4; Basle 31.8; Berne 29.3.

The meteorological record for the week in Boston was as follows:—

Date.	Barom- eter.	Thermom- eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.	
Sun., 22	30.099	57	69	48	85	78	81	81	N	E	SE	1	6	1	O	F	O	—	—	
Mon., 23	30.248	57	66	52	79	76	86	80	NE	E	C	1	5	0	F	F	F	—	—	
Tues., 24	30.224	60	68	52	95	66	80	80	C	SE	SE	0	3	1	G	C	C	—	—	
Wed., 25	30.256	54	70	45	76	69	91	79	C	NE	N	0	13	5	H	O	R	—	—	
Thurs., 26	30.167	55	61	46	91	71	80	81	NE	E	S	3	4	6	O	F	C	—	—	
Fri., 27	29.879	75	91	56	73	19	62	51	SW	W	W	9	16	7	F	F	F	—	—	
Sat., 28	29.956	62	74	58	49	55	50	51	NE	E	SW	8	6	1	O	F	F	—	—	
Week.	30.118	60	91	45				72										1.25	.01	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 4, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Princi- pal "Zy- motic" ^b Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	660	271	31.36	11.21	8.80	5.61	3.94
Philadelphia.....	846,984	302	102	23.51	5.29	3.64	3.64	1.32
Brooklyn.....	566,689	216	86	27.78	8.33	13.96	6.94	3.70
Chicago.....	503,304	208	106	38.94	10.10	7.21	2.88	8.17
Boston.....	362,535	147	42	14.97	12.24	7.48	.68	3.40
St. Louis.....	350,522	117	36	24.79	1.71	2.56	.85	4.27
Baltimore.....	332,190	113	51	21.24	3.54	4.42	4.42	4.42
Cincinnati.....	255,708	99	47	26.26	12.12	1.01	1.01	10.10
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	49	14	8.16	14.29	—	—	—
Pittsburgh.....	156,381	68	27	27.94	11.76	4.41	10.29	4.41
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	41	26	22.20	7.32	7.32	9.76	—
Providence.....	104,855	41	9	17.07	14.63	2.44	7.32	—
New Haven.....	62,882	21	8	42.86	14.29	—	4.76	—
Charleston.....	49,999	47	22	25.53	4.26	2.13	8.51	14.89
Nashville.....	43,461	18	5	16.67	—	—	5.56	11.11
Lowell.....	59,485	14	2	21.43	—	—	—	—
Worcester.....	58,295	16	3	6.25	12.50	6.25	—	—
Cambridge.....	52,740	20	8	20.00	10.00	20.00	—	—
Fall River.....	49,006	19	10	31.58	—	10.52	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	16	6	12.50	18.75	6.25	6.25	—
Springfield.....	33,340	11	4	18.18	9.09	—	9.09	—
Salem.....	27,598	14	6	7.14	14.29	—	—	—
New Bedford.....	26,875	5	—	20.00	20.00	—	20.00	—
Somerville.....	24,985	6	2	50.00	16.67	16.67	—	16.67
Holyoke.....	21,851	5	1	—	20.00	—	—	—
Chelsea.....	21,785	4	1	—	—	—	—	—
Taunton.....	21,213	10	2	10.00	20.00	10.00	—	—
Gloucester.....	19,329	5	2	20.00	—	20.00	—	—
Haverhill.....	18,475	5	—	—	40.00	—	—	—
Newton.....	16,995	5	1	20.00	—	20.00	—	—
Newburyport.....	13,537	4	1	—	—	—	—	—
Fitchburg.....	12,405	2	1	—	50.00	—	—	—
Twenty-six Massachusetts towns...	213,338	61	11	19.67	9.84	9.84	3.28	1.64

Deaths reported 2369 (no report from New Orleans or Buffalo); 913 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 619, consumption 344, lung diseases 218, diphtheria and croup 158, scarlet fever 102, diarrhoeal diseases 94, small-pox 57, cerebro-spinal meningitis 56, measles 39, typhoid fever 36, malarial fevers 29, puerperal fever 18, erysipelas 14, whooping-cough 11, typhus fever five. From small-pox, Philadelphia 27, New York 20, Chicago eight, Brooklyn and Fall River one. From cerebro-spinal meningitis, Chicago 13, New York 12, St. Louis 11, Cincinnati four, Pittsburgh three, Baltimore, Milwaukee, New Haven and

Fall River two, Philadelphia, District of Columbia, Providence, Somerville, and Westborough one. From measles, New York 20, Chicago five, Brooklyn and Cincinnati three, Boston and Baltimore two, Pittsburgh, Milwaukee, Providence, and Woburn one. From typhoid fever, Chicago 11, Philadelphia six, New York five, Brooklyn, Boston, St. Louis, Cincinnati, Pittsburgh, and Lowell two, Baltimore and Salem one. From malarial fevers, New York 12, St. Louis five, Brooklyn and Chicago three, Philadelphia and New Haven two, Baltimore and Springfield one. From puerperal fever, New York nine, Philadelphia three, District of Columbia two, Boston, St. Louis, New Haven, and Holliston one. From erysipelas, Philadelphia four, Cincinnati

three, New York two, Chicago, Baltimore, District of Columbia, Lowell, and Fall River one. From *whooping-cough*, Philadelphia, Chicago, Baltimore, and Cincinnati two, New York, St. Louis, and Providence one. From *typhus fever*, New York five.

Twenty-four cases of small-pox were reported in Brooklyn, nine in Chicago, six in Pittsburgh, one in New Haven, seven in Fall River; diphtheria 25, scarlet fever seven, typhus fever two, in Boston; scarlet fever 23, diphtheria ten, in Milwaukee.

In 44 cities and towns of Massachusetts, with a population of 1,092,071 (population of the State 1,783,086), the total death-rate for the week was 17.62, against 17.13 and 18.90 for the previous two weeks.

For the week ending May 14th, in 149 German cities and towns, with an estimated population of 7,736,432, the death-rate was 25.3. Deaths reported 3767; under five 1624; pulmonary consumption 590, acute diseases of the respiratory organs 392, diphtheria and croup 128, diarrhoeal diseases 111, scarlet fever 77, typhoid fever 47, measles and *rubella* 38, whooping-cough 36, typhus fever (Königsberg nine, Danzig three, Stettin two, Thorn, Stolp, Posen, Erfurt two, Berlin, Potsdam) 21, puerperal fever 19, small-pox (Königsberg five, Beuthen, Mu-

nich, Berlin three, Charlottenberg, Aachen three, Essen two) 16. The death-rates ranged from 10.4 in Wiesbaden to 40 in Augsburg; Königsberg 39.5; Breslau 29.5; Munich 35.7; Dresden 20.5; Berlin 22.1; Leipzig 18.2; Hamburg 24; Hanover 13.5; Bremen 31.1; Cologne 29.2; Frankfurt 22.

For the week ending May 21st, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20.8. Deaths reported 3036: acute diseases of the respiratory organs (London) 256, small-pox (London 103) 104, whooping-cough 94, measles 88, scarlet fever 57, fever 33, diarrhoea 28. The death-rates ranged from 13.3 in Hull to 25.7 in Oldham; Leeds 16.3; Bristol 18.3; Sheffield 20; Birmingham 20.4; London 20.9; Manchester 24.9; Liverpool 25.5. In Edinburgh 18.8; Glasgow 20.6; Dublin 25.2.

In the 21 chief towns in Switzerland, for the week ending May 21st, population 479,934, there were 36 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 19, diphtheria and croup 11, measles 11, typhoid fever five, small-pox two, whooping-cough one. The death-rates were: Geneva 22.8; Zurich 26.4; Basle 26.8; Berne 37.5; St. Imier 58.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.	
May 29- June 4, 1881.																				
Sun., 29	29.878	64	74	59	81	60	77	73	C	SW	SW	0	5	2	R	C	F	—	—	
Mon., 30	29.806	73	91	62	69	35	87	64	W	W	SW	12	16	7	C	C	R	—	—	
Tues., 31	29.820	67	71	61	72	72	85	77	NE	SE	C	2	6	0	C	C	F	—	—	
Wed., 1	29.794	61	77	56	65	53	76	64	NE	SE	N	6	12	1	F	F	F	—	—	
Thurs., 2	29.869	54	66	47	86	73	100	86	NE	SE	E	1	8	5	R	F	G	—	—	
Fri., 3	29.799	48	51	44	99	91	88	93	E	NE	NE	18	23	14	R	R	R	—	—	
Sat., 4	29.691	50	62	44	91	82	77	83	N	NW	SE	17	9	4	R	O	C	—	—	
Week.	29.808	60	91	44				77										25.15	1.81	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 28, 1881, TO JUNE 10, 1881.

BAILY, E. I., lieutenant-colonel and surgeon. So much of paragraph 1, S. O. 112, C. S., A. G. O., as directs him to report to the commanding general, Division of the Pacific, for duty as medical director of the Department of California, is revoked. S. O. 121, A. G. O., May 27, 1881.

CORLES, E., captain and assistant surgeon. Assigned to temporary duty as post surgeon at Fort Verde, A. T. S. O. 56, Department of Arizona, May 20, 1881.

BAILY, E. I., lieutenant-colonel and surgeon. Having reported at division headquarters, in compliance with S. O. 112, paragraph 1, C. S., A. G. O., is assigned to duty in San Francisco as attending surgeon, relieving Surgeon C. C. Keeney. G. O. 10, Division of the Pacific and Department of California, May 31, 1881.

CONSON, J. K., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for two months' extension. S. O. 61, Department of Arizona, May 31, 1881.

HELMANN, C. L., captain and assistant surgeon. The telegraphic instructions of 25th inst. to commanding officer, Fort Townsend, W. T., directing Assistant Surgeon Helmann to report at these headquarters, continue in force. S. O. 71, Department of California, May 21, 1881.

ANSON, F. C., captain and assistant surgeon. Relieved from temporary duty at post of San Antonio, Texas, and assigned to duty at Fort Clark, Texas. S. O. 76, Department of Texas, May 31, 1881.

SCHULTZ, R. W., first lieutenant and assistant surgeon. Assigned to temporary duty in the surgeon-general's office. S. O. 120, A. G. O., June 7, 1881.

PERLEY, H. O., first lieutenant and assistant surgeon. Relieved from duty in Department of Dakota, and to comply with S. O. 104, C. S., A. G. O. S. O. 97, Department of Dakota, June 6, 1881.

POWELL, J. L., first lieutenant and assistant surgeon. Relieved from duty with Co. A, 22d Infantry, on arrival at Fort Concho, then to proceed to Fort Stockton, Texas, and report to post commander for duty as post surgeon. S. O. 76, C. S., Department of Texas.

BENHAM, R. B., first lieutenant and assistant surgeon. Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assiniboine, Mont. T. S. O. 97, Department of Dakota, June 6, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the society will be held on Monday evening, June 20th, at eight o'clock, at the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Ingalls. Subject, Headache. M. H. RICHARDSON, M. D., Secretary.

GYNÆCOLOGICAL SOCIETY OF BOSTON.—Next stated meeting will be held first Thursday of July, at 10.30 o'clock A. M. Paper by T. M. Durell, M. D. Subject, Functional Nervous Diseases depending upon Uterine Disease. Profession cordially invited. HENRY M. FIELD, M. D., Secretary.

AMERICAN NEUROLOGICAL ASSOCIATION.—The seventh annual meeting of the association will be held in New York on June 15th, 16th, and 17th, at the Academy of Medicine, No. 12 West Thirty-First Street. The profession are invited to attend.

Original Articles.

POEM WRITTEN BY DR. OLIVER WENDELL HOLMES FOR THE CENTENNIAL ANNIVERSARY DINNER OF THE MASSACHUSETTS MEDICAL SOCIETY, JUNE 8, 1881, AND READ BY HIM ON THAT OCCASION.

[Dr. HOLMES said on rising:]

IN speaking of some of the trials to which the members of the three "learned professions" are exposed, I have not hesitated to emphasize those specially belonging to the Medical Profession. I owe to my friends the Physicians so much more than the practice of medicine owes to me that I feel at liberty to praise their calling without reserve, but no more than I think its due.

THREE paths there be where Learning's favored sons,
Trained in the schools which hold her favored ones,
Follow their several stars with separate aim;
Each has its honors, each its special claim.
Bred in the fruitful cradle of the East,
First, as of oldest lineage, comes the Priest;
The Lawyer next, in wordy conflict strong,
Full armed to battle for the right,—or wrong;
Last, he whose calling finds its voice in deeds,
Frail Nature's helper in her sharpest needs.
Each has his gifts, his losses and his gains,
Each his own share of pleasures and of pains;
No life-long aim with steadfast eye pursued
Finds a smooth pathway all with roses strewed;
Trouble belongs to man of woman born,—
Tread where he may, his foot will find its thorn.

Of all the guests at life's perennial feast,
Who of her children sits above the Priest?
For him the brodered robe, the carven seat,
Pride at his beck, and beauty at his feet,
For him the incense fumes, the wine is poured,
Himself a God, adoring and adored!
His the first welcome when our hearts rejoice,
His in our dying ear the latest voice,
Font, altar, grave, his steps on all attend,
Our staff, our stay, our all but Heavenly friend!
Where is the meddling hand that dares to probe
The secret grief beneath his sable robe?
How grave his port! how every gesture tells
Here truth abides, here peace forever dwells;
Vex not his lofty soul with comments vain;
Faith asks no questions; silence, ye profane!
Alas! too oft while all is calm without
The stormy spirit wars with endless doubt;
This is the mocking spectre, scarce concealed
Behind tradition's bruised and battered shield.
He sees the sleepless critic, age by age,
Scrawl his new readings on the hallowed page,
The wondrous deeds that priests and prophets saw
Dissolved in legend, crystallized in law,
And on the soil where saints and martyrs trod
Altars new builded to the Unknown God;
His shrines imperilled, his evangels torn,—
He dares not limp, but ah! how sharp his thorn!
Yet while God's herald questions as he reads
The outworn dogmas of his ancient creeds,
Drops from his ritual the exploded verse,
Blots from its page the Athanasian curse,
Though by the critic's dangerous art perplexed,
His holy life is Heaven's unquestioned text;
That shining guidance doubt can never mar,—
The pillar's flame, the light of Bethlehem's star!

Strong is the moral blister that will draw
Laid on the conscience of the Man of Law
Whom blindfold Justice lends her eyes to see
Truth in the scale that holds his promised fee.

What! Has not every lie its truthful side,
 Its honest fraction, not to be denied?
Per contra,—ask the moralist,—in sooth
 Has not a lie its share in every truth?
 Then what forbids an honest man to try
 To find the truth that lurks in every lie,
 And just as fairly call on truth to yield
 The lying fraction in its breast concealed?
 So the worst rogue shall claim a ready friend
 His modest virtues boldly to defend,
 And he who shows the record of a saint
 See himself blacker than the devil could paint.

What struggles to his captive soul belong
 Who loves the right, yet combats for the wrong,
 Who fights the battle he would fain refuse
 And wins, well knowing that he ought to lose,
 Who speaks with glowing lips and look sincere
 In spangled words that make the worse appear
 The better reason; who, behind his mask
 Hides his true self and blushes at his task,—
 What quips, what quillets cheat the inward scorn
 That mocks such triumph? Has he not his thorn?

Yet stay thy judgment; were thy life the prize,
 Thy death the forfeit, would thy cynic eyes
 See fault in him who bravely dares defend
 The cause forlorn, the wretch without a friend?
 Nay, though the rightful side is wisdom's choice
 Wrong has its rights and claims a champion's voice;
 Let the strong arm be lifted for the weak,
 For the dumb lips the fluent pleader speak;—
 When with warm "rebel" blood our street was dyed
 Who took, unawed, the hated hirelings' side?
 No greener civic wreath can Adams claim,
 No brighter page the youthful Quincy's name!

How blest is he who knows no meaner strife
 Than Art's long battle with the foes of life!
 No doubt assails him, doing still his best,
 And trusting kindly Nature for the rest;
 No mocking conscience tears the thin disguise
 That wraps his breast, and tells him that he lies.
 He comes; the languid sufferer lifts his head
 And smiles a welcome from his weary bed;
 He speaks; what music like the tones that tell
 "Past is the hour of danger,—all is well!"

How can he feel the petty stings of grief
 Whose cheeting presence always brings relief?
 What ugly dreams can trouble his repose
 Who yields himself to soothe another's woes?

Hour after hour the busy day has found
 The good physician on his lonely round;
 Mansion and hovel, low and lofty door,
 He knows, his journeys every path explore,—
 Where the cold blast has struck with deadly chill
 The sturdy dweller on the storm-swept hill,
 Where by the stagnant marsh the sickening gale
 Has blanched the poisoned tenants of the vale,
 Where crushed and maimed the bleeding victim lies,
 Where madress raves, where melancholy sighs,
 And where the solemn whisper tells too plain
 That all his science, all his art, were vain.

How sweet his fireside when the day is done
 And cares have vanished with the setting sun!
 Evening at last its hour of respite brings
 And on his couch his weary length he flings.
 Soft be thy pillow, servant of mankind,
 Lulled by an opiate Art could never find;
 Sweet be thy lumber,—thou hast earned it well,—
 Pleasant thy dreams! Clang! goes the midnight bell!

Darkness and storm! the home is far away
That waits his coming ere the break of day;
The snow-clad pines their wintry plumage toss,—
Doubtful the frozen stream his road must cross;
Deep lie the drifts, the slanted heaps have shut
The hardy woodman in his mountain hut,—
Why should thy softer frame the tempest brave?
Hast thou no life, no health, to lose or save?
Look! read the answer in his patient eyes,—
For him no other voice when suffering cries;
Deaf to the gale that all around him blows,
A feeble whisper calls him,—and he goes.

Or seek the crowded city,—summer's heat
Glares burning, blinding, in the narrow street,
Still, noisome, deadly, sleeps the envenomed air,
Unstirred the yellow flag that says "Beware!"
Tempt not thy fate,—one little moment's breath
Bears on its viewless wing the seeds of death;
Thou at whose door the gilded chariots stand,
Whose dear-bought skill unclasps the miser's hand,
Turn from thy fatal quest, nor cast away
That life so precious; let a meaner prey
Feed the destroyer's hunger; live to bless
Those happier homes that need thy care no less!

Smiling he listens; has he then a charm
Whose magic virtues peril can disarm?
No safeguard his; no amulet he wears,
Too well he knows that Nature never spares
Her truest servant, powerless to defend
From her own weapons her unshrinking friend.
He dares the fate the bravest well might shun,
Nor asks reward save only Heaven's "Well done!"

Such are the toils, the perils that he knows,
Days without rest and nights without repose,
Yet all unheeded for the love he bears
His art, his kind, whose every grief he shares.

Harder than these to know how small the part
Nature's proud empire yields to striving Art;
How, as the tide that rolls around the sphere
Laughs at the mounds that delving arms uprear,—
Spare some few roods of oozy earth, but still
Wastes and rebuilds the planet at its will,
Comes at its ordered season, night or noon,
Led by the silver magnet of the moon,
So life's vast tide forever comes and goes,
Unchecked, resistless, as it ebbs and flows.

Hardest of all, when Art has done her best,
To find the cuckoo brooding in her nest;
The shrewd adventurer, fresh from parts unknown,
Kills off the patients Science thought her own,
Towns from a nostrum-vender get their name,
Fences and walls the cure-all drug proclaim,
Plasters and pads the willing world beguile,
Fair Lydia greets us with astringent smile,
Munchausen's fellow-countryman unlocks
His new Pandora's globule-holding box,
And as King George inquired with puzzled grin
"How—how the devil get the apple in?"
So we ask how,—with wonder-opening eyes,—
Such pygmy pills can hold such giant lies!

Yes, sharp the trials, stern the daily tasks
That suffering Nature from her servant asks;
His the kind office dainty menials scorn,
His path how hard,—at every step a thorn!
What does his saddening, restless slavery buy,
What save a right to live, a chance to die,—
To live companion of disease and pain,
To die by poisoned shafts untimely slain?

Answer from hoary eld, majestic shades, —
 From Memphian courts, from Delphic colonnades,
 Speak in the tones that Persia's despot heard
 When nations treasured every golden word
 The waudering echoes wafted o'er the seas
 From the far isle that held Hippocrates;
 And thou, best gift that Pergamus could send
 Imperial Rome, her noblest Caesar's friend,
 Master of masters, whose unchallenged sway
 Not bold Vesalius dared to disobey;
 Ye who while prophets dreamed of dawning times
 Taught your rude lessons in Salerno's rhymes,
 And ye, the nearer sires, to whom we owe
 The better share of all the best we know,
 In every land an ever-growing train,
 Since wakening Science broke her rusted chain, —
 Speak from the past, and say what prize was sent
 To crown the toiling years so freely spent!

List while they speak :

In life's uneven road
 Our willing hands have eased our brothers' load;
 One forehead smoothed, one pang of torture less,
 One peaceful hour a sufferer's couch to bless,
 The smile brought back to fever's parching lips,
 The light restored to reason in eclipse.
 Life's treasure rescued like a burning brand
 Snatched from the dread destroyer's wasteful hand, —
 Such were our simple records day by day,
 For gains like these we wore our lives away.
 In toilsome paths our daily bread we sought,
 But bread from Heaven attending angels brought;
 Pain was our teacher, speaking to the heart,
 Mother of pity, nurse of pitying art;
 Our lesson learned, we reached the peaceful shore
 Where the pale sufferer asks our aid no more, —
 These gracious words our welcome, our reward,
 Ye served your brothers; ye have served your Lord!

MEDICAL SOCIETIES: THEIR ORGANIZATION AND THE NATURE OF THEIR WORK.

BY J. COLLINS WARREN, M. D.

The fundamental idea which brought about the formation of the American Medical Association was the improvement of our system of education.¹ During the fifteen years intervening between 1830 and 1845 the number of medical colleges in the United States more than doubled. The competition was great, and short courses of instruction and easy terms of graduation were consequently the rule. Sixteen weeks were very generally adopted as the length of the college term, and in some of the schools it was reduced to thirteen. At the meeting of the Medical Society of the State of New York in 1839, when the subject of medical education was brought forward, it was proposed to hold a national medical convention in Philadelphia the following year, consisting of delegates from the societies and schools of the different States. No response was made to the action of the society. In 1844 the New York society made a second movement in this direction. Dr. N. S. Davis, a delegate from Broome County, New York, offering a resolution that a national convention be called to meet in New York in 1846, the organization of which was intrusted to a

committee, of which Dr. Davis was chairman. On this occasion there was a general response from all quarters except Philadelphia and Boston. The proposed convention assembled in May, 1846, and Dr. Jonathan Knight, of New Haven, was chosen president. Committees were appointed, and resolutions in favor of the formation of a national association and elevation of the standard of medical education were adopted. The convention reassembled the following year, and, after listening to the reports of their committees, resolved itself into the American Medical Association, and elected Dr. Nathaniel Chapman, of Philadelphia, its first president. The two systems discussed at this meeting as the basis of membership were, first, "the delegate," which has since become so familiar to American physicians, and which was adopted; and, secondly, that proposed by Dr. Isaac Hays, which contemplated an organization, the members of which should be elected by itself, either directly or through a board of councilors, thereby making it independent of state and local societies and institutions. It was thought that the latter plan would give the Association greater stability, and make membership more select and permanent, while it was argued that the former would give the Association more influence among the profession at large, and would favor the development of state, county, and city societies throughout the Union. The delegate system was adopted; but finally, in 1871, delegates from hospitals and col-

¹ *Collegium Medicum*, p. 426-448.

² *History of the American Medical Association*. By N. S. Davis, M. D., Philadelphia, 1856.

leges were excluded, the State and county societies, which are recognized by their own State society, alone being represented. Even this modification does not seem to have proved very satisfactory, for in 1877 it was proposed by the president, Dr. Bowditch, that every member of a State society should be *ex officio* a "permanent member," the number of delegates being greatly reduced. But this plan was objected to, a committee subsequently reporting that it would be desirable if uniformity of organization and the payment of fees could be secured. It is interesting in these early meetings to note the character of the resolutions bearing upon medical education, having in view increase in the length of term,¹ the necessity of a full three years' course of study, a higher and more uniform standard of preliminary education, and the separation of the teaching from the licensing power.

A prominent feature of these meetings was reports from standing committees on medical science, on practical medicine, on surgery, on obstetrics, on medical education, on medical literature, and on publication. At the second meeting in Baltimore the report of Dr. Holmes on medical literature justly criticised the proneness of American writers of that period to content themselves with the position of editors of foreign works, and the character of our periodical literature, and urged the substitution of original for parasitical authorship. The beneficial effect of such criticisms from the Association is indicated by Dr. Davis, in his presidential address in 1865. When the Association was formed publishers would not take books from American authors. The influence of the Association had, he thought, already at that time wrought an entire change. The second annual meeting was held in Boston, and Dr. John C. Warren was elected the third president. It is particularly worthy of note at the present time that in connection with the report of the committee on medical education a paper was presented from the faculty of Harvard University *opposing* the proposition to extend the annual college terms to six months. It was at this meeting that social features were introduced, an entertainment being offered to the Association by the physicians of Boston.

Already at the third meeting an interest in public hygiene began to manifest itself, and papers on subjects pertaining thereto were offered from Boston, New York, and New Orleans. An appropriation having been made for two annual prizes, the first was awarded at the fourth meeting, in Charleston, in 1851, "to Dr. John C. Dalton, Jr., for the Essay On the Corpus Luteum of Menstruation and Pregnancy."

The annual reports of committees, containing abstracts which were lengthy and uninteresting, were soon abolished, the number of committees being enlarged to thirty, and special subjects being assigned to each.²

At the next meeting we find the Association memorializing Congress in regard to abuses in the merchant marine, and as early as 1852 the propriety of substituting a periodical journal for the Transactions was suggested by Dr. J. B. Flint, of Kentucky. This proposition has been advocated since by Drs. Gross,

Sayre, and Parvin, at different meetings, as it was thought that no other measure would promote so efficiently the prosperity of the Association, and in this view they are undoubtedly correct.

The Association early felt the importance of medical organizations in the different States; but few State societies and smaller local societies had been formed, and the masses of the profession had not only no coherence, but were actually separated.³ A committee was appointed to draw up a plan of organization of State and county societies, for the purpose of facilitating and encouraging such formation. It was suggested in the report that the counties should be made "auxiliary" to the State, and the State societies "auxiliary" ⁴ to the national association. As the importance of maintaining a high standard of education was not forgotten, each State was strongly urged to include in their plan the formation of a board of Censors. It was contemplated that the counties should send in reports from its individual members to the State, and the States in their turn should make return to the parent society, thereby establishing a concert of action throughout the country.⁵

Dr. Chaillé says in regard to this point: "In fine, the most important duty of this association is to devise ways and means to organize the medical profession in county societies, to gather these into State societies, and to aggregate the whole into this Association, and to induce each physician to contribute \$10 to \$15 to support the three societies. The Association would thus obtain a revenue of \$200,000." Such a plan, attractive as it may appear, would be impracticable at the present time. It would be difficult to collect fees or to persuade members to take an active interest, judging from the experiences of State societies. For instance, in 1878 Georgia dropped 300 of 547 members for non-payment of fees.

The code of the committee referred to above did not prove satisfactory, for we find Drs. Gross and Davis stating, in 1878, that many of the State societies were little more than annual mass-meetings, and that there was no uniformity in the plans of organization.

It has been proposed since to improve upon the old code, and to publish in the Transactions annually a statistical report of certain specified details for every State society; also, peculiarities of its regulations, or measures it is using to promote its efficiency. The State societies have also been requested to publish a register of the members of the profession in good standing. No society, however, has complied, although many local registers are published.

The plan of committees to report on special subjects proving a failure, all special work was, in 1860, referred to the "sections," which by holding simultaneous meetings accomplish a far greater amount of work.

The next great improvement in organization was effected in 1873, when the formation of a judicial council satisfactorily disposed of what was becoming a great source of annoyance and impediment to work,—the discussion of local questions of ethics at the general meetings. The council consists of twenty-one members, seven new members being added each year, and seven retiring.

¹ The University of Pennsylvania extended its lecture term to six months, and the College of Physicians and Surgeons lengthened its course to five months. Other schools added a few weeks to the term, but this was all that was accomplished.

² Somewhat after the plan of the International Congress, above mentioned. The plan did not succeed; not one in six furnished a report of any kind. Dr. Davis, Presidential Address, 1865.

³ Dr. Bowditch, Presidential Address, 1877.

⁴ "Delegated bodies," or independent bodies represented by delegates.

⁵ When the Association was formed there were about 125 societies in the United States. Now there are over 1200.

As in the earlier meetings the presidential addresses teemed with suggestions on the subject of medical education, so in later years we find the growing interest manifested in public hygiene. Since 1870 this has been strongly marked. In 1871 the Association urged that a professorship of hygiene should be established in every medical college, that every State government should be memorialized to establish a board of health, and that members should use their influence to induce Congress to form a national board. In 1873 a section of state medicine and public hygiene was formed. In the Transactions for 1879, the exceedingly valuable and interesting paper by Dr. Chaillé, of New Orleans, on State Medicine and State Medical Societies, and papers on Protective Sanitation, by Dr. Storer, and Registration of Disease, by Dr. Balch, testify to the increased interest in these matters.

The Association does not appear to have taken any stand in regard to the perplexing question of medical license laws in the several States. It seems to have contented itself, and perhaps judiciously so, with recommending the exaction of preliminary education by boards of Censors, and later in advising the societies to examine all practitioners, whether graduates or not; in other words, with urging a high standard of excellence from each State society.

It has used its influence to secure improved rank for medical officers in the army and navy, and its repeated efforts through committees have undoubtedly helped to give us the first volume of the Index Catalogue.

Resolutions have also been passed, having in view the prevention of criminal abortion, and reform in the methods of securing expert testimony.

This brief sketch is sufficient to show the character of the work attempted by the society, and to enable us to estimate roughly what it has accomplished. The medical mind throughout the country was roused into activity by its formation.¹ Although the early work in aid of medical education had little apparent effect at the time, undoubtedly it may fairly claim a share of the influence which has brought about the great changes of the last decade. The questions of public health, which have lately been so prominent, have reminded us of the usefulness of such a body, when well managed, in time of need. The result is certainly more satisfactory than one might have expected, considering its diminished popularity in the Eastern and Middle States² during the last ten or fifteen years of its existence. The class of medical men who take an active part in the work of the Association are no longer of the same stamp as those who attended the meetings in the early years of its life. But comparatively few of the prominent men of the country are now to be seen at the annual gatherings. The causes of this decline it is not difficult to find. The delegate system of membership, which was not adopted without opposition, seems largely to blame for this unfortunate result, offering, as it does, but little inducement for membership, and opening the door to any one who may wish to make this an excuse for a pleasure trip, or who may desire to use the Association as a means of personal aggrandizement. The ever-changing character of the material of this body gives it a lack of stability and permanency which must necessarily greatly impair its efficiency. The conditions which exist in this country

are to be met only by an organization specially devised for the purpose, and it would clearly be impossible to select any other national association for a model. The lack of uniformity in our State societies would prevent, for instance, the adoption of so simple a plan as that of the British Medical Association. In 1872 this question was freely discussed in the medical journals, and amongst other plans it was proposed to establish a national council,³ a sort of medical senate, the members of which were to be elected for a term of years by State councils, whose members in turn should be selected from congressional districts. To such a body would be intrusted the scientific and professional business of the Association. Eventually, the various State and county societies might be included as branches and sub-branches of the parent society. An important element in the success of any such large body of medical men is the inducements which it offers to each individual to become a member. He must see a substantial return for the money annually paid in assessments. The sum is usually larger than the average practitioner can afford to spend for objects the usefulness of which may appear to him somewhat remote. The annual volume of Transactions does not supply this need. The work of the annual meeting does not appear until many of the questions it has discussed have, in these rapidly-moving times, lost the vitality which made them topics of special interest at the moment. During the greater part of the year the Association is a blank; beyond the feeble efforts of a few committees, its work seems to have come to a stand-still. Nothing is known of the coming meeting by the profession at large. Contrast this fact with the methods adopted by the International Congress; how much more we know about a meeting which is to take place three thousand miles away than we did beforehand of one which has taken place at our very doors! The publication of a weekly periodical would not only fill this void for each individual, but would be a powerful incentive to the Association for continuous work throughout the year. This would of course necessitate a radical change in the organization of the society, which is perhaps the reason why its leaders have shrunk from taking the step.

The future of the Association depends largely upon the success with which it identifies itself with the interests of the State societies. It should become a bond of union between them, the usefulness of which should be made so apparent that all would be glad to avail themselves of it. To effect this object, the present organization must be discarded, and an active and vigorous body must take its place, making its influence perennial, and appropriating for its highest offices the ablest men in the country. With such machinery the profession of the United States would, I think, be started to find the power which it would be able to exert.

The Medical Association of the State of Alabama was organized in 1818, and reorganized in 1873.

The objects of the Association are stated to be the organization of the medical profession of the State in the most efficient manner; to encourage a high standard of medical education, and regulate the qualifications of practitioners of medicine; to watch over and protect all the interests of the medical profession of the State; and to supervise the sanitary laws and interests.³

¹ Dr. Gross, Presidential Address, 1866.
² Dr. Bowditch, Presidential Address, 1877.

³ Boston Medical and Surgical Journal, July 25, 1872.

⁴ The composition of the society is somewhat complicated, the

The peculiar features of this Association are the attitude which it has assumed towards the regulation of the practice of medicine and its public health system. The various boards of Censors assume the double duties of examining boards and boards of health for the State at large, and for its various counties respectively.

The draft of an act to regulate the practice of medicine was submitted to the Association in 1871, and became a law in 1877, after an active opposition in the Legislature. The leading features of this law are as follows: The State and county boards of Censors are constituted boards of medical examiners, from whom all persons intending to practice medicine in the State must obtain a certificate of qualification after passing an examination. All persons legally engaged in practice at the time of the passage of the law are continued in the enjoyment of their rights under certain regulations. It has been found expedient not to molest any practitioner actually in practice at that time, even though he be thus engaged without the authority of the law, except in notorious cases. The examinations for those who propose to practice the "regular" system of medicine include anatomy, physiology, elements of chemistry, organic and inorganic, materia medica, therapeutics, pathology, theoretical and practical medicine, surgery, obstetrics, hygiene, and medical ethics.

Those who propose to practice some irregular system are examined only in chemistry, anatomy, physiology, and the mechanism of labor. The examinations are partly oral and partly written.

There are preliminary examinations laid down for those who intend to begin the study of medicine, which include English grammar and literature, outlines of history, elements of arithmetic, algebra, geometry, physics, or natural philosophy.¹

The certificate of the board is duly registered in the probate court of the county. After having passed the examination, the successful candidate, if a "regular," is generally elected into the county society. Up to the present time the county boards have been engaged for the most part in the preliminary work of issuing *pro forma* certificates to those already engaged in the practice of medicine. They have also made a few examinations of applicants who propose to practice the regular system of medicine. Practitioners of the peripatetic class have as a rule declined to come before the

boards, when summoned to do so, and have preferred rather to leave the State. Numerous cases of this kind have occurred. The penalty for violation of the law is a fine not exceeding one hundred dollars, and in default of payment imprisonment for not over one year.

In one of the reports of the Censors regret is expressed that provision requiring the examination of irregular practitioners has been introduced, as it thus elevates irregular medicine into a position of quasi-respectability, and "because it will, perhaps, give a somewhat longer lease of life to systems of practice that are already falling into decay, and that should have been allowed to die as quietly as possible, without being temporarily galvanized into an appearance of vitality by legislative action."

The Association has in view the annual publication of a complete register of medical practitioners of the States.²

The State Association is also made the State Board of Health, and the functions of county boards of health are invested in the several county medical societies, "thus virtually engaging all the doctors of the State in the sanitary service of the people, and in the administration of the health laws of the State." The bill proposing this measure was passed in 1875. In 1879 an act was passed appropriating three thousand dollars for the use of the State Board. The county boards enjoy only advisory powers, and are conducted without expense to the State. Under certain emergencies they may be invested with extra powers and duties by the legal authorities.

It is proposed to pass an act this year to provide for the supervision of the public health, and for the collection of vital statistics. The act specifies more accurately the duties of the various boards, including the supervision of all public institutions, and all matters pertaining to quarantine and quarantine physicians.³ Each county board has a health officer at a salary of not less than one hundred dollars a year, who is the executive officer of the board. He attends to all the specified duties, is prepared to vaccinate and perform any additional duties which may be assigned him. He must keep a register of births and deaths and infectious diseases, and every physician, midwife, or citizen is expected to send to him full reports. He is obliged to make weekly, monthly, and annual reports to his board of all business done in connection with his office, and the county boards make to the State Board an annual report, "containing all the vital and sanitary statistics of the county," and any other information that may be deemed advisable. The health officer may have assistant health officers appointed to aid him in this work. Fines may be inflicted to compel information upon the desired points. The State Board can declare quarantine measures when thought necessary, and twenty thousand dollars are annually appropriated for quarantine purposes. This board may also have its health officer, if deemed important. His term of service lasts five years, and he is paid out of the annual appropriation first mentioned. His business is to

members of the Association being divided into four classes, namely, members, delegates, councilors, and correspondents. The members of county societies are "members" who have the privilege of attending the sessions of the general society, but are not allowed to vote. Two "delegates" are chosen annually by each county to represent them in the Association. They are entitled to vote on all questions which come before the Association, but cannot hold office. The "councilors" are a body of one hundred members, formed from some preëxisting body, apparently. They hold their positions permanently, and vacancies are filled by a joint vote of councilors and delegates. "Correspondents" are honorary members. The board of Censors of the Association consists of ten men, elected for such terms that there shall be two vacancies annually to fill. They act as a general committee of reference in all questions relating to the organization and general welfare of the Association, and have other peculiar functions, presently to be mentioned. The county societies have each a body of Censors consisting of three members. The annual meeting is on the first Tuesday in April, and lasts four days. Thirty-two county societies have been organized, containing 382 members. Members pay a fee of one dollar. Delegates pay a fee of five dollars. Councilors pay a fee of ten dollars. Each member pays to the county society five dollars annually. "None of the funds of the Association shall ever be appropriated to furnishing festivals or entertainments; nor for any purpose whatever except such as may look directly to the advancement of medicine, including under this head the publication of an annual volume of Transactions."—Constitution M. A. A., Sec. XII.

¹ No practitioner can receive a student who has not passed the preliminary examination.

² The county societies are held strictly to account, and may be censured, or their charter may be forfeited to the general society.

³ It is also specially provided "that no person laboring under any pestilential or infectious disease shall come or be brought into any such county, or removed from place to place, except by permission of the county board of health," and "that no dead human body shall be brought into any such county or removed from place to place," etc.

conduct the correspondence of the State Board, to assist in organizing and conducting the county boards, and to take charge of the annual reports.¹

Ordinances exist also for the regulation of the practice of pharmacy and the practice of dentistry in the State. Attention should be called to an important recommendation in the last report of the Censors, "that no laws affecting the interests of the medical profession in any way should be allowed to go before the General Assembly without first having received the indorsement of the Association."

In the Transactions for 1875 we notice the following significant remark: "We will appreciate most adequately the real character of the Association if we regard it as a medical legislature, having for its highest function the governmental direction of the medical profession of the State, while its other functions, important as they are in themselves, are, in comparison with this, of quite subordinate rank."

Undoubtedly the work to be performed by this very energetic body will produce satisfactory results, and the plan may prove the one best adapted to the present needs of the State, being perhaps the most effective that could be devised for inculcating a due appreciation of the laws of public hygiene and raising the standard of the profession in Alabama. The experiment of such a species of medical legislature should be watched with interest by the profession, as whatever may be its fate its experiences will be most instructive to similar bodies throughout the country.

The Medical Society of the State of North Carolina has an organization similar to that of Alabama.² By an act passed in 1877 the society was constituted the State Board of Health, the county societies becoming the boards of health for the various counties, under the direction of the general board; these boards receiving from the competent legal authorities any necessary powers for carrying on their work as may be agreed upon. No other boards are allowed to exist, the object being to secure a uniform system of sanitary supervision throughout the State. The sum appropriated for this work by the Legislature was at first but one hundred dollars, but this has since been increased to two hundred dollars; and it is expected that the State government, having appreciated the great advantages of such an organization to the welfare of the State, will establish it upon a basis more on an equality with other departments, as that of agriculture, as a "health department," with perhaps a "commissioner of health" as a State officer, and that it will become auxiliary, if properly managed, to the Board of Educa-

tion.³ It is stated that the object of this plan is to preserve the board from the contamination and corruption of political parties. In a supplemental act passed in 1879, it was provided that the board should consist of six members elected by the society, and three members, one of whom should be a civil engineer, appointed by the governor.⁴ The board is disposed to cooperate heartily with the National Board of Health. The latest accounts show that the board is actively at work, and endeavoring to organize a system of registration for vital statistics, and to inculcate elementary sanitary principles among the people. The secretary complains of the ignorance of government officials and the indifference of physicians.

An act of 1859 authorized the organization of a board of seven "regularly graduated physicians" under the title of the Board of Medical Examiners of the State of North Carolina, the board to be appointed by the society, unless the Legislature choose to exercise this right, of which it has never availed itself. The term of office is six years. The board meets yearly with the State society, and continues in session until all applicants have been examined, receiving pay for services. Temporary licenses may be granted at other times of the year by any two members of the board. This law, although not making it unlawful for non-licentiates to practice, deprives them of the privilege of collecting fees by legal process. Those practicing at the time of the passage of the act were not affected by it. The law has forced many unwilling physicians to undergo an examination for the license, and many have failed to pass the board.⁵

The Texas State Medical Association was organized in 1869. As is usual in most States, the county societies are represented at the meetings of the State society by delegates, two of whom are chosen for every ten members.⁶ The medical colleges in the State are represented in the society, each school having two votes. There is a council of twenty-one members, to which all questions of an ethical or judicial character are referred. The Association has not succeeded in establishing a State board of health; there is a law authorizing local boards, but it has proved of little value. The chief work has been the establishment of a law regulating the practice of medicine. This was secured in 1873,

¹ Transactions of the Medical Society of the State of North Carolina, 1877. Report of the committee appointed to memorialize the Legislature.

² Those appointed by the society serve two for six years, two for four years, and two for two years; those appointed by the governor serve two for two years. The officers are elected by the board, the president serving two years and the secretary six years. The latter has a salary, the members receiving two dollars a day when on duty. In each county there are provided auxiliary boards, which are composed of members of the county societies, the mayor, the chairman of the county commission, and the city or county surveyor. From this number one physician is elected to serve two years, with the title of superintendent of health, being a salaried officer. His duties are to gather vital statistics, to make medico-legal post-mortem examinations for coroners' inquests, and to attend prisoners in jails, poor-houses, and work-houses. Reports are made and work done as ordered by the State Board. "Inland quarantine" for small-pox, scarlet fever, yellow fever, and cholera is under the control of the county superintendent of health, and any violation of the rules laid down by him subjects the offender to a fine of \$2500 and imprisonment for not longer than twenty days.

³ Dr. L. Julien Picot, the secretary, writes: "Citizens of the State are beginning to demand of their local practitioners that they obtain a license. When a new man settles in a community it is asked of him at once if he had stood and passed his examinations. A diploma counts for nothing now in North Carolina if a man cannot pass the board. Fortunately, we have no 'pathies' as yet in our State." To which might be added: But with returning prosperity and wealth quacks will be probably abound.

⁴ Members pay a fee for the support of the Association. This was reduced in 1878 to fifty cents.

¹ The Board of Health during the past year has memorialized Congress to the effect that the bills now before it to increase the efficiency of the National Board of Health are open to the objection that they give to the National Board the power to establish and administer quarantines within the limits of the State against all commerce and travel of which one of the terminal points lies outside the State, and thus without consent of or consultation with the local authorities. In its opinion the State Board should be required to submit its regulations to the National Board for approval, and if satisfactory proper assistance should be extended to them. The National Board should have general direction and control of quarantine against foreign commerce, but through the agency of the State boards. The memorialists say that the National Board has a wide and important sphere of usefulness, within which local boards have no jurisdiction.

There are permanent members, delegates, associates, and honorary members. The first appear to be members of the county societies, and what counts as members of the Alabama society. "Delegates" are members of the county societies at the general meetings. "Associates" are members of the county societies, and have a right to attend the general meetings, but are not allowed to vote. "Honorary members" are those who are independent of the State society, but may on occasion become "auxiliary" to it.

but has since been modified. It has been framed in accordance with a provision of the constitution of the State that "no preference shall be given by law to any school of medicine." The examining boards, consisting of three practicing physicians, are appointed by judges of the district courts. Every person intending to practice medicine must undergo the examination prescribed by the board. The penalties for non-compliance with this law vary from fifty to five hundred dollars. The licensing power is thus placed entirely under the control of the State. The judges of district courts are supposed to be officers of sufficiently high standing to be intrusted with the formation of efficient boards, although it has been thought by those familiar with the medical acts of other States "that this system offers the best solution of the difficult problems arising from the various divisions of the medical profession." It is stated by Dr. Chaillé that in some districts difficulty has been experienced in organizing the boards owing to the appointment of homeopaths.

The society has interested itself actively in calling the attention of the government to all matters pertaining to state medicine. Unsuccessful efforts have been made to obtain an appropriation for the Galveston Medical College, to enforce compulsory vaccination, to appropriate five thousand dollars for the cultivation of the *Eucalyptus globulus*, etc. In Louisiana an attempt has been made to provide for the maintenance of the University of Louisiana by the State; but in Michigan, where the State society succeeded in establishing a general hospital and a medical department in the University of Michigan, under State patronage, the government appropriated six thousand dollars to support two professorships for teaching homeopathy. Serious and constant trouble has resulted, and advocacy of the doctrine that "a State ought not to establish medical schools, nor support nor govern them."¹

The Illinois State Medical Society possesses many points of peculiar interest. It is one of the oldest of the Western State societies, and was organized in 1850; its secretary, Dr. N. S. Davis, has been more closely identified with society work than any other man in this country, and its relation to the State Board of Health and the medical practice laws present an interesting contrast to those of the societies which have just been described. Of special interest to us is the plan upon which membership is based. Like many of the State societies which followed the pattern of the American Medical Association, the delegate system largely predominated. In addition to delegates, however, "permanent members" were also elected, apparently without any special plan. The consequence was that many men became members who were not in good standing, and many thus elected became alienated from the local societies; others took little interest in the society, and neglected to pay their fees. The feeling became prevalent "that most physicians care nothing for a medical society until sickness, adversity, or a suit for malpractice overtakes them."² The system was evidently an unsatisfactory one and liable to great abuse. It was found necessary to revise the constitution, particularly with reference to the election of members. This was done in 1878. At this time there were but 352 members, and at the annual meeting in 1878 the total attendance was 100 members in a State

where there are 5000 practitioners. In the same year the attendance at the annual meeting of the American Medical Association was 526, and in Maryland, at the meeting of the state society, 150 members were present, being the largest number at any State meeting except that of Massachusetts.

RECENT PROGRESS IN SURGERY.

BY H. H. A. BEACH, M. D.

ANATOMICAL RELATIONS IN TRACHLOTOMY.

THE significance of an abnormally high position of the innominate artery was dwelt upon in a discussion following the reading of a paper before the Medico-Chirurgical Society of Edinburgh by Dr. Symington.³ The author presented a subject in which only half an inch intervened between the artery and the isthmus of the thyroid body, and advocated the employment of a high operation, taking the chances of incising the isthmus of the thyroid gland rather than to incur the increased risk of wounding the artery. Necessarily the risk is more applicable to childhood, but the possibility of such a complication deserves consideration in advising or undertaking the operation.

ECZEMA OF THE NIPPLE AND CANCER OF THE MAMMA. (PAGET'S DISEASE.)

Dr. Thin proposes⁴ to call this affection Malignant Papillary Dermatitis, and concludes that it is "neither eczema nor psoriasis, nor any known specific skin disease." He has observed that "the first change was found at the mouths of the lactiferous ducts from whence it very slowly spread out, and later on formed a cancerous tumor deeply in the mamma; the change in the skin must therefore be cancerous in its nature." The practical conclusion to be drawn from his investigations is, that early excision of the diseased nipple and areola should delay, if not prevent, the gland from becoming involved; on the other hand, Busch, Gross, and Chambers have cured cases by simple local applications without the development of cancer. Evidently, two varieties of disease may attack the nipple and areola; which are so much alike that a prognosis involving the future of the gland proper cannot be safely based upon anything short of a *microscopical* examination of the structures involved; or, it is safe to assume that Paget's disease, as Mr. Erichsen terms it, has a stage when simple means will cure it.

PARTIAL OPERATIONS IN CANCERS OF THE BREAST.

The old question of the local or constitutional origin of cancer was opened by Mr. Lawson in detailing some of his experiences in the cancer wards of the Middlesex Hospital.⁵ He claims that "partial removals of cancerous breasts are not only useless but worse than useless, one operation stimulates the growth of the cancer and hastens the progress of it instead of retarding it. The delay of efficient treatment which such a partial operation causes is very prejudicial, as the recurrence of the disease, which is almost certain to take place, is usually very extensive and frequently such as to forbid any further operative proceedings. In all cases of schirrus of the breast which admit of operation, even though the growth be no larger than a chest-

¹ State Medicine and State Medical Societies. By Stanford E. Chaillé. Transactions of Amer. Med. Asso., vol. xxx.

² Chaillé, op. cit.

³ Edinburgh Medical Journal, March, 1881.

⁴ Lancet, March 17, 1881.

⁵ Lancet, May 7, 1881.

nut, and be placed at the edge of the gland, the whole breast should be removed and that, rather than perform a partial operation, it is better to allow the disease to run its course."

CANCER OF THE TONGUE.

Vernueil states¹ that "the diagnosis, in a majority of cases, should not be difficult; and, through the recent teaching of M. Fournier, the affection may be readily distinguished from tertiary glossitis. There are hybrid cases where the cancers occur in a subject of old syphilis and in which the objective characters are modified by constitutional treatment, such cases do not require any alteration of treatment, for the hybrid affection in its course, termination, and prognosis resembles pure epithelioma and should be dealt with in like manner. When more than a third of the tongue has been involved or the floor of the mouth is affected, the case cannot be treated by operation with any chance of success. Out of two hundred operations by M. Vernueil, one only was fatal. Operation at an early stage is advised.

ANESTHESIA.

The recent reports of the Scientific Grants Committee of the British Medical Association, composed of pathological, chemical, and physiological experts, and the work of Rottenstein² present strong evidence of the dangers of chloroform as an anæsthetic, and will help to fortify the position so ably held for some years by Mr. Ernest Hart, the editor of the *British Medical Journal*, in advocating the substitution of ether for chloroform as a general anæsthetic.

Mr. H. Macnaughton Jones, surgeon to the Cork County Hospital and Professor of Obstetrics and Gynecology at Queen's College, has published an exceedingly interesting report on anæsthetics, and makes the following epitome of the views now held on the action of chloroform.³

(1.) By chloroform the blood-pressure is "enormously reduced." This fall in the blood-pressure causes an anæmic state of the brain and respiratory centres, which tends to cause ultimately a cessation of respiratory movement and of the heart's action.

(2.) Chloroform produces a paralysis of the inhibitory centres after the primary stimulation.

(3.) Chloroform paralyzes the vaso-motor centres, thus accounting for the fall in pressure.

(4.) Chloroform acts directly on the heart's muscle, destroying its contractile power, and arrests the heart's action suddenly.

(5.) Arrest of respiration may precede stoppage of the heart, or vice versa, dependent, it may be, upon the degree of concentration of the vapor.

Death would appear to occur alike from asphyxia and from syncope, but much more frequently from the latter; in fact, it is doubtful if the cause of death be asphyxia whether we should not look to the method of administration to account for it.

"Si l'on me démontrait l'asphyxie chez un malade mort pendant la chloroformisation, je dirais qu'elle est due à un mode vicieux d'administration." (M. Perrin.) We may conclude that the great cause of death from chloroform is syncope—empty vessels, stoppage of the heart, sudden and often impossible to foresee.

(6.) Chloroform would appear from the researches of some to exercise a direct effect, physically and chemically, upon the blood, altering the size of the corpuscles (contraction), diminishing the amount of carbonic acid, and increasing the oxygen; at the same time the quantity of carbonic acid in the exhaled air is increased.

(7.) Chloroform abolishes conscious sensibility by its action on the perceptive centre, on the cerebral cells themselves,⁴ through their protoplasm⁵ carried thither by the blood, destroying the inherent irritability of the protoplasm, and thus bringing about the disappearance of the sensorial function of consciousness. This liberates the spinal cord to a power of independent action, during which time its reflex functions are exaggerated. Pain is not now felt, analgesia is produced. At the same time the motor brain-cells become affected, and now those of the cord and other tissue elements; finally, in complete anæsthesia, there is perfect muscular relaxation, and should the chloroform be further pressed and attack the medulla, respiration and circulation are arrested—death is the result. Reflex excitability would appear to be first exalted and then a steady lowering to follow in the full stage of anæsthesia. The theory that death may be the consequence of *reflex* stoppage of the heart through the peripheral irritation of the pulmonic nerve is supported by these views of Legroux.⁶ They are more important in their bearing on the action of chloroform during parturition.

Lastly, regarding death from chloroform, it is right to point out: (1) that death frequently occurs after the first few inspirations; (2) that the quantity sufficient to kill varies from a few drops upwards, but that in the majority of cases recorded not more than from one to three drachms have been sufficient to kill; (3) that in a large proportion of cases there is no previous indication of danger—sudden cessation of the pulse and extreme pallor of the face, with alteration in the pupil, being the first indications, these being rapidly followed by an arrest in the respiration; (4) that though abnormal states of the heart—and principally fatty change—have been frequently found after death from chloroform, yet in numbers of other cases the signs are negative, the patients have been in good health, and the heart, lungs, and brain perfectly normal."

PHIMOSIS AS A CAUSE OF HERNIA.

Mr. S. Osborn read a paper before the West Kent Medico-Chirurgical Society recently,⁷ urging *early* circumcision in cases where the prepuce is contracted in order to do away with the strain required to empty the bladder, such straining being one of the common causes of hernia in children, as verified by a large number of observations.

THE ANTISEPTIC SPRAY.

Professor Von Bruns, after trial, has discontinued the use of spray in his surgical operations, on the ground that "the utility and necessity for its employment is not sufficiently proved, and that it must be regarded as a useless addition to the antiseptic treatment. In place of a continuous spray he employs temporary irrigation or watering with a two to five per cent. solution of carbolic acid for a few seconds at a time. In

¹ Rottenstein, page 346.

² Claude Bernard, *Leçons sur les Phénomènes de la Vie communes aux Animaux et aux Végétaux*, 1878.

³ *Gazette hebdomadaire de Médecine et de Chirurgie*, March 15, 1878.

⁴ *Lancet*, January, 1881.

⁵ *London Medical Record*, February 15, 1881. *Bull. et. Mon.*

⁶ *Ann. Chir. et. Gyn.*, Paris, 1. *Branc. Fournier Bull.*

⁷ *London Medical Record*, March, 1881.

protracted operations the cut surface is washed several times with a two-per-cent. solution of carbolic acid; in other operations this is done at the conclusion only. Moreover, every unhealed surface, if not quite too extensive,—for example, the inner surface of a pleural cavity which has been opened into, or of an abscess which has been evacuated,—is washed out with a stream of carbolic acid solution (five per cent.), and the same proceeding is adopted in amputations after the edges of the flaps have been brought together should any further hemorrhage have occurred, the drainage tubes being employed as the means of access for the carbolized stream."

"In the same way in all dressings of wounds no spray is used, but merely irrigation with a two-per-cent. carbolic acid solution. In other respects the usual rules of the antiseptic treatment are strictly carried out, and especially the use of carbolized gauze, prepared according to my son's method. I regard the dressing of the wound as seldom as possible as of special importance. Thus, after amputations, the first dressing occurs, as a rule, on the eighth, tenth, or twelfth days. In two complete resections of the knee the dressing applied immediately after the operation was not changed until the twenty-eighth day, and not until the thirtieth day in two other cases."

Following the above, the *London Medical Times and Gazette* published an Experimental Inquiry into the Value of the Antiseptic Spray (March, 1881), and concludes that "the antiseptic irrigation of wounds is not only a protective against any possible infection by the air; it fulfills a second and even more important object. It insures the safety of the antiseptics, and this is an object, therefore, which recommends it in all cases, even where the air is not to be feared. The antiseptic treatment requires, comparatively speaking, a complicated apparatus, which must be used with great exactitude, and even with a certain pedantry. The slightest failing may cause the most serious disturbances, and it moreover requires a considerable amount of assistance from others besides the surgeon. Its safety is thus much endangered. Irrigation, on the other hand, is a simple proceeding, and any accidental oversight as regards the fingers, instruments, or sponges is counteracted by efficient irrigation. Then the tissues themselves remain unfavorable to the propagation of bacteria for a considerable time. It is especially during the early hours after an operation that this is of importance, because the tissues themselves are in a condition of what may be termed *local shock*; their function is disturbed by the mechanical result of the operation and the cooling, and they are thus unable for a while to initiate those changes which usher in healing. It may be urged that the irrigation is more irritating, and that it leads to a larger secretion from the wound during the early days after operation; but, although this necessitates more frequent change of dressings, it secures more certain asepsis" . . . "On theoretical grounds it has been shown to be unnecessary, and Trendelenberg and others here, by the result of their operations, show that the spray may safely be dispensed with in practice."

Von Bruns states¹ that during "the two years preceding his publication there were in the hospital sixty-two amputations and disarticulations; ten osteotomies; twenty-six resections of joints; thirteen resections of outside joints; nine trephinnings with scooping out of

flat bones; twenty-four necrothecotomies of long bones. In all one hundred and forty-four operations on bones. Not one of these ended fatally. Besides these one hundred and forty-four operations more than three hundred and fifty other operations were performed in the hospital without reckoning enlargements of wounds, opening of abscesses, and other small incisions.

"The total number of patients admitted to the hospital during these two years was 1175, a number which, with the present accommodation (one hundred beds) was considerably below what it should have been, as the changes which were being made in the hospital caused some reduction in the number of beds in June and July, and the entire closure of the institution in August and September. The deaths among these 1175 patients was 36, a mortality of little more than three per cent., but none of these deaths was due to blood-poisoning, whether pyæmia, septicæmia, or erysipelas.

"These numbers and facts are surely large enough and important enough to inspire even the most ardent supporter of the spray with some doubt as to its necessity, and to induce him to make some experiments in operating and dressing without it."

There can be no question of the disadvantages of operating under the spray and the additional time consumed if it is employed. It is equally true that good results followed certain forms of antiseptic dressing before the days of Listerism, and the special dressings employed by Mr. Lister between the dates of his first paper on the treatment of compound fractures and that wherein he advocated the employment of the spray. But such results could not be expected as surely without the complete dressing as with it, and surgeons have conceded the additional time and annoyance in operating, even in cases where a protracted anæsthesia alone was undesirable for the greater security which the Lister system promised their patients from septic processes.

Therefore, any modifications which do not add to the risks of treatment will commend themselves, and time alone must determine their value. One great disadvantage of irrigation with carbolic acid solutions is the additional opportunity it affords for an absorption of the agent to such a degree as to cause poisonous symptoms or even death. A non-poisonous agent, equally protective, would dispose of this objection. Another is the disturbance of the apposition of wounded surfaces by distention, delaying union and prolonging the treatment. Even Von Bruns insists upon the importance of dressing the wound as seldom as possible.

COD-LIVER OIL.

Mr. R. F. Fairthorne, Ph. G., suggests a new method for the administration of cod-liver oil, which consists in adding about one part of tomato or walnut cats-up to four of the oil, the mixture being well shaken up just before taken. He very pertinently remarks that taking an ordinary emulsion of cod-liver oil is like eating cod-fish or lobster with a dressing of sugar and gum. He has found his suggested mixture to agree much better with many persons than any other form which they have tried. This he attributes to the association of such condiments as are generally employed as additions to food, and which experience has shown best to bring into operation those digestive faculties of the stomach which might otherwise remain dormant. — *American Journal Pharmacy*.

¹ Dublin Medical Journal.

Reports of Societies.

MASSACHUSETTS MEDICAL SOCIETY. — THE CENTENNIAL DINNER.

THE members being assembled about the table, a blessing was asked by the REV. PHILLIPS BROOKS. After showing due appreciation of the provision made for the corporal man, the society was called to order and addressed by the centennial chairman, DR. WHITE, as follows: —

Members of the Massachusetts Medical Society. — It is my pleasant duty, after all these entertainments, during which you have enjoyed the hospitality of a great university, and that extended to you by your fellow members of this society, to welcome you to the closing and best event of all, our annual dinner.

Well may you congratulate yourselves upon this notable birthday of the mother society.

A century of American medicine has passed, and already you have listened to two admirable addresses upon this theme; but I cannot forbear to recall your attention to the possibilities demonstrated in that one hundred years by the progress made in the collateral branches of our art, so richly illustrated in our visit to Cambridge yesterday.

What did those who founded our society know of ethnology, botany, or archaeology? What opportunities did the university offer for the acquirement of such knowledge? Dr. Waterhouse was the first to bring to us some knowledge of these sciences, but not till after the commencement of the present century did we possess any opportunities for their acquirement. In 1814 Dr. Jacob Bigelow published his explorations in this direction, and in the following year was organized a society for the study of natural history, which included, among others, the names of Dr. Walter Channing, George Hayward, John Randall, John Ware, John Warren, Enoch Hall, John C. Warren, and George Shattuck. The magnificent collections that you have recently visited at Cambridge may be proudly claimed to be the legitimate outcome of this early appreciation by those distinguished members of this society for these branches of learning.

With such advances in the past, who will venture to predict what will be taught in the hundred years to come?

Look at the collections of *materia medica* in the adjoining hall, and contrast them with those of a hundred years ago, and who can limit the possibilities of the medical science in 1914?

The hundred years that have passed have been occupied in the development of the race, in active warfare for the defense of all citizens and the encouragement of the highest interests in science and education, and our birthday should well be celebrated as a jubilee, not only by ourselves, but by all who recognize our labors for humanity.

It is, then, with the joyous spirit of the present occasion that we deal to-day.

We have with us the highest representatives of the State, of the university, of divinity, of law, of poetry, and of science. Our sister societies from other States have sent delegates to congratulate us, and eminent physicians from all parts of our country have honored us with their presence.

I beg to offer in conclusion the following sentiment from Dr. Woodard Parker, of New York: 'The Massa-

chusetts Medical Society: As years roll on may she, ever unite with the wisdom and experience of age the vigor and efficiency of youth!' Throughout one hundred years the society has been fortunate in its presidents, from Dr. Holyoke to its present esteemed head. It is fitting that the man who has taken such an active part in its councils should speak for it on its becoming of age. I introduce to you Dr. Henry W. Williams.

DR. WILLIAMS responded as follows: —

Accept my warmest thanks, Fellows of the Massachusetts Medical Society, for this *supreme* honor conferred in my election as your *Centennial* President. I count myself in nothing else so happy as to be thus remembered by my good friends.

The charm of this day is the charm of memory; it brings us face to face with the men of the past. Reading the lesson of the lives of our founders, we find in their high example of honor and faithfulness an inspiration for ourselves. And as we contemplate the eminent and earnest life of our first president, Dr. Holyoke, we may well adopt as our own the yearning invocation of Elisha to the ascending Elijah, "My father, let a double portion of thy spirit fall upon me."

The date of our baptismal certificate, signed by the same bold hand which subscribed the charter of our national liberties, John Hancock, attests for this society a hundred years of honorable life. And though not to many of its Fellows will be accorded the century of usefulness which was granted to the first president of this association, yet, though the members die the society lives.

As I look around me I see a spirit of youth in everything. Our annals are still a record of self-sacrifice, of devotion to duty, of careful scientific research. And as the unit of years since the birth of the society has become a hundred, so the links of the chain of friendship, forged by Holyoke, Rand, Tufts, Warren, and their associates, have been multiplied and strengthened, until it now extends from one extreme of the Commonwealth to the other, from Hoosac's heights to Siasconset's sands, uniting us all in one brotherhood of faith and duty.

But the prophetic eyes of those earnest men, sanguine as they doubtless were, pictured for them no scene like this. The charter of incorporation limited the number of Fellows to seventy, that being as many as it was supposed would in all the Commonwealth be eligible for the honor of admission to such a fraternity. Less than twenty attended at several of the first annual meetings, because, as they said, of the remoteness of their places of residence, Salem and other towns distant from the capital.

Could they revisit us to-day they would surely be satisfied that the seed they had sown in weakness, but in trustful hope, had indeed been raised in power. Could they see what has been done, even in this present generation, by their Massachusetts Medical Society for the promotion of the object so dear to their hearts, as set forth in the charter, the preservation of health, so essential to the happiness of the community; could they behold the veil of unconsciousness softly drawn over the subjects of capital operations, and observe its magic lightening of that pristine sorrow which is forgotten only when a man is born into the world; could they witness the doings of our own great surgeon, Bigelow, who has solved the problem with

which Hippocrates cared not to grapple, demonstrating to a grateful world how vesical calculus, that incubus from which the stout heart of the Father of Medicine shrank dismayed, can be removed. *currente manu*, at a single sitting, quickly, safely, pleasantly; could they survey the Society as it is to-day, multiplied twenty-fold beyond their limit of expectation, endowed with instruments of research to them unknown, educated beyond their highest opportunity; and should they follow these brethren here present as they dispense throughout the whole length and breadth of the Commonwealth those kindly and skillful ministrations which give to the long-suffering sufferer solace and restoration, — could they view such a fruition, surpassing their utmost anticipations and fondest hopes, their hearts would overflow with exulting thankfulness.

A distinguished physician of Massachusetts once gave this toast: "Our country, however bounded, still our country; to be cherished with all our hearts and defended with all our arms."

So say we of our Massachusetts Medical Society. Its opinions and its methods may have changed somewhat from those of the time of Holyoke; we hope, we know, that another century will see modifications and improvements of our ideas of to-day; but the conservative principles of our association, its progressive aims, have been, are, and will remain the same. Changeless through every change, steadily augmenting its numbers and usefulness, our society, which for a hundred years has been the embodiment of medical knowledge and medical progress, well deserves in like manner to be cherished and defended.

A distinguished physician once gave this toast: "Our country, whether bounded by the Rio Grande, or how otherwise bounded, yet still our country." So say we of our Massachusetts Medical Society.

Our ideas have changed from those of Holyoke and his associates, and all of our opinions will be modified one hundred years hence; yet the principles of the society and its conservative opinions will ever remain the same, and steadily onward, both in principles and usefulness, may it ever advance, and as of old be cherished and defended.

Dr. White then introduced the Governor with the following words: —

The Commonwealth of Massachusetts and the Massachusetts Medical Society, — mutual servants and allies: the latter evinces its relations to the former by the care of her citizens and soldiers, in making our towns and habitations healthy; and her sanitary code we need not mention in the presence of her chief magistrate, one who appreciates all labors for humanity, and one whom we all especially honor, — GOVERNOR LONG.

To which the Governor responded as follows: —

I am sure that one of the most fundamental, though unwritten, laws of the Commonwealth is a sound mind and a sound body. One hundred years ago last October the people provided for the former by adopting the Constitution, by which the advancement of piety and progress were insured. About a year later she incorporated, over the signature of her first Governor, the Massachusetts Medical Society, and intrusted the lives and limbs of her makers to its careful keeping; and to-day we are celebrating not only her centennial, but also a century of progress onward, out of ignorance and doubt into the light of truth and learning.

Of all professions I suppose that that of medicine is most experimental and tentative. The law, the common law, has hardly taken a step forward for a century. The pulpit has only exemplified the "Sermon on the Mount," and that not always trustworthily. But without any personal knowledge from my end of the line — and I trust it will be many years before I have — I take it that medicine owes its splendid progress to its forgetting and discarding the ideas of yesterday, and therefore I speak of it, as of all professions the most experimental. However delightful the profession proves to the scientist, it is somewhat different, I fancy, to the patient, although its operations are done quickly, safely, and pleasantly.

Of all the sciences, then, medicine is the most liberal one; and while it gains so tremendously by such an organization as this, yet it should take care to avoid a danger which in the light of the present day is most obvious, and one which attends all such organizations, namely, limitation.

I bring to you to-day the good wishes of the Commonwealth. The State and society should go together; medicine and politics I am quite ready to admit go well together, only it is, perhaps, pleasanter to administer than to swallow the dose. This I may say, there is never any better or cleaner politician than the doctor. Both medicine and politics are unpleasant in the art of cure, and I wonder whether or not it is better to let nature have her way, and just as easy to recognize the best sentiments of her people and let them alone, only so far as to see that they have fair play, equal rights, and, particularly, good air, good water, and sufficient drainage within ten miles of Boston.

The chief significance of your professional body to the great body of the Commonwealth, which I represent here, the chief significance, I say, is not immediately in your scientific projects, nor so immediately in your researches, but in your relation to the homes of the Commonwealth.

In this relation, ministering to the relief of pain, in the sympathy of attendance, in the confidence and friendship of the family doctor, in the liberation of wife and child from sickness and death, — in all these you have the warmest gratitude and most powerful hold upon their affections.

The Commonwealth recognizes its dependence upon you. It also appreciates what a century of beneficent advantage it has been, and for which my lips can only pay a tribute of open admiration.

Finally, I can only say this: you are sometimes impatient with the Commonwealth's action in various ways, but in the long run the public sentiment of the Commonwealth vindicates itself. If, then, the State, through its law-makers, is not always ready to follow your counsel and do your bidding, yet believe me that its common sentiment is always with you in every generous step that you may take toward the saving of the body, and so far also of the soul.

The following sentiment was then given: —

"Harvard University: To her medicine in New England is indebted for a century of affectionate care; to her do we owe the demonstration of the fact that a system of medical education characterized by a definite course of studies and examinations based upon actual knowledge is not only wanted but demanded."

I call upon President Eliot, one to whom we are greatly indebted for such results.

PRESIDENT ELIOT responded: It always gives me great pleasure to come to the dinner of the Massachusetts Medical Society. If I had not been a college man I should probably have been a doctor. My great-grandfather was a minister who mostly practiced medicine. His diary mentions in the briefest possible manner his official duties: preached so and so on Sunday, November , text so and so; buried such a man on such a day, and christened a child on such a day; but when it came to tracing an epidemic through the dogs, pigs, and sheep of old York, Me., he expanded his diary into many pages, and showed that he was intended for a physician. Perhaps this is one of the reasons why I have taken an interest in the plans which the faculty of the Medical School have entertained toward its development. I have had occasion several times to come here and thank this society for the generous support it has always extended to Harvard and its branches, and to-day can only repeat the same old story. The subscriptions to the Medical School have reached 103,650, and we owe much of this to you in a very important sense. The community is willing to endow our medical universities because they are the birthplaces of medical men, and to this extent we owe it to you.

But allow me to say a few words upon another theme, for the interest of those who are looking forward with hope and expectation to the future. I believe that the profession of medicine is only just now for the first time in the history of civilization dimly discerning its future greatness. The professions of law and divinity have been highly organized for many centuries. Indeed, priesthoods have thus far proved the firmest and most durable of human institutions, and legal tribunals and guilds are not much inferior in permanence, although less universal. The medical profession, on the other hand, has only lately begun to organize itself effectively to exert a collective influence, and to take collective action through its schools, societies, and literature. Yet no profession has more to gain by collective action than that of medicine. The pupil of the isolated country doctor had but one master, few books, and very restricted clinical opportunities; the student at the modern medical school has forty masters, ample libraries, and an endless variety of bedside instruction. A few generations ago the knowledge and skill of the most sagacious and experienced physician were likely to perish with him, or to be precariously transmitted to a few immediate disciples. Now every accidental discovery, every result of long-continued observation, everything which medical sagacity discerns or genius divines, can be promulgated in societies, recorded in medical literature, and made easily accessible to future inquirers by catalogues and indices. Nothing which the fondest physician or surgeon learns need be lost to the profession or mankind. To heal the individual bodies brought under his care was almost the only aim of the good physician of preceding centuries; but now wider interests demand a share of his attention. He studies to prevent disease; he strives to root out of society the causes of physical degradation and contamination; he contends against noxious trades and injurious occupations; he fights contagion, and also the rational dread of it. In short, his mind ranges far beyond the healing of individuals to the welfare of the race. Now all these new and larger modes of action require cooperation, organization, and collective public influence; and many new arts had to be discovered and brought into use before this cooperation and organization be-

came possible. Without steam power, cheap printing, and rapid mails, the advances made in medicine by the last two generations could not have been achieved. It is a wonderful stride from the electuary of sowbugs, the nauseous salt extracted from men's skulls, and the king's magic touch, which Dr. Green told us about yesterday, to sulphate of morphia, ether, and quinine; but how short the time in which this progress has been accomplished! The life of this new country more than covers the period. It is not the advance of the physical and mental sciences alone which has made practicable the recent progress of medicine. The new art of bibliography is essential to modern medicine. The accumulating experience of civilized nations in constitutional government and in association for public objects has taught the medical profession how to organize itself and how to exert a useful public influence. The profession already begins to discharge a new and beneficent function through its influence upon sanitary and reformatory legislation; but not only is all such legislation actually very recent, but it has only lately become possible in modern states to have any such legislation or to get it enforced. In view of these things, I say that the century whose completion this society is celebrating to-day will hereafter be looked back upon as the birth-time of medicine as a learned and liberal profession. The calling of the priest or minister is ennobled by his conviction that he labors for the spiritual part of man, and that in a special sense he belongs to the army of the living God. The lawyer holds that the great interests of public justice and morality are promoted by his labors, and feels himself a member of a venerable and vigorous body. The educated physician ought henceforth to feel that his work underlies all other work for humanity, and that even his single, fleeting life enters into the corporate immortality of a beneficent and powerful organization.

Dr. White then introduced Judge Hoar with the following sentiment:—

"The relation of medicine to the State and legislation: may it become more intimate as civilization advances. We look to our eminent statesmen for their assistance in making it closer in many ways."

JUDGE HOAR replied: It gives me great pleasure to acknowledge the obligation. I was in some doubt as to what I could be indebted for the privilege of coming before you and participating in these your high solemnities, but upon thinking it over I first called to mind that ancient proverb, namely, "After forty every man is either a fool or a physician;" and being inclined to put the most charitable construction upon it, I find myself now among you. Another claim to being present at your celebration is that my earliest recollection dates back to my acquaintance with an ancient practitioner, a surgeon in the Revolution, and one of the earliest members of this society. The most valid reason of all for my being present, however, is that you might have that privilege that Burns thought so desirable, "to see yourselves as others see you," and after you had sung your own praises sufficiently to hear something about yourselves from a different point of view.

My earliest recollections of the medical profession are not at all favorable. They commence with an attack of the measles at the age of four, and on that occasion I delivered my mind to the doctor in regard to his manner of dealing, which led that worthy to observe

to my mother that "the boy must be out of his head." That experienced lady was satisfied that it was only a manifestation of my sincerity, to which I have adhered for the remainder of my days. I must say, however, that my respect for the medical profession has steadily increased from that day.

To adopt a Scriptural phrase, "and also as certain of your poets have said,"

"Little of all we value here
Wakes on the morn of its hundredth year
Without both feeling and looking queer,
In fact, there 's nothing that keeps its youth,
So far as I know, but a tree and truth."

[As the judge said this, he turned in acknowledgment to Dr. Holmes, who sat near him.] And with the health and vigor of a tree, and founded upon a scientific respect for truth, your society at this advanced age seems more likely to endure forever. A poet has said of a work of genius that it always finds us young and always keeps us so. Now I don't know but what the same compliment may be paid to the medical profession: you certainly always find us young, and I have no doubt to the best of your ability you always keep us so, or at least about "so so," if I may observe it, at any time of life.

The Massachusetts Medical Society has had one honor which I supposed his Excellency the Governor, in his pleasant address would have referred to: you have contributed to the service of the Commonwealth two of his distinguished predecessors, General Brooks and Governor Eustis.

I wish, however, gentlemen, from the point of view of a member of another profession, on this occasion to say seriously to you what I think has been the great service of this society to the public and the Commonwealth. In the first place, you have been the great barrier to this community against what Sir Thomas Brown so quaintly expresses as that class of "quacks and charlatans whose impostures are full of cruelty and worse than any other, and delude not only into pecuniary diversions, but the irreparable deceit of death." That is your first and highest claim to honor.

In the next place, I think that your society has done much to substitute the pride in an honorable profession for the personal rivalries and jealousies which were in early times the bane of all professions.

You have also steadily raised the standard of professional accomplishments and acquirements. To you we shall ever be indebted for what you have done in modifying the ancient medical practice; blood-letting is gone into the memories of things past, and you have shown a great inclination to substitute as your patron deity Apollo for Mercury, and to trust to the curative properties of sunshine rather than to calomel.

Finally, you have abolished the ancient pretense which was the curse of all professions. Miss Martineau says that "one of the most impressive things in her visit to this country was the terrible truthfulness of the Boston doctors."

You do not now rely upon what at any rate it would seem to many was much relied upon by your predecessors when they tried to seem wise, which Lord Bacon characterizes when he says that "when they know within themselves that they speak of that of which they do not well know would nevertheless seem to know of that of which they may not well speak."

Your medical profession, I think, has advanced to its present high and honorable position by its regard for sincerity and simplicity.

I cannot trust myself to give expression to my feeling of respect for you as a body of men, but when I think of you all as distributed over our Commonwealth in your individual relations to the people, trusted friends in time of sorrow and danger, giving strength to the weak and comfort to the despairing, the pillars of the State; each in your limited or widest sphere in all our towns and villages, I have no other purpose in rising than to call you blessed.

In conclusion I will simply say — and I always like to borrow from my friend the *doctor* when I can — that I wish for the continued and constant prosperity of this society, and

"May it live untroubled by woes and fears
For a second youth of a hundred years."

Dr. Holmes was thus happily introduced: —

History, that is nature, ever repeats herself, even in her highest types. We are assembled here below the presiding divinity of this hall (Apollo), who, as the father of Æsculapius, so appropriately overlooks our feasting. On rare occasions he revisits us, and, as the father of poets, is ever young, in whatever form he comes to-day, — Dr. Holmes.

DR. OLIVER WENDELL HOLMES was greeted with prolonged applause as he rose in response to Dr. White's introduction. By way of preface he mentioned the praise of the medical man which he was about to bestow, and said that though that praise was without reserve it was no more than was due, and from his own long retirement from practice not unfitting to come from his lips. He then read a characteristic poem, which is to be found in this number of the JOURNAL.

Next was introduced REV. PHILLIPS BROOKS. He spoke of the professions of theology and medicine as intrinsically and essentially associated. The society is like a great being which has lived through a century. How much suffering it has relieved in that time, and how it is to be congratulated for its labors and success! It receives the congratulations and the God-speed of the whole community as it starts off on the second century of its life. It is to be thanked not only for the care of the sick and the relief of suffering, but that it has laid its hands upon all classes, and has preserved the conditions upon which they do their work. So this great doctor who has lived comes and asks for support in the future as in the past. It is a great privilege that the doctor can study into the perpetual mystery of the human body. In the specialization of all human activity the medicine and ministry are temporarily separated, but the separation is only temporary, as is every separation of those who work in different fields of human life. In the battle with human sin, error, and suffering the combatants are temporarily separated, but as certainly as that sin and suffering are connected these combatants will be united again in the final attack of the good upon the evil. It is one of the advantages of occasions like this celebration that as the combatants march forward they may signal one another in a friendly way. [Applause.]

"Our distinguished guests from far and near," introduced DR. GROSS, who responded: —

MR. PRESIDENT — My task is a simple one, and as pleasant as it is simple, namely, to tender thanks in behalf of the guests of the Massachusetts Medical Society. I came here upon the kind invitation of your society extended through your distinguished chairman.

I did not intend to make a speech, but I found yesterday that your chairman was spotting me for some purpose, and I felt like a countryman who has fallen into the hands of a confidence man. At last he asked me to sit down with him for a moment, as he wished a word with me. I tried to back out, but to no purpose.

I stand in your presence to-day, among men who are old on the one hand and those who are young on the other. None of you are in your dotage, but some have jumped across the boundary line into a healthful infancy, and with the blessing of God may all your lives extend into good old age, and may you all meet at the end of the century.

I have heard a good deal about the Massachusetts Medical Society, but it never fell to my lot to meet it upon so interesting an occasion as this is. I come here to lay my respects at the feet of the association. I congratulate you upon the work which you have done and are to do hereafter. Young men of the Massachusetts Medical Society, do not forget the debt you owe to your predecessors, and do not forget that without their light, which has been showered upon you, you could but dimly discern your path, as if lighted with an oil lamp rather than by the electric light of the present day. It is too much the practice of young men to forget the work of their predecessors, and thus the light of science and duty. Yesterday, during the ceremonies at Cambridge, I could not help recalling what Harvard University has done in the education of the men of Massachusetts and of the whole American continent, and much of the interest which attaches to the Massachusetts Medical Society is due to the fact that many of its members are graduates of Harvard University. I cannot but remark the contributions of this association toward the support of Harvard University. It is a great school, and one which is still an example of progress,—an example which has not been adopted as yet, but it is sure to come about in the providence of God. Here in Massachusetts you have been blessed with the services of many distinguished men, but none of them more brilliant in any profession than the names of Ware, Hayward, Jackson, Bigelow, and Warren. I knew the elder Bigelow, an honored name, and if Massachusetts had never done anything more save to furnish to us that genius and his work on the *Limits of Nature in Disease* her name would be immortal.

As I look around me I fail to distinguish the form of Dr. J. B. S. Jackson. Death called him hence suddenly and unexpectedly. One of the last evenings of his life was spent in my parlor. I had a warm attachment for that man. With him I was greatly interested in the study of pathological anatomy. In my early life I came to Boston in 1839, with my manuscript of *Pathological Anatomy* under my arm, looking for a publisher, whom I had sought in vain in Philadelphia and New York; and Jackson was the first to speak a kind word for me, and then a sympathy grew up between us that ripened with age into a most intimate friendship.

Dr. White then said:—

While our profession is so earnestly engaged with the ills of mankind, and while we cannot pay much attention to the work of the past, we are fortunate in having them preserved for us.

I introduce Dr. George E. Ellis.

REV. DR. GEORGE E. ELLIS then spoke as follows:—

The Massachusetts Historical Society may well claim an interest in this centennial occasion. Its diligent and accomplished librarian, in his address to you, yesterday, gave you some idea of the contents of the ancient manuscripts and other sources from which he gathered his curious information. Having had the privilege of reading the whole of that address, of which only a fragment was spoken to you, I know what satisfaction you will find in its deliberate perusal. You will observe with professional approval one very striking fact, to which your attention is there drawn, namely, the purpose and effort from the very beginning of the legislature of Massachusetts to secure honor and dignity to the true medical profession by severe dealing with manifest quackery. The baffled attempt to obtain through our legislature, two years ago, the protection of our community from charlatans and incompetent practitioners was but the last of a long series of efforts in that direction, of which the first is found on our records in the very first year of this colony. And this is more noteworthy, as what is now represented as true medical science was then but in its infancy,—here and all over Christendom hardly distinguishable from empiricism. The acute old Puritan discernment could even then draw the line between the effrontery of a bold charlatan and the tentative purpose of a right-minded tyro in a critical calling. The historical society will show you, among its ancient portraits, one of the famous Dr. John Clark, perhaps the first here with a doctor's diploma from England, 1637-1664. He is said to have taken the lead in trepanning the skull. His portrait, venerable and sage, shows him with a skull on a table, boring into it with something that looks like a corkscrew.

It must have been to the equal satisfaction of members of both the professions when the clergy yielded up their ancient oversight of bodily maladies to the new generation of doctors of medicine. On many of the minister's diaries, and on some of the church records of our early years, are often found recipes for making ink, and for dealing with "the flux," sore throat, and other diseases. There is evidence that the old clerical treatment was Herculean,—as drastic as was their Calvinistic discipline for the soul. The stomach was the main place of assault. Heart and lungs were not of much consideration then, and the nerves do not appear to have been discovered as being such mischief workers as they are held to be now. We must remember, however, that it was a doctor of medicine, not of divinity, who, by pronouncing the first "afflicted" person in Salem, in 1692, to be "evidently under the evil hand of the devil," opened the direful tragedies of the witchcraft delusion. Experience has shown that it is better that the two professions should stand apart. I recall the case of a minister, ill-furnished and unsuccessful in that profession, who ventured, as he phrased it, to "take up doctoring." He was soon in the hands of the law, for malpractice. His explanation was that "in preaching most of what went into one ear went out of the other, while it was more risky to deal with the apothecary's stuff."

The wisdom of severing the professions is found in the fact that the worst and meanest of all the quacks among us are those who trifle with both professions and belong to neither. Ministers and physicians have at least one common object in dealing with the sub-

jects of their care. It is an advantage for a person under treatment, morally or physically, to know as clearly as possible what is the matter with him, — or, in our plain vernacular, "what ails him." It would be difficult to say which of the professions has the advantage in the diagnosis of disease, but their knowledge in each case exceeds their curative skill and power.

On the church records of the revered old Indian apostle and pastor at Roxbury, John Eliot, I find this entry, under date of 1632: "Mary Chase, the wife of William Chase, had a paralytic humor wh. fell into her backbone, so that she could not stir her body but as she was lifted, and filled her with great torture, & caused her back to goe out of joynt, & bunch out from ye beginning to the end; of wh. infirmity she lay 4 years & a half, & a great part of the time a sad spectacle of misery. But it pleased God to raise her again, & she bore children after it."

I have submitted this case professionally to Dr. Holmes. As your proclivities will lead you to prefer the doctor's account of it to the apostle's, I will read it to you as the close of my speech: —

296 BEACON STREET, June 3, 1881.

MY DEAR DR. ELLIS, — A consultation without seeing the patient is like a murder trial without the *corpus delicti* being in evidence. You remember the story of Mr. Jeremiah Mason and the witness who had had a vision in which the angel Gabriel informed him of some important facts: "Subpœna the angel Gabriel." So I should say, Carry us to the bedside of Mary Chase; but she has been under green bedclothes so long that I am afraid she would be hard to wake up.

We must guess as well as we can under the circumstances. The question is whether she had angular curvature, lateral curvature, or no curvature at all. If the first, angular curvature, you must consult such authorities as Bryant, Dewitt, and the rest. If you are not satisfied with these modern writers, all I have to say is, as I have said before, when asked whom to consult in such cases, Go to Pott, to Percival Pott, the famous surgeon of the last century, from whom this affection has received the name by which it is still well known of "Pott's disease;" for if a doctor has the luck to find out a new malady it is tied to his name like a tin kettle to a dog's tail, and he goes clattering down the highway of fame to posterity with his æolian attachment following at his heels.

As for lateral curvature, if that had existed, it seems as if the apostle Eliot would have said she bulged sideways, or something like that, instead of saying the backbone bunched out from beginning to end. Besides, I doubt if lateral curvature is apt to cause paralysis. Crooked backs are everywhere, as tailors and dressmakers know, and nobody expects to be palsied because one shoulder is higher than the other, — as Alexander the Great's was, and Alexander Pope's also.

I doubt whether Mary Chase had any real curvature at all. Her case looks to me like one of those *minoses*, as Marshall Hall called certain forms of hysteria which imitate different diseases, among the rest paralysis. The body of an hysterical patient will take on the look of all sorts of more serious affections. As for mental and moral manifestations, an hysterical girl will lie so that Sapphira would blush for her, and she could give lessons to a professional pickpocket in the art of stealing. Hysteria might well be described as possession, — possession by seven devils, except that this number is

quite insufficient to account for all the pranks played by the subjects of this extraordinary malady.

I do not want to say anything against Mary Chase, but I suspect that, getting nervous and tired and hysterical, she got into bed, which she found rather agreeable after too much housework, and perhaps too much going to meeting, liked it better and better, curled herself up into a bunch, which made her look as if her back was really distorted, found she was cosseted and posseted and prayed over and made much of, and so lay quiet until a false paralysis caught hold of her legs and held her there. If some one had "hollered" Fire! it is not unlikely that she would have jumped out of bed, as many other such paralytics have done under such circumstances. She could have moved, probably enough, if any one could have made her believe that she had the power of doing it. *Possumus quia posse videmur*. She had played *possum* so long that at last it became *non possum*. Yours very truly,

O. W. HOLMES, M. D.

PROF. ALEXANDER AGASSIZ was the last speaker. He said that the naturalists usually regarded themselves as offshoots of the medical profession. But biologists have not been seen to pay their debts to that profession. Physicians are looked upon by biologists as specialists who practice on the human race. Progress will be achieved as the whole animal kingdom is studied, not man alone. To the metaphysical doctor, not the doctor of metaphysics, must society look for progress in the future.

DR. WILLIAMS then rose, and said: —

We are not without links which connect us with the olden time. Another Warren is in the field, adding lustre to the name he bears. And a stately representative of the Fathers, who was among those present at a dinner given by this society to its first president on his hundredth birthday, but for the unfavorable weather would have graced our table with his presence. I ask the society to join me in offering our respects to him who has been during two whole generations of doctors *facile princeps*; an exemplar of honor, skill, and generous courtesy; a true Fellow of the Massachusetts Medical Society, — Edward Reynolds.

In closing DR. WHITE simply said: —

Thus ends our centennial anniversary, and may our children find our Society as prosperous a hundred years hence.

TRIPOLITH.

At a Berlin medical society meeting Professor von Langenbeck exhibited as a new material for forming plaster splints tripolith, which was originally used for stucco and decorative purposes, and has the advantage of lightness, and that when once dry it does not again easily absorb water. Tripolith, according to Dr. Wiehel, is an artificial mixture of gypsum, magnesium sulphate, and powdered cork. It hardens quicker than gypsum, and in the fresh condition is eight, while in the completely dried about twelve, per cent. lighter. — *Chemiker Zeitung*.

UNGUENT DIACHYLON.

Dr. A. Bauer states that Dr. Hebra had substituted vaseline for linseed oil in the composition of his celebrated ointment. — *Pharm. Zeitung*.

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THE MASSACHUSETTS MEDICAL SOCIETY'S HISTORICAL EXHIBITION.

IN the JOURNAL of last week the intention was expressed of returning to the consideration of the exhibition, which was one of the most marked features of the Massachusetts Centennial Celebration. The general tone of the centennial was, as was eminently fitting, strictly local. The exhibition was in tone and nature cosmopolitan, and when we speak of its universal character we are far from regretting the local flavor naturally attending the meeting; a peculiar zest was given to the enjoyment of the whole by the contrast between the cosmopolitan exhibit and the local celebration.

No part of the exhibit had more to do with this contrast than that of books and engravings. Beginning with the fifteenth century, many of the most important and most curious specimens of medical literature which the world has produced were collected and arranged in a manner calculated to furnish a graphic idea of the evolution of medical science. The marked feature of the exhibition, however, was the series of illustrated anatomies, many beautiful specimens of art from the domain of pathological anatomy and surgery being included. As a whole the exhibit gave an excellent idea of the rise and progress of anatomical illustration. Confining ourselves for a time to what we have called the principal line, we would draw attention at first to the anatomical works of the pre-Vesalian period.

The various editions of Mundinus, the graceful cuts of some of the earlier editions of Johann de Ketham, containing the earliest anatomical woodcuts, including Dr. Hunt's copy of the *editio princeps*, bearing date of 1494, the rude cuts of some of the German anatomists, may be all mustered, as far as anatomical work is concerned, under the leadership of Jacobus Berengarius Carpensis. Professor Holmes's copy of this work was one to satisfy the most exacting bibliophile.

It would be impossible to mention all the volumes that represented the next great stage of anatomical development. Beginning with Vesalius and Etienne — remarkable for his minimum of anatomy and maximum of non-essentials — and ending with Albinus, there was hardly an important anatomical work missing from the exhibit.

Vesalius would have rejoiced to have seen Grevin, Hammeo, Plater, Alberti, Bauhinn, and many others of the eighteenth-century anatomists shown in a position that rendered their indebtedness to himself

very evident, while Bedloo might have sympathized with him in seeing his gorgeous plates in the beautiful copy of Professor Holmes shown by the side of Couper's English edition of the same plates, published without acknowledgment of their source, — for book pirating is by no means an invention of the present day. Brown, on the other hand, would have fellowshiped with his countryman Couper, for his *Myographia* bore evidence of its lack of originality in the company in which it was shown; but to follow the anatomical plagiarisms would be altogether impossible in the space at our command.

A long series of works, among which we may mention an edition of Aselli with the rare colored woodcuts, the slightly known plates of Beretini, the *Osteographia* of Cheselden, an odd little specimen of the colored copper plates of Dagoty, the *Observationes Anatomicae* of Santorini, bring us to the epoch of Albinus, whose *Tabulae Scaletii et Musculorum* and the *Tabulae Ossium* in beautiful editions demonstrate his skill, taste, and learning. Haller and William Hunter were noticeable in the epoch that intervened between Albinus and Scarpa, Soemmering and Mascagni. Probably the brilliant-colored copy of the *Anatomia Universa* of Mascagni, loaned by Dr. J. C. Warren, was one of the most striking objects in the exhibition, but the beautiful engraving in Dr. Hunt's copy of Scarpa did not lose in effect, nor was the conscientiousness of Soemmering's production less perceptible in comparison with its gorgeous coloring.

Of the anatomists of our own century we can only say that, while many were shown, want of space prevented a full display of nineteenth-century work. The anatomical works were followed by a brilliant line of chromo-lithographic and other representations of pathological anatomy and surgery. Cruveilhier, Ricord, Mad. Boivin, Mad. Lachapelle, Bougery, Pirigoff, Hunter and Bell, Sibson and Cooper, formed a group not less interesting than the anatomists already mentioned. Then followed some very beautiful botanical plates; the grand works of Thornton, Hill, Blume, Miller, and many others giving rare representations of the application of pictorial art to scientific medicine.

We cannot even attempt to notice the hundreds of volumes of curiosia. There was the old *Ortus Sanitatis* and its long progeny of fifteenth and sixteenth century herbals, German and English; fifteenth-century tracts on Syphilis, the *Surgery of Taliacotins*, the works of Fallopius, Fabricius Hildanus, Fabricius ab Aquapendente, Pauc, Malpighius, Willis, Leuwenhoek, of Harvey the great and Gideon Harvey the little, of Bishop Berkeley, eloquent upon the virtue of Tar Water, and an original account of Perkins's Tractors. Not the least interesting in this department were the exceedingly rare and valuable original works on Cow-Pox, loaned by Dr. Henry A. Martin, whose name was also attached to many other rare pieces. Particularly noticeable, even among the many rare books, was Dr. Holmes's minute edition of Hippocrates, with notes by "Dr." Rabedais, published in 1545.

An especial object of interest in this celebration of

the nativity of the society, whose birth was so closely connected with the War of Independence, was the single volume of the unfinished *Anatomy of Vieq D'Azyr*, bearing the date of 1786. The pathetic story of his talented career, so early closed by too arduous devotion to the science of his choice, will always give additional interest to the magnificent folio which bears his name; but the present interest to which we especially refer lies in the dedication, of which we give a translation: "Louis XVI., to whom the thirteen States of the new world owe their liberty, the seas their independence, Europe peace, France its monuments of justice, benevolence, and humanity, science, letters, and arts a strong support, has deigned to accept the dedication of this work."

Of the engravings displayed it is only possible to say that they deserve quite as full a notice as the books.

The materia medica exhibit, divided into ten groups, arranged on each side of a passage on the right of the hall, attracted the attention of the visitor by its novel and picturesque appearance. The pressed medicinal plants from the Gray Herbarium at Cambridge papered the wall at one end of the hall, the botanical models from the College of Pharmacy covered a large table near the entrance, and hundreds of bottles from the cabinets of the College of Pharmacy and the Harvard Medical School were arranged along either side, interrupted only on the left by Mr. Sheppard's collection of Pharmacopœias and Dispensatories.

The principal groups were arranged in regular order, with numberless explanatory cards. They were, briefly, as follows:—

No. 1 contained upon its upper rows the vegetable and animal drugs which have been official during the entire century; that is, they were to be found in the Edinburgh Pharmacopœia of 1783, or the London Pharmacopœia of 1788, and in all the editions of that of the United States to the present time. The middle shelves of this group contained the chemicals, and the lower one the preparations which have stood the same test. These, the "Ancients and Honorables," were in full force, there being in the upper rows hardly a deficiency, excepting common articles not exhibited. Of the preparations, a complete catalogue was prepared for distribution, but only about fifty of the most interesting were shown. No. 2 contained those which have been discarded during the century. This group was naturally quite incomplete, still it contained a few things quaint and curious. No. 3, drugs and preparations introduced during the same time, was fully represented. No. 4, novelties not yet official. This interesting collection numbered from fifty to sixty specimens of crude drugs and a number of preparations; among the former, *coto quebracho*, *duboisia*, "*yerba santa*," and others attracted attention. Among these it was curious to see pepsin and "*cosmoline*," which have been used so long as to seem official. The elastic capsules, soft as India rubber, containing half an ounce each of cod-liver oil, were the most striking novelties of the season. These were in No. 5, devoted to modern specialties.

The case No. 6, containing proximate principles found in medicinal plants and animals, was unusually full and interesting, and included many of great rarity and value. The fixed oils, eighteen or twenty in number, included all of any interest to the physician. The volatile oils, fifty-four in number, represented almost every conceivable aromatic drug. Among those rarely seen were the oils (not oleoresins) of pepper, ginger, and cubeb, calamus, and East India sandal-wood. Menthol, vanillin, copaivic acid, as well as resorcin, were other interesting novelties. The centre of the case was filled with alkaloids and their salts. Of the alkaloids themselves and definite neutral or acid constituents there were one hundred and thirty-two. Among the rarer substances here were to be found crystallized aconitine, pseud- and jup-aconitine, pelletierine, cotoin, para- and hydro-cotoin, duboisine, curarine, crystallized tannic acid, pepsin (pure), and many non-commercial alkaloids of opium. Besides these there were salts of the commoner alkaloids in great variety, and a beautiful set of seventy alkaloids, acids, and salts from the cinchona. No. 7, miscellanies and curiosities, contained several obsolete medicinal fungi and numerous worthless things which have had a temporary place in therapeutics. No. 8, the Pharmacopœias and Dispensatories above mentioned, of all ages and languages, numbered over two hundred.

An annex to the Herbarium already mentioned was formed by living specimens of gualicum, hamatoxylon, cinchona, and other interesting plants of medicinal virtues upon the stage at the other end of the room.

The botanical models which attracted much attention were Anjou's complete set of thirty-seven flowers, fruits, etc., made upon a greatly enlarged scale (the peapod is about two feet long), and capable of being taken to pieces so as to display the internal structure. Of the specimens shown it is interesting to know that many were donations from leading manufacturers and dealers, or from druggists in the city, and that after the exhibition they were divided between the College of Pharmacy and the medical department of Harvard University, whose cabinets are thereby materially enriched.

We have already dwelt so long on the other portions that we have but space for a very brief mention of the surgical exhibit, which showed equal care in its preparation with the others already mentioned.

The observer was carried directly back over the hundred years by the two surgical cases of Jeffries and Warren, which were used on the opposing sides during the Revolution, but lay peacefully side by side in the hall. One of the most striking commentaries on the change in medical practice was the set of perhaps thirty lancets, the *vade mecum* of an old practitioner in the palmy days of phlebotomy. Waterhouse's lancets lay by the side of his silver snuff-box, in which vaccine lymph is reported to have been sent him by Jenner.

The gynecological instruments showed the development of the speculum and pessary into their present forms. One very old pessary, used by a practitioner

of Boston, too long "under green bedclothes" to take any lively interest in the matter, bore a striking resemblance to a pessary now largely sold under the name of a modern gynecologist.

A collection of old obstetrical instruments presented a marked contrast to the neighboring armamentarium of an obstetrician of to-day, and a stethoscope given by Laennec to Dr. Bowditch looked strangely rude by the side of the polished instruments of recent date.

Space fails for even the mention of the great variety of improved modern instruments loaned by the hospitals and instrument makers and surgeons of the city.

The gentlemen who were active in the establishment of this exhibition deserve well of their brethren. They helped show the connection of our profession on the one hand with literature and art, on the other with the natural sciences, while the surgical exhibit particularly showed the advances during the hundred years of the society's existence. We have purposely abstained from mentioning names; to catalogue those whose labor or contributions deserved notice would have been impossible, and to distinguish would have been invidious.

In conclusion we wish to say, if the exhibit had a fault it was one common to museums everywhere; the exhibit of so many treasures made it almost impossible to get the good that ought to be obtained from such collections. We hope to see such an exhibit repeated hereafter in a somewhat different or rather more limited form. Could the books be exhibited in some succeeding year, and sufficient time be taken for their arrangement, and a small catalogue issued which should contain such comments as would give a key for the benefit of undeveloped bibliophiles, it would afford a better opportunity for their due appreciation.

Such an exhibit might be followed in succeeding years by a similarly limited display of engravings, of surgical instruments, of drugs and pharmaceutical preparations, of splints and mechanical apparatus, and of hygienic appliances. In this way an entirely different and equally instructive display might be provided for a series of years.

Such exhibits would not be idle collections of curiosities, but would give instructive lessons in medical history, without some knowledge of which no one can properly appreciate the present condition of the profession. A knowledge of the past is the best guide for the future in medicine as well as in politics, and if this somewhat lengthy description shall have any influence in furthering such annual displays our columns will have been well employed.

THE BOYLSTON PRIZE AND THE MASSACHUSETTS MEDICAL SOCIETY PRIZE.

The Boylston medical committee announces, through its secretary, Dr. R. M. Hodges, among the advertisements on page 23 of this journal, the award of the Boylston Medical Prize for 1881. The successful contestant is Herbert W. Page, F. R. C. S., assistant surgeon of St. Mary's Hospital, London, for a disser-

tation on Injuries to the Back, without Apparent Mechanical Lesion, in their Surgical and Medico-Legal Aspects. No prize was awarded for any dissertation on the first subject proposed for 1881, The Effects of Drugs, during Lactation, on either Nurse or Nursing.

Both last year and this year the Boylston prize has gone to London, and has been carried off on both occasions by especially able and thorough essays. We must endeavor to console ourselves by the victories of Iroquois in England and of Foxhall in France, and at the same time borrow the closing lines of Punch's greeting to America upon the late success at the Derby:—

"Your health, Brother J.! Come and beat us again!
And cold grudge at a victory honestly scored
Melts away like the snow when the wine is outpoured."

The following are the questions proposed for 1882:—

I. Sewer Gas, so called (the Gas found in Sewers): What are its Physiological and Pathological Effects on Animals and Plants? An Experimental Inquiry.

The author of a dissertation on the above subject, considered worthy of a prize, will be entitled to a premium of three hundred dollars.

II. The Therapeutic Value of Food administered against or beyond the Patient's Appetite and Inclination.

The author of a dissertation on the above subject, considered worthy of a prize, will be entitled to a premium of two hundred dollars.

The following are the questions proposed for 1883:—

I. Measles, German Measles, and their Counterfeits.

II. The Differential Diagnosis of Abdominal Tumors, especially those connected with the Genito-Urinary Organs.

The author of a dissertation, considered worthy of a prize, on either of the subjects proposed for 1883 will be entitled to a premium of two hundred dollars.

It is proper to call attention to the fact that whereas for many years, and until within a few years, the capture of a Boylston Prize was considered a necessary step in the career of every ambitious Boston physician, the home competitors of late have been fewer and fewer, and we suspect we are correct in saying that this year not a single dissertation was sent in from Boston.

The same apathy is emphasized by the report of the committee for the award of the Massachusetts Medical Society Prize, which is derived from funds left to the society by the late Dr. Shattuck, and is open to members of the State Society only.

For this prize not a single dissertation was sent in this year, and of the few received last year none was found worthy of an award.

It is evident that the younger generation of medical men in this community either has no stomach for this kind of competition, or has found that it can put its talents where they will be more productive. We suspect that the rapid changes in modern medical science

and the extent of modern medical periodical literature have each a part in the production of this apparent listlessness, which we none the less regret to record.

MEDICAL NOTES.

—The annual meeting of the National Board of Health was held in Washington, D. C., June 1st and 2d. The board reelected its former officers.

—We learn from the *Wiener Medizinische Wochenschrift*, No. 22, that Professor Billroth's patient, on whom he performed excision of the pylorus for cancer on January 29th, has just died in Vienna. The case, surgically speaking, has become historical, for the operation was quite a new departure, and one which, but a short time ago, would have been considered impracticable. The case is rendered more interesting by the fact that an autopsy was obtained, and that thus the conditions of parts post mortem has been accurately studied. Dr. Zemann—in the absence of Heschl, the director of the Pathological Institute, whose death from the effects of a post-mortem wound has since occurred—conducted the examination. He found that death had resulted from metastatic deposits of cancer throughout the entire peritoneum, the duodenum and jejunum being likewise coated with a similar deposit, so that it was impossible to separate them one from another. As regards the stomach, it is stated that it retained its natural form, and that no one unacquainted with the operation to which it had been subjected would have observed anything remarkable about it, or guessed that fourteen centimetres had been removed from it. The duodenum had been attached to its lesser curvature, so that a little pouching was observable along the greater curvature. The woman had not suffered from any digestive troubles, but had taken and retained her food very well. At the point of junction there was no stenosis, the thumb being easily passed through the orifice. The union was perfect in all respects, so that hardly any scar could be perceived along the line of the suture.—*Medical Times and Gazette*.

NEW YORK.

—The last meeting of the Academy of Medicine for the present season was held on June 16th, when Dr. A. B. Judson read a paper on the use of crutches in the treatment of joint diseases of the lower extremity. On the same evening Dr. Hammond gave a reception at his residence in honor of the American Neurological Association, which was then in session in the city.

—Two cases of death from hydrophobia have recently been reported, one of them occurring in West Forty-Third Street, and one in Bellevue Hospital. The patients were lads of eleven and thirteen, respectively, and in each instance were bitten about the face by dogs some two months before the development of hydrophobic symptoms.

—The twenty-second annual commencement of the Long Island College Hospital was held at the Brook-

lyn Academy of Music on the 14th of June, when Charles J. Thomas, of Ohio, was the valedictorian, and the Rev. Henry Ward Beecher delivered the address to the graduating class, which numbered fifty-one members. The one-hundred-dollar prize was awarded to the essay of Dr. Albert J. Leffingwell.

—Dr. Rose, veterinary surgeon for Richmond County, Staten Island, claims to have discovered in the lungs of a cow which died of pleuro-pneumonia the ovum of an insect which he believes to be the destructive agent in that disease among cattle. The matter is to be brought before the New York College of Veterinary Surgeons for thorough investigation.

—The health officer of the port, Dr. Wm. H. Smith, has recently caused to be issued two official communications—one to the owners and agents of steamship passenger lines, and one to the health authorities of the interior of New York and of the Western States—in reference to the danger of the spread of infection by the vast numbers of emigrants now arriving in this country. In the first he showed that small-pox had been unprecedentedly frequent on board the passenger steamers arriving during the past few months, and pointed out that the incubation period of the disease—fourteen days—was so much longer than the average passage of steamships from many of the European ports to New York that there was great danger of the disease developing far in the interior of the country. As it was apparent, he continued, that no amount of vigilance at the port of New York could prevent this result, since the infected emigrant might pass quarantine perfectly well, it was of importance that every available means should be employed in these foreign ports to prevent the infection of emigrants and arrest the propagation of the disease. A careful inspection by competent medical officers of every emigrant and the vaccination of all unprotected persons would do much to accomplish this object; and in the absence of either power or inclination on the part of the constituted authorities to do this, it was exceedingly desirable that the owners and agents of steamship lines should take it into their own hands to inspect, direct, and control the movements of emigrant passengers from the time of their arrival at the port until their departure. He then went on to say that the condition and management of too many of the passenger steamers, as regards the proper care of infectious and contagious diseases, were objectionable and reprehensible. Hospital accommodations, if such they might be called, were in some instances provided in the midst of the crowded steerage, where neither sufficient light nor air nor proper isolation could be secured. When vessels arrived in port with small-pox on board it was necessary to remove the whole number of well steerage passengers to an isolated island for observation during the usual incubation period of the disease; and notwithstanding the serious inconvenience to all and the great expense to the owners, it could not be doubted that this alternative was far better than the admission of a cargo of infected emigrants to the dense population of our cities and the crowded thoroughfares of the interior. Better than

either, Dr. Smith pointed out, would be such watchfulness and vigilance on the part of medical officers as would secure early and complete isolation of the sick in hospital rooms that would afford sufficient ventilation and comfort to the sick, and opportunity for the complete seclusion of real or suspected cases of contagious disease. Such violations of hygiene and common sense as had too commonly been the rule on these vessels, he, announced in conclusion, would in the future be likely to subject to a quarantine of observation all passengers who might be so unfortunate as to have taken passage on steamships having small-pox on board, with such hospital accommodations as had been described.

In the second communication referred to, Dr. Smith states that experience and earnest consideration of the subject during the past year have confirmed the opinion that a careful inspection of all emigrants at certain points west of the maritime quarantines is essential for the protection of the country from the introduction of this form of contagious disease. In the absence of such action on the part of the municipal or state authorities, the National Board of Health, it was believed, had authority, under its reserved powers for the regulation of interstate quarantines, to secure the desired inspection of emigrants at such distributing centres as might be necessary for the protection of adjacent States. At intermediate localities the authorities, it was hoped, would establish a careful inspection, and, for a short period, maintain a close supervision of all emigrants who arrived to remain for any considerable time. If this management was practiced by the health authorities along the great thoroughfares westward of the Atlantic seaboard it was confidently believed that the introduction of contagious disease through infected emigrants would be effectually prevented.

CHICAGO.

— The faculty of Rush College at a recent meeting elected Dr. J. Suydam Knox to the position of adjunct professor of diseases of children. This is a new position in the college.

— In addition to the laws regulating the practice of dentistry and pharmacy passed by the last legislature, an act was passed that may become very vital to the health of Chicago. It is a law requiring an inspection and approval by the commissioner of health of the plans and specifications of every house proposed to be built, in respect to the ventilation, sewerage, and plumbing. If he fails to approve any plans submitted to him, and on the ground of lack of sanitary care and precautions, it will amount to a prohibition of the progress of the building. Plumbers are required also, after they have completed their work for any house, to notify the health department that such work is ready for inspection, and they are prohibited from covering it up till it is inspected and approved. So, if the law is executed fearlessly by the health department, as there can be no doubt it will be, the commissioner has it in his power to establish to a certainty the sanitary conditions, in the particulars mentioned, of every house hereafter built in the city.

Doubtless there will be some difficulty in carrying out the provisions of the law until more funds are appropriated by the common council for the pay of the additional inspectors that will be required. But there is little question the council will grant the means necessary, as the municipality cannot afford to forego the advantages and benefits likely to accrue from such a law.

— Anent the health department it is worthy of record that Mayor Harrison has commenced his second term, to which he was elected a few weeks ago, by reappointing Dr. DeWolfe as health commissioner. The city administration is democratic; the commissioner is a republican, and was appointed nearly four years ago by a republican administration. He has held the office continuously since, and is now reappointed on the basis of a fair and clean record of the efficient administration of his office.

— Dr. Daniel T. Nelson, for many years professor of physiology in the Chicago Medical College, has been appointed adjunct professor of gynecology in Rush College.

Miscellany.

THE TITLE OF ESQUIRE.

MR. EDITOR, — Dr. Green, in his interesting Centennial Address before the Massachusetts Medical Society, says, "The records follow the precedent of the act in withholding the medical title from Dr. Holyoke's name. Perhaps it was because Dr. Holyoke held a commission as justice of the peace, and the title of esquire at that time carried a great deal of dignity with it." Dr. Holyoke's medical title does not appear in the *act* because all the medical petitioners failed to add their titles to their signatures, and there was nothing to distinguish them from laymen. This loose fashion was almost as common then as now (even in medical communications), and often leads to confusion. The medical degree should *always* be appended to the signature, except in private communications. Under the common law every physician is (in common with barristers and sergeants at law) entitled to the title of *Esquire*, and the *proper* mode of address to a physician (say Dr. Holyoke) would be Edward Augustus Holyoke, *Esquire*, M. D. Surgeons (even without a degree) are also (in common with attorneys or counselors at law, justices of the peace, army and naval officers, and all persons holding a *government* commission) entitled to be addressed as *Esquire*. Blackstone says (vol. i. p. 404), "Before esquires the heralds rank colonels, sergeants at law, and doctors in the learned professions." In the time of Elizabeth "doctors in physic and sergeants at law had precedence of both knights and baronets." Vide *Nobilitas*, p. 116. At present doctors of the *universities* rank "with knights and above queen's counsel, deans, masters in chancery, chancellors, admirals, generals, barristers, and esquires." Vide *Precedence*, N. and Q., 4 S., xii. p. 282. General Grant's degree as LL. D. places him in the order of precedence on a par with a knight, and above deans, queen's counsel, generals, and others before mentioned. "The wives of doctors rank among women as their husbands among men, and the daughters of doctors rank with the daughters of knights." ORDER.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 11, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhoeal Diseases.	Scarlet Fever.
New York.....	1,206,590	633	252	33.18	9.00	7.90	8.53	5.06
Philadelphia.....	846,984	310	105	22.90	2.26	2.58	2.26	4.52
Brooklyn.....	566,689	188	81	29.26	9.04	13.83	4.26	6.91
Chicago.....	503,304	197	99	31.47	9.14	11.17	5.58	2.54
Boston.....	362,535	139	59	17.27	3.60	10.07	2.88	.72
St. Louis.....	350,522	158	66	17.09	7.60	—	5.70	.63
Baltimore.....	332,190	121	56	31.40	4.13	11.57	6.61	2.66
Cincinnati.....	255,708	92	32	20.65	6.52	1.09	9.78	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	74	20	13.51	6.76	1.35	4.05	—
Pittsburgh.....	156,381	70	28	44.29	11.43	4.29	5.71	14.29
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	53	35	32.08	13.21	3.77	1.89	3.77
Providence.....	104,555	32	7	25.00	6.25	3.13	—	—
New Haven.....	62,882	24	9	25.00	12.50	4.17	—	—
Charleston.....	49,999	51	23	34.90	3.88	—	19.61	1.96
Nashville.....	43,461	—	—	—	—	—	—	—
Lowell.....	59,485	21	5	4.76	9.52	—	—	4.76
Worcester.....	58,295	12	6	8.33	—	—	8.33	—
Cambridge.....	52,740	12	5	33.33	8.33	25.00	—	—
Fall River.....	49,006	16	8	18.75	18.75	6.25	—	6.25
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	17	4	23.51	—	17.65	—	—
Springfield.....	33,340	10	1	10.00	—	—	—	—
Salem.....	27,598	9	3	—	11.11	—	—	—
New Bedford.....	26,875	12	3	8.33	8.33	—	—	8.33
Somerville.....	24,985	6	3	16.67	—	16.67	—	—
Holyoke.....	21,851	7	3	28.57	14.29	14.29	—	—
Chelsea.....	21,785	10	3	40.00	20.00	40.00	—	—
Taunton.....	21,213	8	1	—	12.50	—	—	—
Gloucester.....	19,329	2	1	50.00	—	50.00	—	—
Haverhill.....	18,475	5	0	20.00	40.00	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	7	1	—	14.29	—	—	—
Fitchburg.....	12,405	2	0	—	—	—	—	—
Twenty-two Massachusetts towns..	163,352	54	19	27.78	7.41	11.11	1.85	3.71

Deaths reported 2362 (no reports from New Orleans or Buffalo); 938 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 635, consumption 371, lung diseases 173, diphtheria 163, diarrhoeal diseases 129, scarlet fever 87, cerebro-spinal meningitis 61, small-pox 52, measles 36, typhoid fever 35, malarial fever 24, whooping-cough 17, erysipelas 13, puerperal fever 12, typhus fever six, malignant pustule one. In addition, Nashville two deaths from diarrhoeal diseases, two from consumption, one each from typhoid fever, puerperal fever, and lung diseases: total deaths and deaths under five years not given. From *cerebro-spinal meningitis*, New York 13, Chicago 11, Pittsburgh nine, St. Louis seven, Milwaukee six, Baltimore and New Haven three, Philadelphia and Cincinnati two, Charleston, Cambridge, Holyoke, Haverhill, and Webster one. From *small-pox*, Philadelphia 29, New York 15, Chicago four, Brooklyn two, Baltimore and Pittsburgh one. From *measles*, New York 24, Providence three, Brooklyn, Baltimore, and Cincinnati two, Philadelphia, Milwaukee, and Woburn one. From *typhoid fever*, Philadelphia six, New York, Chicago, Cincinnati, and Charleston four, Providence three, St. Louis, Baltimore, and Pittsburgh two, Brooklyn, Boston, District of Columbia, and Milwaukee one. From *malarial fevers*, New York eight, St. Louis four, District of Columbia three, Milwaukee and Charleston two, Philadelphia, Brooklyn, Chicago, Baltimore, and New Haven one. From *whooping-cough*, Chicago four, New York, Brooklyn, and Baltimore two, Philadelphia, St. Louis, Cincinnati, District of Columbia, Pittsburgh, Providence, and Milford one. From *erysipelas*, Baltimore two, New York, Philadelphia, Brooklyn, St. Louis, Pittsburgh, Milwaukee, New Haven, Fall River, Lynn, Northampton, and Webster one. From *puerperal fever*, Boston four, New York and St. Louis two, Cincinnati, District of Columbia, Milwaukee, and Quincy one. From *typhus fever*, New York five, Philadelphia one. From *malignant pustule*, Springfield one.

Twenty cases of small-pox were reported in Brooklyn, 18 in

Chicago, two in Boston, one in Baltimore, 12 in Pittsburgh, one in New Haven; diphtheria 19, scarlet fever 11, in Boston; diphtheria nine, scarlet fever nine, in Milwaukee.

In 39 cities and towns of Massachusetts, with a population of 1,025,090 (population of the State 1,783,086), the total death rate for the week was 17.75, against 17.62 and 17.13 for the previous two weeks.

For the week ending May 21st in 149 German cities and towns, with an estimated population of 7,837,787, the death-rate was 26.3. Deaths reported 3968; under five 1806: pulmonary consumption 587, acute diseases of the respiratory organs 399, diarrhoeal diseases 178, diphtheria and croup 115, scarlet fever 73, whooping-cough 52, typhoid fever 43, measles and *rötheln* 28, puerperal fever 23, typhus fever (Königsberg seven, Danzig, Elling, Thorn, Tilsit, Erfurt two, Berlin two) 15, small-pox (Königsberg, Berlin two, Aachen three) six. The death-rates ranged from 15.7 in Metz to 41.7 in Ansburg; Königsberg 34.3; Breslau 35.7; Munich 39.1; Dresden 26.2; Leipzig 18.9; Hamburg 25.4; Hanover 18.6; Bremen 29.7; Cologne 26.2; Frankfurt 24.3; Strasburg 32.8.

For the week ending May 28th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20. Deaths reported 2912: acute diseases of the respiratory organs (London) 241, measles 125, small-pox (London 92) 94, whooping-cough 84, scarlet fever 68, fever 42, diarrhoea 27, diphtheria 12. The death-rates ranged from 13.9 in Plymouth to 24.2 in Liverpool; Birmingham 15.7; Bristol 17.1; London 19.8; Leeds 20.7; Manchester 22.3; Sheffield 22.5. In Edinburgh 19.4; Glasgow 19.1; Dublin 24.9.

In the 21 chief towns in Switzerland, for the week ending May 28th, population 479,934, there were 32 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 11, measles nine, diphtheria and croup six, small-pox two, puerperal fever two, scarlet fever one. The death-rates were: Geneva 14.4; Zurich 29.1; Basle 25.1; Berne 23.4; St. Imier 21.7.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.		Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.		
June, 1881.																					
Sun., 5	29.741	60	77	46	66	40	82	63	Calm.	SW	NW	0	14	11	H	O	R	—	—		
Mon., 6	30.000	58	68	47	71	25	60	52	NW	W	Calm.	4	12	0	C	O	C	—	—		
Tues., 7	30.145	56	67	45	51	79	74	68	Calm.	E	S	0	4	8	C	O	O	—	—		
Wed., 8	29.849	57	61	51	98	84	85	89	E	NW	Calm.	12	4	0	R	C	C	—	—		
Thurs., 9	30.077	55	66	51	83	62	79	75	Calm.	NE	E	10	20	8	O	F	O	—	—		
Fri., 10	30.007	48	53	45	97	100	100	99	NE	NE	NE	22	26	23	R	R	R	—	—		
Sat., 11	30.027	53	59	46	100	89	89	93	NE	NE	Calm.	20	12	0	R	R	C	—	—		
Week.	29.978	55	77	45				77										55.30	5.12		

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

H. LENOX HODGE, M. D.

ON June 10th, at his home in Philadelphia, Dr. H. Lenox Hodge died, in the forty-fifth year of his age, of heart disease, with embolic pneumonia and thrombosis of all the extremities. Dr. Hodge was the son of Prof. Hugh L. Hodge, and was graduated at the University of Pennsylvania in 1858. In 1861 he was appointed demonstrator of anatomy at his Alma Mater, which position he occupied at the time of his death. He also delivered independent courses of lectures to private students upon operative surgery. Having served as resident physician in the Pennsylvania Hospital, when the Presbyterian Hospital was opened in 1872 he became attending surgeon to that institution, and for several years he has been surgeon to the Children's Hospital. He also served in the Satterlee Hospital in West Philadelphia during the war, belonging to the Pennsylvania Reserve Corps of Surgeons. He accompanied the Army of the Potomac at the time of the advance upon Richmond, and was also present at the battle of Gettysburg.

Dr. Hodge was a member of the American Medical Association, Philadelphia County Medical, Obstetrical, and Pathological Societies (of the latter he was ex-president), and a Fellow of the College of Physicians. He was not a voluminous writer, but his medical contributions were of a high order. In his professional career he was very successful, and enjoyed a large practice, moving in the best social circles. Personally he was universally liked by all who came in contact with him for his uniform courtesy of demeanor, his great kindness of heart, and his unassuming Christian character. A young son and a wide circle of friends sincerely mourn his loss. "He was a man, take him for all in all, we never shall see his like again." F. W.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 11, 1881, TO JUNE 17, 1881.

HARISLEE, A., major and surgeon. To proceed to the cantonment on the Uncompaggre, Colo., and report for duty to Colonel Mackenzie, 4th Cavalry, commanding. S. O., 113, Department of the Missouri, June 8, 1881.

HARVARD MEDICAL SCHOOL. — The Class Association of the Class of 1878 has obtained room 55, Fayer Hall, at the University, for the local part of the cross-commencement day, Wednesday, June 29, 1881. A punch will be served, *treats at the classes omitted*. The third annual dinner of the Class of 1878 will be given at the Hotel Vendome, on Wednesday evening, at half past six o'clock. This is the first time that the Medical School has been represented at Harvard University, the commencement exercises by any class association, and the Class of 1878 is the only class that has succeeded in sending its members together after their graduation.

VERMONT MEDICAL SOCIETY. — The semi-annual meeting of the society will be held in the city of Vergennes on Friday and Saturday, June 24th and 25th, commencing about noon on Friday. The morning of the evening and a part of the following day. The valedictory address will be delivered

on Friday evening. Many interesting papers on medical topics are expected. The resident members of the society propose some pleasant entertainment during the sessions. Important business is to come before the society. The railroads will extend the usual courtesy of fare one way to all who attend, and the hotels will furnish free carriages to and from the depot.

APPOINTMENTS. — The following appointments have been recently made: —

Visiting physician to City Hospital, Dr. Allan Sumner.
Physicians to out-patients, City Hospital, Dr. T. M. Rotch, Dr. Edward J. Forster.
Surgeon to out-patients, City Hospital, Dr. M. H. Richardson.
Surgeon to out-patients, Massachusetts General Hospital, Dr. Arthur T. Cabot.

CORRECTION. — In the report of the Massachusetts Medical Society in the last number, page 568, it should have been stated that the motion to adjourn to the day previous to the next annual meeting was carried.

ERRATA. — In the last number of the JOURNAL, page 567, first column, lines 45 and 46, for Heywood read Hayward; second column, line 24, for Cann read Conn.

BOOKS AND PAMPHLETS RECEIVED. — Mr. Spencer Wells's Note Book for Cases of Ovarian and other Abdominal Tumors. Sixth Edition. London: J. and A. Churchill. 1881.

Twenty-Third Annual Report of the Washingtonian Home, Waltham Street, Boston.

Report of the Health Officer of the District of Columbia for the Year ending June 30, 1880.

Locomotor Ataxia, Differentiated from Functional Conditions which Simulate It. By A. D. Rockwell, M. D. (Reprint.)

A Case of Primary Tuberculosis of the Larynx. By J. Solis Cohen, M. D. (Reprint.)

The Fifty-Seventh Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn., April, 1881.

The Relations of the Marine Hospital Service of the United States to Commerce, the Public, and the Medical Profession; being a Report of the Committee of the Medical Society of the State of California, showing the Character, Objects, and Inutility of such Service.

Ventnor, Isle of Wight, and its Peculiar Advantages for the Invalid. By W. Thornton Parker, M. D. (Reprint.)

On Anchylosis, and the Treatment for the Removal of Deformity and the Restoration of Mobility in various Joints. By Bernard E. Brodhurst, F. R. C. S. Fourth Edition. London: J. and A. Churchill. 1881.

Thirty-Eighth Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y., for the Year 1880.

Fourth Biennial Report of the Trustees, Superintendent, and Treasurer of the Illinois Southern Hospital for the Insane, at Anna, October 1, 1880.

Vox Humana, or the Art of Singing, from a Medical Point of View. By Herbert Junius Hardwicke, M. D. (Reprint.)

Extirpation of Rectum without Destroying the Sphincter-Ani Muscle. By William A. Byrd, M. D.

Original Articles.

MEDICAL SOCIETIES: THEIR ORGANIZATION AND THE NATURE OF THEIR WORK.¹

BY J. COLLINS WARREN, M. D.

IN Wisconsin the society was almost destroyed by being "a delegated body," through the neglect in organizing local societies, and of those organized to send delegates. The Wisconsin society now consists of permanent members entirely; for although delegates are admitted, these prefer to become permanent members. Such facts as these justify the action of those who refused to permit similar changes in the organization of our society.²

Under the present organization in Illinois, effected in 1878, there are still delegates, who represent local societies, medical colleges, hospitals, lunatic asylums, and other permanently organized institutions in the State.³ After serving one year in this capacity, they become permanent members. There is a judicial council of nine members, whose term of office is three years. Its duty is to decide all questions of an ethical and judicial character.

The manner of dealing with public hygiene and medical license is in striking contrast to that of those States previously mentioned, the work being done independently of the society, although the latter has exerted itself to bring about legislation upon these matters.

The Illinois Medical Society appointed a committee to memorialize the Legislature to establish a board of health in 1876. The committee met with great opposition. They were assisted by a committee of the American Medical Association through Dr. Johnson, their chairman, and also by the profession of Chicago. The board has been partially successful in collecting vital statistics. Dr. Ranch, the secretary, states in the report for 1880 that the board has no power to enforce this portion of the law, which devolves upon the county clerks, who frequently claim exemption from the discharge of that duty, proper compensation and assistance not being afforded by the county supervisors. In this report he urges that a committee be appointed on the law regulating the practice of medicine, and another on vital statistics, both of whom to coöperate with the state board in securing sufficient enforcement of the laws. At the last meeting of the society in 1880, it was proposed to memorialize the Legislature to secure the enactment of a law to create a school board of health for each county, consisting of the superintendent of schools, the surveyor, and one physician, the duties of the board being to inspect all sites and plans for schools and their sanitary condition.

The time of the Board of Health has been chiefly taken up in carrying on a work which in no other State has been assigned to such a body, namely, the execution of the law to regulate the practice of medicine.⁴ The act was passed in 1877. In organizing the board the governor appointed three "regular" physicians, one homœopath, one eclectic, and two

members at large. All physicians who had not been in practice ten years were required to show their diplomas to the board, that body reserving to itself the right to decide whether the school granting the diploma came up to a proper standard. If the candidate had no diploma he was required to pass an examination. These examinations have been largely "written," and a perusal of the papers show them to be of a high standard. The fines for violation of the act vary from fifty to five hundred dollars. Quite a variety of classes of individuals were found undertaking to practice. Among these it is important to note, in view of certain similar tendencies in this State, that there were a number of colleges whose curriculum was too short, and the work of teaching too carelessly done, and others who did no teaching at all, although chartered schools, their function being the sale of diplomas. There were many holding diplomas that did not belong to them. Forty-one practitioners were found under assumed names. The board went actively to work: held meetings in different parts of the State, and in the first year issued over five thousand certificates. It was thought that the difficulties in the way of determining the status of the thousands of practitioners scattered all over the State would be insurmountable, but the examining body being also the State Board of Health, the provisions of the law requiring the registration of practitioners as a part of the machinery necessary for securing the vital statistics of the State became an efficient means of overcoming this difficulty. Dr. Johnson is of the opinion that for this reason mainly the regulation of the practice of medicine can best be attended to by state boards of health. He believes that the law should compel every practitioner to pass an examination, as it has been found practically very difficult to discriminate between diplomas from the various colleges.⁵

There is published an annual "Illinois State Medical Register."

At the last meeting, Dr. N. S. Davis, the permanent secretary, who for thirty years had served the society in different capacities, sent in his resignation, which was received and accepted with much regret.

Glancing at other States, it may be noted that in Arkansas futile efforts have been made to secure an insane asylum, a board of health, the registration of vital statistics, and a law to regulate the practice of medicine. An excellent plan in Indiana is the appointment of a committee of three on State legislation in each county. The State society has issued to members of the Legislature copies of articles published in its Transactions, on State medicine. Louisiana has been active in urging upon the Legislature the needs of State medicine. It has been said that no State in the Union was better protected against impositions of all kinds. A law to regulate the practice of medicine was enacted in 1808, and amended in 1816, 1817, and 1840. The various provisions were repealed in 1852, without encountering the opposition of any: "for such was the

⁵ The number of unqualified practitioners has been diminished by 1750 since the law went into operation. It is estimated that about 550 of those now practicing and qualified were compelled through the law. The board has found that the clause which exempts physicians who had practiced in the State for ten years prior to July 1, 1877, "has rendered its duties more arduous and delicate than they would otherwise have been." Nearly one half of the spurious diplomas came from Philadelphia, and the greater part of the remainder from Cincinnati and St. Louis. The "schools" recognized by the board were the regular, eclectic, homœopathic, and physio-medical. (Second Annual Report of the State Board of Health of Illinois. Springfield. 1881.)

¹ Concluded from page 585.

² See page 554.

³ One delegate is elected for every five members of the local societies. Each faculty is entitled to two delegates, and each hospital to one delegate. The annual assessment is five dollars.

⁴ Dr. H. O. Johnson. Transactions of the American Medical Association, vol. xxx.

execution of these laws that the State was infested with quacks and patent medicines, and whilst the laws imposed taxes and other burdens on the good, their penalties against the bad could not be enforced."¹ In Mississippi laws to regulate the practice of medicine are deemed premature until better appreciated by the people. The New York license law requires every practitioner to register, showing a suitable diploma. The penalty is a fine, varying from fifty to two hundred dollars. This has the advantage of avoiding a mixed board, and does not oblige physicians to indorse any "sect."

Having thus passed in review a number of associations of medical men, which, although in some cases formed for widely different purposes from our own, present peculiarities of interest to our Fellows, let us pause to consider whether we can gather from the experience of others hints which will be of use to us in carrying on our future work.

With the organization of our society we have certainly reason to be content. One of its greatest merits is its simplicity; there is no complicated system of delegates, "permanent" or "associate" members. By it the whole regular profession of the State is united into one compact body, which, through its council meeting at stated intervals, is able to do a large amount of work with a minimum of friction. The tables of Toner and Chaill² show in no State such figures as are credited to Massachusetts, which stands alone in wealth and numbers. Nowhere have I been able to find machinery which could do the work for which our society is designed in so satisfactory a manner. Under these circumstances we ought to be able to accomplish a great deal of good for the community in which we live. Let us glance, therefore, at some of the questions of the day which interest us as medical men.

Most prominent among these is the great question of public health or preventive medicine, the history of which dates back nearly one half a century to what may be called the period of its birth in modern times. It was after the cholera epidemic of 1830 that attention was first drawn to this question in Europe, and it is since that time that it has risen to the rank of one of the departments of science. The great work which has been accomplished in England also during this period has been of almost incalculable benefit to the civilized world. It is only, however, during the last decade that this vital question has actively engaged the attention of medical men in the United States. The first State Board of Health in this country was formed in Massachusetts in 1869, and to-day we have, besides the National Board of Health, similar boards in twenty-three of the States,³ in addition to numerous local organizations throughout the cities and counties of the country. Our recent pestilences have greatly stimulated this movement, which even with its present crude machinery has, on more than one occasion, demonstrated that sanitary science has not only been able to save life, but, what perhaps appeals more forcibly still to the American legislator's mind, has been

productive of results involving substantial pecuniary benefits.

There still remains much to be done, and doubtless many disappointments to be endured, before we reach the desired stage of perfection in this to the nation most vital department of science. When the General Board of Health came into existence in England it was so far in advance of public opinion that it soon fell to the ground, and a similar fate befell the splendid sanitary organization which was built up out of its ruins.⁴ The record of many States is far from encouraging. In Indiana there is still no board of health, but there are laws to protect animals from Texas cattle disease, fish from poisoning, and hogs from hog cholera. In Maine, where the State society has striven hard but unsuccessfully to obtain a board, there has been an annual appropriation of four thousand dollars for bounty on wolves, to protect sheep. When this argument was brought forward as a reason for asking an appropriation for the protection of man, the bounty was withdrawn. Unfortunately Massachusetts is not in a position to smile at the lack of appreciation of these important questions by her sister States. It has been said that our own State Board, which in its original form served as a model for the whole Union, has been worse than abolished.⁵ Its efficiency has, in the opinion of medical men, been seriously impaired by the cumbrous machinery of which it now forms a part. The City Board of Health is in danger, and at a time, too, when we are threatened with a serious epidemic. It behooves our society, as an association of men who are better qualified to judge of the importance of these matters than any others in the State, to make its influence felt both by active interference through the agency of committees and by the dissemination of sound views on questions relating to the health of the community; and this, it seems to me, is one of the directions in which we are able to increase our sphere of usefulness. From time to time it has been customary to appoint committees for the purpose of memorializing the Legislature to protect the interests of the profession, or to offer testimony for or against certain questions brought before that body. This has been done, however, in a somewhat desultory manner, and it is more frequently the result of individual enterprise that the "hearings" at the State House receive the benefit of sound medical testimony. The British Medical Association intrusts this work to the Parliamentary Bills' Committee, and it would seem eminently desirable that it should be placed in the hands of a permanent committee, who with time and experience would become a trained body of men, qualified to represent the society on all such occasions, and to give a well-digested opinion on all medical subjects. As very crude notions are held by representatives of the people in this State, not only of the practice of medicine but of State medicine, these questions should on every occasion have the benefit of all the light which the best talent of a powerful society is able to shed upon them. It would hardly be advisable to imitate the Alabama plan, and endeavor to obtain complete control of a work portions of which are not within the physician's sphere.

One of the questions of the day which is beginning to attract the general attention of physicians, and on

¹ *Boston Medical and Surgical Journal*, November 18, 1880, page 429.

² *Transactions of the American Medical Association*, 1878, p. 145.

³ State Boards of Health are established in Alabama, California, Colorado, Connecticut, Delaware, Georgia, Illinois, Iowa, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Jersey, New York, North Carolina, Rhode Island, South Carolina, Tennessee, Virginia, Wisconsin.

⁴ *Boston Medical and Surgical Journal*, September, 1879.

⁵ In 1880 the Board of Health was united with the Boards of Lunacy and Charity.

which an opinion will probably before long be expected from the society, is the regulation of the practice of medicine by means of legislative enactments.

The exaction of a requisite amount of medical skill by law is, as we all know, a measure which is of more vital importance to the public than to the medical profession; for experience has shown that the money which goes into the pocket of the charlatan would rarely, in his absence, be diverted into respectable medical channels. The suffering caused by the ignorant practitioner is, on the other hand, borne by the laity who patronize him. We should therefore let the public clearly understand that it is they we are seeking to protect, and not ourselves, in case we advise legal remedies for the evil. That the evil exists, and that it exists in a very aggravated form in this State, is, I think, denied by no one.

It was for the purpose of checking these irregularities that our society was originally founded, that the public might be able to discriminate between the honest and the wicked and ignorant.¹ Until the year 1840, nearly every State afforded some protection of this sort, but with the period of development of the so-called "sects" of medicine it has become inoperative or obsolete, or has been repealed. Connecticut had a law, dating back to 1792, empowering the State society to regulate the standard requisite for a practitioner. But in 1848 the same authority was given to the Botanic-Medical Society, in 1855 to the eclectics, and in 1864 to the homœopaths.² Maryland also had a law authorizing the State society to examine and license, which was practically amended by a law in favor of Thomsonians. New York has had an almost identical experience, as also this State. The State societies after this period were obliged to content themselves with maintaining a high standard among their own members, thus making it always possible for the public to obtain the services of a well-educated practitioner.

All restraints having thus been removed, the more flagrant forms of quackery began to thrive, until the credulity of the public has been abused to an extent probably unparalleled in modern times. The enterprise to which unrestrained license has given rise has led even to extensive criminal practices, which it is acknowledged the common law is powerless to prevent. Many States have therefore found it necessary to enact laws to regulate a system which is so productive of evil, and such laws are now in force not only in those States already mentioned, but also in California, Kentucky, New Hampshire, Vermont, and Pennsylvania, many of which were framed in imitation of the Canadian laws, the most noteworthy feature of which is the provision giving a position to the homœopaths and eclectics on the board of examiners.³

¹ See page 553.

² A "mixed" commission, consisting of one homœopath, one eclectic, and one regular physician, has recently been appointed to draft a medical practice act.

³ The following is a summary of the law proposed by a committee of the American Social Science Association and presented to the Legislature of this State in 1880, as summarized in an article in the *International Review* for April, 1881, by Dr. Ernest W. Cushing, who gives an able sketch of legislation on this question:—

"There should be one examining board, comprising representatives of the three medical societies,—under favorable circumstances, of dentistry and pharmacy also. All candidates for license ought to be examined directly by the board. The subject of therapeutics might be totally omitted from such examinations for the sake of harmony; or, as in Illinois, persons holding 'special or peculiar views' might be allowed, on request, to appear before individual members of the board for examination on such subjects. If diplomas must be received as evidence of qualification for licenses, the

From the examples already given some estimate may be made of the effectiveness of these laws. Their advocates do not pretend that they are without defects. They have been chiefly successful in driving peripatetic practitioners out of the State, in checking the sale of bogus diplomas, and in making the struggle for existence of the more notorious form of quackery uncertain and difficult.

On the other hand, these laws are not without grave defects. They have been chiefly objected to as partaking of the character of class legislation, and it is difficult to persuade our legislators that they are not framed in the sole interest of the medical profession. They are unpopular with the public, as they interfere with the right of every American citizen to exercise perfect freedom in the selection of his medical adviser. To the mind of the educated physician the passage of such a law involves serious difficulties, to overcome which sacrifices must be conceded which imperil, if they do not completely counterbalance, the advantages which are supposed to be derived from it. Concessions must be made to, and the protecting influence of the law must be extended over, some of the very classes of practitioners it is proposed to reform. The States already recognize as "educated physicians" numerous sects professing belief in certain special systems of medicine, such as the eclectic, the homœopathic, the Thomsonian, the medico-botanical, etc., and are quite ready to admit into this category other practitioners without special forms of belief, or indeed of any particular education, who form themselves into associations with high-sounding titles, prepared ostentatiously to acknowledge the benefits of such a law and to claim its protection. In addition to all these there exist in this State the magnetic, the spiritualist, and medico-religious practitioners, who have a large and earnest following, whose claims would not be ignored by a committee having the bill in charge.⁴ In view of such possibilities the society may do well to ask itself whether it is fulfilling its duties to the public to advise the enactment of a law which will "galvanize into an appearance of temporary activity" numerous sects of varying degrees of vitality, or give even official recognition to that class of "healers" which constitutes a very large "part of the thing to be reformed."

It will be argued that these objections in no way invalidate the main feature of the bill, which establishes a standard of education to be secured by specified ex-

board should have full authority to 'go behind the returns,' and to reject any diploma when not satisfied that the person presenting such diploma has obtained it after pursuing some prescribed course of study, and *upon due examination*. The board should have authority to refuse and revoke licenses. A register of licentiates should be published annually. There should be provisions for licensing practitioners in other States living near the border; for permitting physicians to be called into the State in particular cases; for permitting such practice, under supervision, as is necessary for the education of students; for exempting United States medical officers, the medical officers of ships, and persons giving gratuitous medical advice in cases of emergency. The question of clairvoyant and magnetic physicians must be met in some way. The burden of prosecuting offenders under the law should rest on the legal officers of the State; not on the medical societies."

⁴ The spiritualists in this State number probably over one hundred thousand, and a large portion of these rely upon their prophets for medical as well as spiritual relief. There are to-day men without medical training who treat disease by virtue of the "psychic force" which they possess, who are honest in their belief, and have a large and intelligent class of patients. Some highly respectable people, to my personal knowledge, are treated after sending a lock of their hair to the "doctor." It is not necessary to dig deeply beneath the surface to find an amount of credulity and superstition comparable only to that which we read of in the history of the Middle Ages.

amination. To which it might be said in reply that no law could be passed, the penalties for non-compliance with which could not be evaded, and that we should thus be saddled with an act uncertain in its restraining, but quite positive in its protective, influences upon the "irregulars."¹ Those who were of the latter opinion might take the view that the society would more appropriately fulfill its mission by maintaining a high standard of education among those it admits to membership, thus making the contrast between the educated physician and irregular practitioner as striking as possible, than to busy itself with special protective legislation for practice and fees.

These are some of the aspects of a question the advocates of which, in no way discouraged by defeat, will urge again upon the Legislature at an early day. Upon such an important subject it will be advisable for the society to have an opinion, whether it may think best to take an active part in the discussion or not.

In this connection I would call your attention to a movement which is now going on within the society, and may lead eventually to important results.

In the numerous discussions which have taken place in recent years upon the question of admitting female practitioners to the society,² attention has frequently been drawn to the fact that no uniformity exists in the examinations conducted by the different boards of Censors throughout the State, and that the various boards have no means of communicating with another, or of comparing their work. An individual rejected by one of these boards may present himself for examination at some distant portion of the State, and be made a member of the society. Many of the boards, it was found recently, were ignorant of certain changes in the laws of the society. It is proposed that each board should hereafter report to the secretary of the society the names of all individuals who have failed to pass. It has also been suggested that a central committee be appointed to furnish certain information to the various boards, and that meetings of this committee, with delegates from each board, should be held at stated intervals. We have here the elements of an "educational section" of the society, from which a vast amount of valuable and interesting work might emanate, and to which might safely be intrusted the task of elaborating a plan which might offer a solution of some of the difficulties attending attempts to restrict the work of irregular practitioners. The society should not forget that it is through the efforts of some of its members that one of the most interesting experiments in medical education in this country is now being successfully completed; that the medical prestige of Massachusetts is to-day superior to that of any other State in the Union; and that any such work which should emanate from medical men in this State would be regarded as valuable authority. The subject is one of the important questions of the day; a free discussion by members of the society could hurt no one, and might be productive of valuable contributions to the cause.

The position of our society toward the treatment of insanity has always been one of cordial cooperation with those gentlemen of our profession who have devoted themselves to the difficult and troublesome duties of

asylum life in caring for the insane. The century's work in that respect is one of which we may be justly proud; our hospitals are among the few in the country which are free from political influences, and, through our distinguished members, Drs. Wyman and Bell, Massachusetts has stamped its mark upon the treatment of insanity throughout the country, and indeed to a very great extent in the Old World, through the effort of Miss Dix, who has carried our humane methods to England, Scotland, and, in a less degree, to the continent of Europe. More recently the society has shown a closer interest in insanity, as indicated by its investigations in regard to commitments to asylums, and by the fact that twelve of our number have taken upon themselves the arduous duty of being consulting physicians of the Danvers Hospital, two visiting together each month at least once. It is evident that it is not practicable to have visiting physicians in charge of insane asylums, while it is desirable to bring the interest of the profession to bear upon that important matter.

With the views of insanity held at the present time, somewhat different from those prevailing a quarter of a century ago, the work of the physician in general practice has widened as regards his relations to people suffering from mental disease. As it becomes better known, and is held more and more by the community to be simply a disease, more or less like other diseases, it will, whether treated in insane asylums or not, be each year to a greater extent advised upon by the practicing physician. The character of our institutions, too, must be changed to a considerable degree from being receptacles or boarding-houses for all kinds of mental deficiency to asylums for the incurable and hospitals in the strict sense of the word, with every appliance which art and science can afford for remedial treatment. In the discussion of this vast question our society can coöperate with the officers of the hospitals for the insane, and an enlightened public opinion which demands more scientific work, and help to place the whole subject in a better light before the community by increasing confidence where there is now unmerited distrust, by showing the falseness of exaggerated complaints, and by assisting all real progress and wise reform. The society is in a position to assist in guiding the legislation regarding insanity in a judicious direction, to help form opinion upon the best methods of improving our hospitals for the insane, and to raise the standard of professional and public knowledge of the causes and prevention of that obscure disease.

The unsatisfactory state of the laws relating to medical expert testimony has from time to time caused much discussion in this State, and cannot fail to have impressed every member of the society who has been called to the witness stand. It is, to say the least, an incongruity that his opinion, which, like that of the presiding officer, is judicial in its character, should be paid for, and to a certain extent controlled, by one of the parties to the suit, and that there should be no discrimination exercised in the selection of individuals who are expected to give testimony of a high scientific value. The abuses of this system are so many-sided, and such striking examples have occurred lately, that it is hardly necessary to draw your attention to them in detail.³

¹ It has been said that a large of those who originally fled from the State have returned to their respective States.

² No action has been taken by the writer to prevent the question of admitting female practitioners to the society. There is, however, no reason to believe that in the way of argument.

³ Among recent contributions to this subject may be mentioned articles by Professor Washburne, Transactions of the American Public Health Association, vol. iii.; Transactions of the Massachu-

In 1868 our society united with the American Academy of Arts and Sciences to present to the Legislature the draft of the law prepared by the late Hon. Emory Washburne, giving discretion to the court to appoint and require the attendance of one or more persons to be examined as experts. It was referred to the judiciary committee, but never came to light afterwards. A committee of the Massachusetts Medico-Legal Society, of which the attorney-general of the State was chairman, has within a year prepared the draft of a bill for legislative action. This bill provides "that in any action, suit, or proceeding, civil or criminal, in which the testimony of a medical expert witness is desired," the parties must make another agreement upon a suitable person, or if they fail to agree the court must appoint the same, upon whom a subpoena will then be served, and whose expenses will be paid by the court, the defeated party being liable to refund the amount. The court may also call other witnesses, if it so desires, and in a criminal case the defendant is allowed additional witnesses at his own cost.

At a meeting of the Boston Society for Medical Improvement, held last autumn, a committee was appointed to cooperate with other societies in this matter, and it was then suggested that the Massachusetts Medical Society possesses the element of organization out of which some plan might be evolved which should serve to determine more definitely the status of the medical expert.

It appears that the English method is open to abuse, like our own, while in Germany the law provides for official experts, and under the French plan the choice of the expert is left to the discretion of the court. In the last two countries, the medico-legal results are said to be admirable, and in striking contrast to the results with which we are familiar.

In connection with this subject, I would call the attention of the society to the extraordinary facility with which suits for malpractice are brought against reputable physicians, a form of business enterprise which, I regret to say, lawyers of the highest respectability in this city consider as perfectly legitimate work to be engaged in. Nothing is better calculated to bring the majesty of the law into disrepute than a system which permits, under the guise of legal processes, a rascally attack upon the pockets of a hard-working and innocent man, while the blunders of the ignorant quack are allowed to go unpunished. It has been suggested that judges should exercise some right of supervision, so that fraudulent suits should be prevented from obtaining a place on the dockets, or that all costs, including the defendant's counsel fees, should be paid by the plaintiff if he loses his case.¹ The society would do well to urge some such restrictive action.

The labors of those engaged in the department of experimental medicine have fortunately not yet been interfered with by the anti-vivisectionists. The great importance of this work in enabling us to acquire more accurate knowledge of the laws of health and disease is doubtless duly appreciated by members of the society. The study of medical science is still in its in-

fancy in this country, but a great deal of valuable original work has already been done, and the profession has reason to be proud of its record in this department. Still, a crusade, such as has swept over England, would strike a severe blow at further progress in medical knowledge. The public should be taught that this is a legitimate field of study, and one which has wrested from nature many valuable secrets. The Medical Society of the State of New York has set a good example to other societies in protecting her scientific men from attempts to interfere with their work by legislation. Repeated efforts to obtain such legislation have been foiled by the agency of individual members, who have promptly put their senators and representatives in possession of the facts of the case.

It has been the policy of the society of late years to offer, in addition to its time-honored certificate of membership, special advantages to each Fellow individually. The wisdom of this plan is shown in the thriving character of such associations as adopt the expedient. Volumes of Transactions, although extremely valuable in preserving an historical record of the society's work, cannot be placed in this category. On the other hand, a medical periodical included as part of the returns to be obtained from the annual assessment is something tangible, which becomes a connecting link to those members who, owing to circumstances, are unable to take an active part in the work of the society. The annual dinner has also proved a most useful feature in bringing together a larger number of members at one gathering than any other society can boast of, and in securing prompt payment of the society's dues. The excellent retrospect of medical science distributed to each member has been a popular and useful experiment. It gives to the busy member of the society valuable hints for use in practice, and affords interesting reading at the same time to the literary and scientific man. Like the patent food or nutritive enema, it administers its pabulum in a convenient and condensed form to those whose minds are intolerant of the more tedious processes by which the original article is usually administered.

The suggestion has, however, been made from several quarters, particularly from districts which depend chiefly upon the publications which the society offers, that a weekly periodical would be a more satisfactory form of journal, and that the patronage of native work would be more in keeping with the spirit and traditions of the society. The "semi-annual" and the "quarterly" are types of periodical literature which are gradually becoming extinct. Science moves too rapidly, and is too impatient of delay, to use such ponderous vehicles. A vigorous and progressive association like our own is hardly keeping up with the times in contenting itself with receiving the work of others at second hand and at long intervals, while it allows its own to be hidden in the volumes of Transactions. The same arguments which have been so frequently urged in behalf of a weekly journal for our National Association are equally true of each State society. Were a group of States like those of New England to unite upon a common medium of intercommunication, the stimulus to society work of all kinds would be immense, and the advantages of co-operation would bring with it great power. It will be a glorious day, both for medical societies and medical literature, in this country, when this principle becomes recognized.

setts Medico-Legal Society, vol. i. No. 2, by Attorney-General Marston; and *The Quarterly Journal of Psychological Medicine*, vol. v. (1871), by J. J. O'Dea. Also papers in the *Boston Medical and Surgical Journal*: Medical Expert Testimony, by F. W. Draper, M. D., November 4, 1880; A Case of Abortion with Acquittal, by F. A. Harris, M. D., April 14, 1881; So-Called Concussion of the Spinal Cord, by R. M. Hodges, M. D., April 21, 1881.

¹ Boston Medical and Surgical Journal, February 17, 1881, page 160.

There is one more topic to which it might be appropriate to allude on such an occasion as this, and that is the manner of conducting our annual meetings. In former years one day was considered sufficient to accomplish all the work the society had to do; but since 1866 a second has been added. It is a frequent criticism that annual gatherings of medical men rarely accomplish any really useful scientific work, being chiefly of a social character. So far as the strictly literary work of the meetings is concerned this is frequently true, but the metropolis at which the gatherings are held becomes for the time being a medical exhibition on a large scale. The hospitals, schools, and museums, and medical institutions of all kinds, are prepared for the occasion. New inventions, new methods of management, groups of interesting cases, are shown in this way, and any new surgical operation or scientific discovery can thus be brought publicly before the profession. At the last two meetings an innovation has been introduced in the shape of an exhibition of drugs, instruments, and medical books in a room adjacent to the hall of the meeting. As a convenience to visiting members this has proved satisfactory; but a more interesting form of exhibit would be a collection of all apparatus and inventions devised by members of the society. The success of the historical collection of instruments and books this year will, I think, be sufficiently great to suggest a continuance of exhibitions in which members participate. That portion of the meeting which needs life infused into it, and into which at this centennial period it would be most appropriate to introduce a new order of things, is the literary work of the society on the first day. Many excellent papers are annually read, but little encouragement is given to the readers to repeat the experiment. Such an exercise without an accompanying debate is a meaningless, and I might venture to add almost useless, performance. The meeting is thinly attended, and the exercises languish. Such was the condition of most society meetings in this neighborhood a few years since, but a new spirit has been infused into our Boston societies, which it is to be hoped has not been made at the expense of the parent society. The secret of success lies in the care with which the work of the meeting is cut out beforehand. Nothing should be left to chance, with all its terrible possibilities; but a debate, participated in by men whom all are anxious to hear, should be organized early in the season, giving ample time for preparations. Important questions of the day might get the benefit of careful study from our best men, and we might aspire to produce in this way some original work.

The formation of the *Medico-Legal Society*, which has proved so valuable an adjunct to our annual meetings, shows how useful a body an organization designed for special work may become. As the wants of any special department of medicine became urgent in the State, similar societies might be formed, which might or might not be sections of the *Massachusetts Medical Society*.

The educational section has already been alluded to, and would come next in order. Some such plan of gradual development would be preferable to assigning an work to special sections, which, so far as I am aware, State societies have not yet attempted. Departments, which might be contemplated in the near future, are the *Department of Therapeutics*, and of one of the *Departments of Medicine*, which have commenced in the report.

would embrace those branches of State medicine which relate to insanity and to hygiene, bodies which medical officials in the State would naturally turn to for advice or support, and from which, did they exist to-day, work of great value to the State might emanate.

I have thus attempted to sketch the plan of organization of our society from its beginning, and to offer a few suggestions for work in the future. When we compare it with some of the representative bodies of the world, the results of a century's growth are certainly gratifying. In pausing at the first great halting place, to look back through one hundred years, the eye sweeps over a period of unbroken prosperity, unmarred by disputes or factions. In spite of the various waves of delusion or pseudo-science which have passed over the community during that period, the society has maintained an unbroken front, and has always rallied round the flag of truth and integrity. Its attitude has been the only one which a truly scientific body could take. It has been the champion of perfect liberty of action to all, but has withheld the hand of fellowship from those who would deny this boon to others, or would seek to enchain science with the manacles of theory or deceit.

The veterans to whom much of this credit is due are passing away, and younger heads and hands are coming forward. In behalf of the latter, I would say that we assume the trust with a full sense of its responsibility, encouraged by the hope that the century which now opens before us may be as full of harmony and prosperity for our society as the one which has passed away.

A CASE OF HYSTERO-NEUROSIS.

BY GEORGE H. BIXBY, M. D., BOSTON.

Miss W., aged nineteen, native of Massachusetts, of an unusually amiable disposition, in whose family history there were no traces of hereditary disease, first menstruated at fourteen. The function continued normal for a few months, then, without any apparent cause, ceased to appear. Soon after this event she began to suffer from general malaise, fullness and pain about the head. These symptoms were attributed by an irregular practitioner to nasal catarrh, for the treatment of which severe measures were resorted to.

These failing to afford relief, further torture was abandoned, and a course of iron prescribed.

The beneficial effects of the latter were soon apparent by a return of the menses, which had been absent two and a half years.

The function, however, was far from the normal type, and was attended with marked nervous manifestations a few days prior to their appearance, and with a profuse leucorrhoea in the intervals. Dragging sensations about the back and loins and obstinate constipation were now the more prominent symptoms. Six months later a regularly educated female physician discovered retroversion, erosion of the cervix, leucorrhoea, with marked nervous manifestations. Local and general treatment was advised and pursued for two years without permanent relief.

Soon after this I saw the patient at her home. She dated the commencement of her illness as far back as her ninth year. As with all these cases of chronic invalidism so common in our New England towns, she had been an object of pity from the entire community, who, by their well-intended but misguided attentions,

had contributed much toward sustaining and confirming her disease.

I found her reclining, a position she rarely changed. Locomotion was apparently, and certainly in her opinion, quite impossible; a single step was seldom or reluctantly taken without the aid of one or two persons. If she exerted herself to the extent of sitting erect, the feet were instantly placed on a level with the pelvis. The full ruddy cheeks, the peculiar motions of the respiratory muscles, the tone of voice, and manner of speech all went to form a typical picture of hysteria.

She complained of pain in the top of the head and lower part of the back; menstruation recurred every three weeks, always anticipated by more or less nervousness, and attended with pain and with leucorrhœa in the interval. Palpation showed ultimate nutrition below the average, the muscles flabby and apparently atrophied, a large pendulous abdomen, sensitive points on pressure over the cervical and sacral portions of the spine, mammae and external genital organs normal. Vaginal exploration revealed the uterus freely movable, retroverted, its cavity three inches, and sensitive at the fundus. Diagnosis: Chronic endometritis, of which too frequent menstruation, dysmenorrhœa, retroversion, were the physical or direct symptoms, and pain in the head, faulty nutrition, and hysteria were the reflex or indirect symptoms.

The following course of treatment was suggested to the attending physician: on the fourth day after the cessation of the menses the application of the tincture of iodine to the fundus; tenth day or middle of the month, a stronger application, as the tincture of iodine comp., or the acide nitrate of mercury; later in the month a milder application. On account of the shortness of the menstrual intervals, not more than three applications should be made to the fundus in the month; at each treatment of the uterine cavity the patient should remain in bed at least twenty-four hours. At the first sign of chill, fever, or pain following an application, a flaxseed poultice with laudanum should be applied to the abdomen, with rectal suppositories of morphia and belladonna. (Morphia *sulp.* gr. ss., ext. belladonna gr. $\frac{1}{4}$.) As the last application in the month would be a mild one, the use of a retroversion pessary, the instrument to be worn during menstruation and until the next application; also an external supporter; painting the sensitive points of the spine with the tincture of iodine; insuring daily dejection by means of laxatives or enema.

The above course to be carried out with unfailing regularity from October 1st to July 1st; the summer months to be devoted to rest, change of scene and air. Since the patient resided at the sea-shore, the country air was insisted upon.

My suggestions were followed to the letter, as far as practicable, for over three years. Much to my regret she was unable to have a change of climate. The results obtained by this long course of treatment were disappointing in some respects, yet gratifying in others, as evidenced by an examination instituted January 5, 1878.

She was still for the most part confined to the bed and lounge; could change her position in her apartments only by means of crutches. The chief physical improvements were normal menstruation, normal position of the uterus, absence of pain in the top of the head and backache, and relief of constipation. In the mental condition there was little, if indeed any, improvement noticeable. The hysterical picture persisted.

This profound effect upon the nervous system I ascribed to the early age of the patient and long duration of the exciting physical cause. It seemed evident that I had now to do with a pure neurosis, a broken-down nervous system, which called for active and extraordinary means for its restoration.

After due deliberation the following departure in treatment was entered upon, namely:—

(1.) Removal from home. (2.) Ignoring the existence of local disease and complete suspension of all treatment thereof. (3.) Continued forced rest in the horizontal position. (4.) Massage. (5.) Electricity. (6.) Forced exercise. (7.) Extra feeding.

January, 1878, she was brought to Boston, admitted at St. Elizabeth's Hospital, and at once placed in bed.

January 15th, at the middle of the catamenial period, with the assistance of Dr. S. G. Webber, of Boston, a thorough examination was commenced by myself, and concluded by Dr. Webber. We agreed in regard to the general neurotic nature of the case, excluded organic spinal disease, and by means of a battery detected decided evidence of paralysis of the tibialis anticus and a number of fibres of the trapezius muscles of the left side.

The first two steps in the proposed new departure having been taken, namely, the removal from home and rest in bed, Dr. Douglas Graham, of Boston, kindly initiated the fourth step by a thorough application of massage.

January 17th, second day. The experience of the previous evening was followed by a sense of weariness, which, however, did not prevent a comfortable night's rest.

January 18th, third day. I applied, with varying intensity, the second current of electricity to the general muscular system and to the palsied muscles the first current.

January 19th, fourth day. The patient passed a good night; there was less weariness than after massage. At four p. m. I applied massage myself, the joints and muscles being vigorously and repeatedly manipulated for thirty minutes. One quart of milk daily added to the regular full diet list. Milk to be night and day within her reach. Rest continued.

January 20th, fifth day. Passed an excellent night. At four p. m. electricity applied as before. Ordered elixir of iron, quinine, and strychnia, one half drachm, after meals. Diet and rest continued.

The sameness of the treatment would render a daily report monotonous; therefore the progress henceforth will be noted weekly.

January 31st, fifteenth day. Menstruation appeared. All treatment suspended. Medicine, diet, and rest continued.

February 8th, twenty-first day. Two days after cessation of normal menstruation massage resumed. quantity of milk increased to two quarts per diem. medicine and rest continued.

February 9th, twenty-second day. Electricity resumed. Medicine, diet, and rest continued.

February 17th, thirtieth day. Massage and electricity have been applied on alternate days without a single omission.

February 25th, thirty-eighth day. Massage and electricity have been applied as usual. Medicine increased to one drachm three times daily. Medicine, diet, and rest continued. The patient sleeps well, has excellent appetite and digestion.

February 28th, forty-first day. Massage and electricity up to date. Menses appeared. Medicine, diet, and rest continued.

March 7th, forty-ninth day. Two days after normal menstruation. Massage and electricity resumed. Medicine, diet, and rest continued.

March 15th, fifty-seventh day. Massage and electricity as usual, without a single omission. Quantity of milk increased to three quarts in the twenty-four hours. Digestion remains undisturbed.

March 23d, sixty-third day. Massage and electricity. Medicine, diet, and rest continued.

March 28th, sixty-eighth day. The menses appeared. Treatment suspended. Medicine, diet, and rest continued.

April 6th, seventy-fifth day. The condition of the patient indicating it: the treatment was now slightly modified in a manner which I shall call "partial rest" or "bed gymnastics." This consisted in the patient's vigorously and rapidly flexing and extending her limbs while reclining; the exercise to last ten minutes at first, to be gradually increased.

April 14th, eighty-third day. The massage and electricity, which had been continued hitherto without a single omission, were permanently suspended, and the sixth step in the treatment, namely, forced exercise, was substituted.

April 23d, ninety-first day. The last eight days, in addition to gymnastics morning and evening, she has been compelled to rise and dress herself with as little assistance as possible, and to take a few steps about the apartment with the aid of the nurse.

April 26th, ninety-sixth day. Exercise in and out of bed has been continued, and each day a little increased. Medicine, diet, and rest continued.

April 30th, one hundred and fifth day. Menses appeared. All exercise suspended. Medicine and diet continued, and full rest in bed enjoined.

May 7th, one hundred and thirteenth day. Two days after cessation of the catamenia, regular exercise in and out of bed resumed.

May 15th, one hundred and twenty-first day. The orders have been scrupulously carried out, and the patient now walks about the ward without assistance, and with increasing confidence in herself. Appetite excellent, and sleeps well.

May 23d, one hundred and twenty-eighth day. During the past week she has ventured down one flight of stairs, unassisted; sits up without discomfort nearly half a day, and always without resting her feet on a level with the pelvis. Moral condition much improved; seems anxious to further all means prescribed for her relief.

May 28th, one hundred and thirty-second day. The menses appeared. Diet, medicine, and rest in bed continued.

June 1th, one hundred and thirty-eighth day. Two days after normal catamenia, all exercises resumed and slightly increased.

June 11th, one hundred and forty-fifth day. The past week all exercises have been continued and increased. She has descended two flights of stairs and ten steps, attended but unassisted walked the distance of one block; sits up nearly all day, with occasional rests.

June 18th, one hundred and fifty-second day. Exercises have all been continued regularly and gradually increased. On examination I found a great

improvement in the muscular system generally, the palsied muscles completely restored. Among her daily exercises a morning walk is a part of the programme. She was now left to the care of the attendants, with strict instructions that the treatment should be continued with the same care and regularity as heretofore, as fatigue often induces relapse, — a condition ever to be expected, always to be dreaded, in the course of the treatment of nervous affections.

Fourteen years from the date of her first illness, four years from the time she came under my observation, and six months from her entrance to the hospital, she was discharged cured, having gained fifteen pounds, with every function normal, and capable of walking half a mile. At my parting benediction I impressed upon her that nothing was more essential to the permanency of her recovery than that *cure* of all ills, occupation. I am glad to say that her improvement has been uninterrupted.

Whatever uncertainty there may exist in regard to the seat or cause of hysteria, one point, it seems to me, is indisputably settled; that in chronic cases we have invariably to do with general faulty nutrition.

These patients, so far as I have observed them, have weak hearts. The flabby and atonic condition of the muscles of that organ with difficulty propels the vital fluid to the remote parts of the economy; hence the slow, soft, small, compressible pulse and the never-failing cold surface and extremities, dyspepsia, constipation, etc. It stands to reason that conditions like these, of years' duration, demand more than ordinary means to arouse the dormant powers of nature, even after the original enemy has been captured and destroyed.

My patient was no exception to this rule. Believing that exercise, good food, good air, are essential to a vigorous circulation, healthy nerves, muscles, and organs, and finally to a sound mind and body, I offered these to her.

At first, it will be remembered that, physically unequal even to the initial step, she was obliged to depend wholly upon external sources, her own feeble powers being carefully husbanded until by her newly acquired strength she was able to continue and complete the cure.

iodoform.

Dr. H. Hager claims that it is the iodine liberated in the free nascent state that is the active agent in iodoform; that it can therefore be rendered perfectly odorless only by the addition of something which will form a stable compound with the thus liberated iodine, and which will consequently prevent its own proper therapeutic action. He therefore recommends only to attempt to modify the odor of the iodoform by the use of volatile oils, such as anise and peppermint. Balsam of Peru absorbs the iodine and renders it inactive. — *Pharm. Zeitung*.

POTASSIUM CHLORATE.

Dr. H. Hager agrees with Dr. Th. Husemann that the maximum daily dose of potassium chlorate for infants should not be over 1.25 grammes, or two grammes for children of three years, and eight grammes for adults, as larger doses are liable to prove poisonous. — *Pharm. Centrallb.*

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

AURAL AFFECTIONS IN THE ACUTE EXANTHEMATATA.

GOTTSTEIN¹ calls attention to the lack of observations on the earlier stages of the aural diseases which accompany the exanthemata, and especially scarlet fever. According to Burckhardt-Merian, of all the cases of ear disease which were referable to the exanthemata but sixteen to eighteen per cent. were seen within six months of their first development, and Gottstein's own statistics are even less favorable for the observation of the acute stages of the disease, and for the determination of the question of how the great destruction, which is seen in such cases, occurs. Wreden, of St. Petersburg, who, from his connection with the large children's hospital of that city, had unusual opportunities for early observations, has reported diphtheritic inflammation of the middle ear as very common in scarlet fever; but his observations have not been confirmed by others, as Gottstein thinks, owing to the ear disease being seen only in its later stages, since the diphtheritic exudation, according to Wreden, only continues for fourteen days, and is followed by suppuration.

As contributions to this subject, Gottstein narrates three cases: one of croupous inflammation of the velum, pharynx, nose, and both middle ears, in the second week of scarlet fever; one of diphtheria of the throat, with diphtheritic inflammation of the left tympanum, in the second week of measles; and one of acute desquamative inflammation of both tympanic membranes, with perforative tympanic inflammation, in the course of measles. In the first case, two days after the appearance of diphtheritic membranes in the pharynx and nose great deafness was noticed, and examination showed diphtheritic deposits over both tympanic membranes, which were already perforated, and the same exudation over the tympanic mucous membrane. From the history, the presence of membranes in the nose, and, later, within the tympanum, Gottstein concludes that the exudative process extended up through the Eustachian tube to the tympanum, and produced the destruction from within outwards.

In the second case, soon after the appearance of diphtheritic membranes on the uvula, palate, and tonsils, great deafness, without pain, was noticed in the left ear, and the deeper meatus was covered with similar membrane. After removal the tympanic membrane was found perforated and the cavity in a state of suppuration, but without any membranous deposit, and Gottstein feels uncertain whether the exudation of the ear was an extension from the pharynx or an independent deposit.

In the third case the deposits in the ears were taken for diphtheritic membranes till the microscope showed that they were composed of epidermal cells, and not of a fibrinous exudation.

In regard to treatment of diphtheria, Gottstein has never seen the diphtheritic process shortened by canterization, and considers that therapeutic efforts should be directed to removal of the exudation and disinfection of the mucous membranes. He recommends prolonged baths in aqua calcis and powdering the diseased surfaces with salicylic acid.

NERVE ATROPHY IN THE FIRST COCHLEAR CONVOLUTION.

A case of great interest to pathological physiology is described by Moos and Steinbrügge.² A man aged sixty-three suffered from disease of the brain, and the clinical diagnosis was hemiplegia lateralis sinistra from a cortical affection of the right central convolution; the autopsy showed carcinoma of the anterior central convolution and carcinoma of the stomach. The patient was extremely deaf, the voice being heard not at all on the right, and at a distance of three metres only on the left, side. Two weeks before death an examination of the ears showed normal appearances, but testing proved that the perception for high tones was entirely lost.

Microscopic examination of the right labyrinth showed the central termination and the trunk of the acoustic nerve generally normal, but containing a few atrophic fibres; further examination of the whole lamina spiralis proved that the nerve fibres in the two upper convolutions were perfectly normal, while those in the first or lower convolution had undergone a very marked quantitative atrophy. The hair cells were similarly affected, the inner ones of the first convolution showing only a finely-granular, molecular, colorless mass; the cells in the second convolution were nearly normal, while those in the third were absolutely so.

The cause of the disease, a nerve atrophy from inactivity or intra-labyrinthine pressure, produced by fixation of the stapes, as argued by the authors, we cannot accept as proven, but the loss of perception for high notes associated with the nerve atrophy of the lower cochlear convolution is a pathologico-histological demonstration of Helmholtz's theory of tone perception, as given in his *Lehre von den Tonempfindungen*, 1862, very unique, and of great interest. Only the conclusions of Helmholtz can be given here; the argument would require too much space, and is well known to the whole scientific world. From the laws of the transmission of vibrations and the study of the structure of the labyrinth, Helmholtz concluded that the cochlea was a stringed instrument, with strings of graduated variable length, the longer corresponding to the low tones and the shorter to the higher tones; and, as from the measurements of Hensen the radial length of the lamina basilaris membranacea increased from below upwards to the cupola of the cochlea, the lower convolution of the cochlea is adapted for the perception of the higher notes.

The functional test in this case, in connection with the pathological condition of the first cochlear convolution, is in full harmony with this theory of Helmholtz.

— During the week ending June 11th there were only 188 deaths in Brooklyn, representing a death-rate of 17.31 to 1000 inhabitants, which is the smallest since June, 1879. It must be borne in mind, however, that in the Brooklyn records of vital statistics no account is taken of the deaths occurring in the public institutions connected with the city, as is the case in New York. One reason, also, why the New York death-rate seems so comparatively high is because the floating population is always so very large, and no account of this is taken in the census enumeration upon which the death-rate as given in the weekly official reports is based.

¹ Beiträge zu den im Verlaufe der acuten Exanthemen auftretenden Gehöraffectionen. Archiv für Ohrenheilkunde, vol. xvi. page 16.

² Archives of Otolaryngology, vol. x. No. 1.

New Instruments.

A METHOD FOR EVACUATING AND IRRIGATING THE BLADDER AND OTHER PARTS.

BY FRANCIS H. WILLIAMS, M. D.

THE usual means of obtaining a to-and fro current in order to wash from the bladder fragments of a foreign body, such as a calculus, has been by compressing and relaxing an elastic bulb. Instead of an elastic bulb the principle of the siphon may be used. In Figure 1 we have a pail containing water, and provided in this instance with a graduation (H), which may serve to measure the amount of water injected. A rubber tube (A) leads from the pail to a three-way-cock of somewhat novel construction. The higher the pail above the cock the greater the pressure of water; when the reservoir is lowered this is diminished. In this way we may have any desired pressure. As the force re-

quired to distend the bladder of a patient under ether is not great (about 30 to 60 cm., or 1 to 2 feet), it is unnecessary to have the reservoir very high above the patient, and if the tube from the pail to the cock be short it is impossible to raise the pressure high enough to do violence to the bladder by over-distention. We shall see later that there are other reasons why the bladder is not apt to be over-distended while using the apparatus. On the stop-cock, near the first tube (A), is a second tube (D), filled with water, and reaching from the cock to a pail on the floor. This is simply

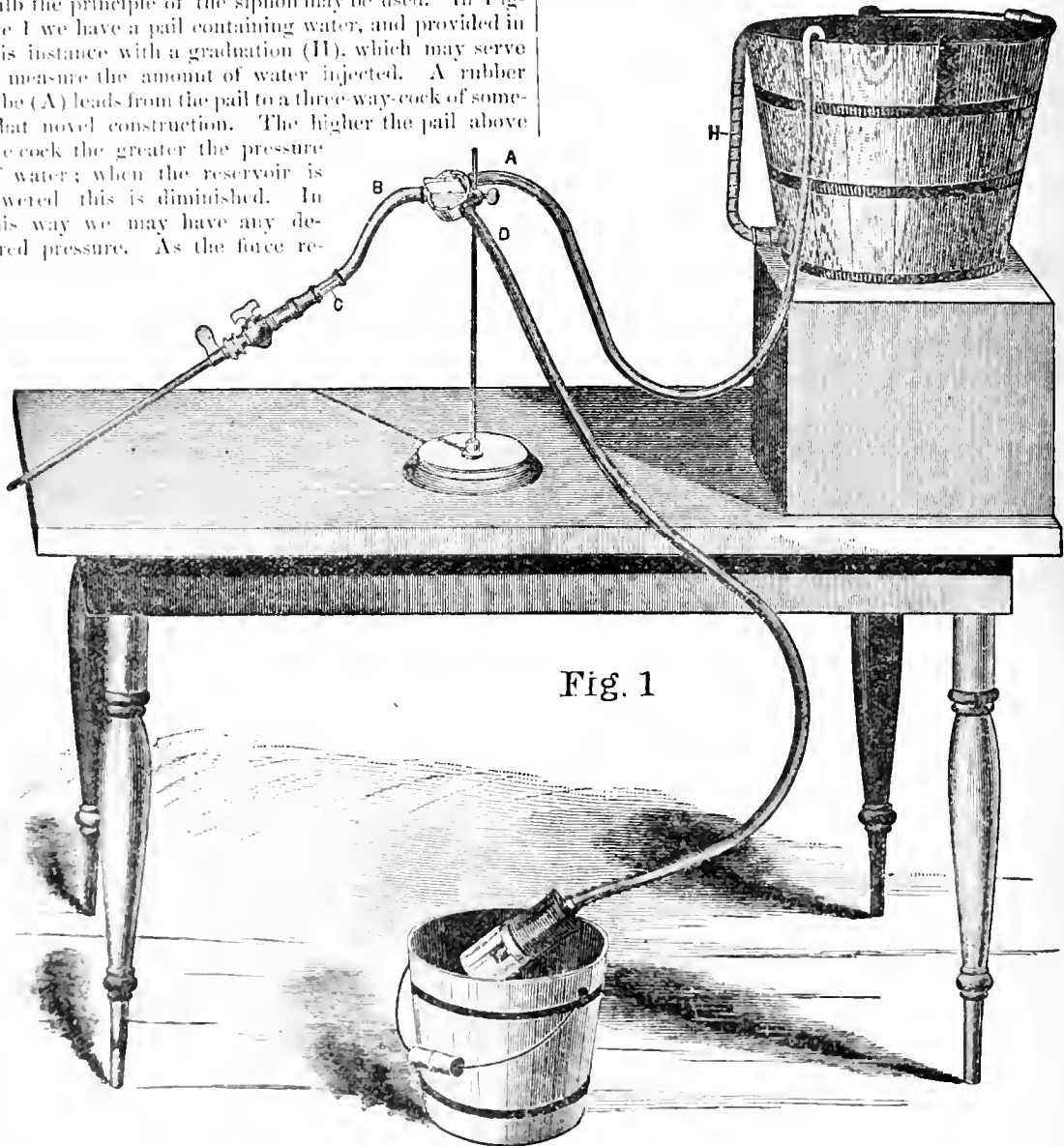


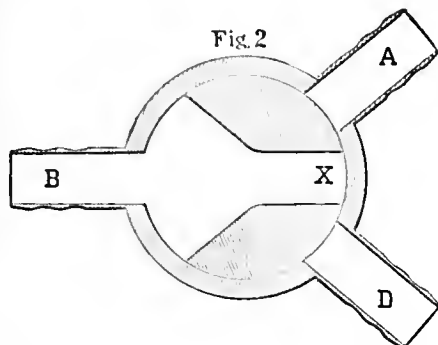
Fig. 1

Figure 1, a view of the whole apparatus. The artist has made the tubes appear too large. Figures 2 and 3 are on a scale of two-thirds the natural size, the stop-cock being two inches in diameter.

a siphon, and sucks with a strength measured by the vertical distance of the cock above the lower end of the tube. Since the column of water in the siphon below the bladder is longer than the column from the upper reservoir to that organ, it follows that fluid will be drawn more rapidly out of than pumped into the bladder.

On the side of the stop-cock, opposite the two tubes A and D, is a third tube, B, which connects the stop-cock with the catheter and bladder. The shape of the handle, N, Figure 3, indicates the form and direction of the opening in the plug of the stop-cock. When the handle is turned a short distance in one direction the bladder is brought into connection with the upper

pail alone, and water flows into the bladder; when the handle is turned in the other direction the bladder and siphon are joined, communication between the upper pail and the bladder being cut off, and fluid is sucked out of the bladder. When at rest half-way between these two points the cock is closed. Figure 2 shows a



A, to pail; B, to bladder; D, to siphon.

horizontal section through the stop-cock. The inner circle represents the plug of the cock; the fan-shaped, unshaded portion is a plan of the opening cut in the plug. In the drawing it will be seen that the cock is

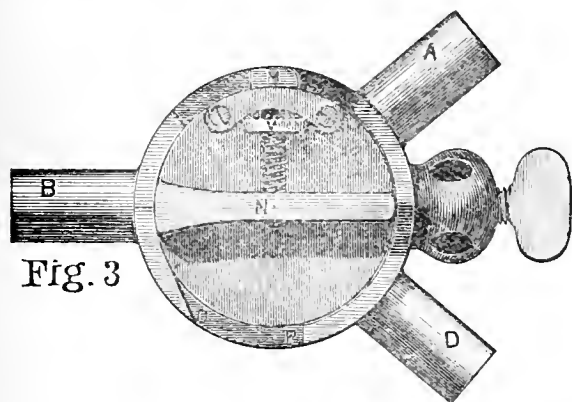


Fig. 3

closed. If the small end, X, of the opening in the plug be turned upwards to A, A and B are joined; if it be turned to D, D and B are connected. In the first instance fluid flows into the bladder; in the second it is drawn out of it. On the outside of the stop-cock, Figure 3, the small bolt, M, allows the plug to be turned only between the points A and D, Figure 2.

When, however, it is desired to have all three openings connected, the evacuating catheter should first be closed; the bolt is then withdrawn by pressing in the knob V, Figure 3, and the plug may then be turned one half way around in the direction M O P, thus bringing the smaller opening, X, Figure 2, opposite B and the larger end connecting A and D.¹ As the plug is turned back again towards B, the bolt, M, is first pressed in by O, and then springs out into the position shown in Figure 3. The position of the cock in which all three tubes are open is used only once, and for the purpose of driving out the air from the siphon D, Figure 1, and filling it with water when the apparatus is set up. At all other times the motion is simply between A and D. In Figure 1 the stop-cock is shown on a stand, and connected with the catheter by

a rubber tube. In this tube is inserted at C a bit of glass pipe of rather larger bore, and within which is a small tassel made from an inch of silk such as is used in ligating arteries. This swings in the current, and indicates the direction, and to some extent the rapidity, of the flow; also the fragments may be seen in the glass tube as they pass out from the bladder. Between the rubber tube and the end of the catheter the arrangement for allowing free rotation of the catheter and the stop-cock is the same as on Professor Bigelow's evacuator, except that the weight on the end of the catheter is diminished by using one instead of two stop-cocks. The evacuating tubes used, than which nothing can be better, are Professor Bigelow's.

The evacuating apparatus, whether it be a bulb or a three-way-cock, may communicate directly with the evacuating tube, as in Sir Henry Thompson's and Ulzmann's evacuators, or indirectly, as shown in Figure 1. Without discussing the obvious advantages of each method, I would suggest, instead of the arrangement in Figure 1, that the three-way-cock be joined directly to the evacuating tube and the intermediate parts be omitted; it would then be well to have a glass tube in A and in D. The stand might be dispensed with.

To use the apparatus, the upper pail is filled with a warm solution of carbolic or boracic acid; the end of the tube A is hooked over the edge of the pail. The tube A, which reaches to the bottom of the pail, is filled by slipping off its lower end from the stop-cock, and sucking with the mouth, so as to draw the liquid over the side of the pail. There is little risk of getting the liquid in the mouth. A is then pinched and replaced on the stop-cock.

This manoeuvre is unnecessary if trouble be taken to have a hole bored in the side of a pail near the bottom and a short bit of brass tube, bent at a right angle, fastened in, over which the rubber tube A may be slipped; with such an arrangement A fills itself when the pail is filled. Supposing A to be full of water, D is filled by stopping the catheter with the thumb, or by closing its stop-cock; then the bolt on the three-way-cock is pressed in and the cock turned half-way around, so that all three openings, A, B, and D, are joined. As soon as water begins to flow into the lower pail the cock is turned back to the position where it is closed, as shown in Figures 2 and 3. The apparatus is now ready for use.

Uncouple the evacuating tube from the tube B, pass it into the bladder, which should contain an ounce or two of liquid, connect it with B, and turn the stop-cock, so as to have D communicate with the bladder; the evacuating tube will be filled by water drawn into it from the bladder. The three-way-cock may now be turned so as to admit fluid to the bladder, and afterward so as to draw it out. Sometimes a longer and sometimes a shorter interval between changes in the direction of the current will give the best success, as shown by the number of fragments passing through the glass tube. The tubes are readily flexible, the upper one, A, being more elastic than the others; its walls are so thin that it was found necessary to slip inside of it near the stop-cock a short piece of brass tube, bent at nearly a right angle, to prevent its "kinking" at that point. The diameter of the other tube is decidedly larger than the bore of the largest evacuating tube. The arrangement at the end of the lower tube, which is shown lifted out of the pail in Figure 1, is to catch the fragments. It consists of a cylinder of wire gauze,

¹ In the construction of the stop-cock the holes are bored with the parts in this position.

with a perforated disc of wood forming its upper end, the lower end being open and stiffened by a brass rim. Outside the neck of a small wide-mouthed bottle is stretched a rubber ring; the lower end of the gauze cylinder fits over this, and makes a joint which allows the gauze cap to be put over the bottle tightly and removed easily. The wooden disc is perforated by a short bit of metal tube, to which is attached on one side the rubber tube from the stop-cock, and on the other a short piece of tubing leading into the glass bottle. The fragments and water come into the bottle, but the gauze prevents the former being carried out.

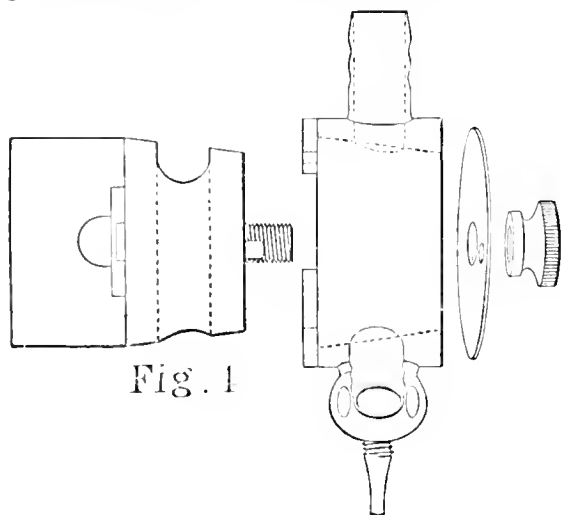


Fig. 1

Figure 1 shows the parts of the three-way-cock separated: on the left the plug of the stop-cock, next to this the shell, and on the right a disc and thumb-screw for holding the plug in place.

Although the apparatus was thought of while watching an operation for litholapaxy, it may be adapted to pumping or washing out any cavity or organ. When tested on a pig's bladder it worked admirably. It would seem that by this method the evacuation of the human bladder could be done quickly and neatly, without the entrance of air and with little risk.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

TYPHUS FEVER IN NEW YORK.

At a stated meeting of the Academy, held May 19th, Professor Edward G. Janeway, one of the commissioners of the New York Board of Health, read a paper on the present outbreak of typhus fever in the city. In commencing he stated that typhus fever had occurred in New York during the last five years to a greater extent than was generally supposed; although it was by no means so common as one might infer from the reports of many of the German practitioners in the city, who, when they meant typhoid fever, frequently wrote *typhus*, and omitted to qualify it by the adjective *abdominalis*. Thus, last autumn an interesting group of cases had been discovered, which he had reported in considerable detail to the County Medical Society. A family of adults, living in the eastern part of the city, were affected with the disease, and the nurse who was

in attendance also contracted it. One of the family died, and the post mortem showed conclusively that the disease was typhus. The first one to be brought down with it was a young woman who was employed in a factory, and on investigation it was learned that a girl who worked with her had also been taken ill at the same time. The latter, it was then ascertained, was the last of a family living in an entirely different part of the city to be sick with a fever which was undoubtedly typhus. It was impossible to trace the origin of the disease further; but the people living in the same house stated that the family were "so filthy in their habits that they ought to have been sick." There was no other typhus in New York at the time (September, 1880).

For some time past typhus had prevailed to some extent in Philadelphia. One case had been reported to the Board of Health in October last, one in November, and several during the months of December, January, February, and March. It was noticeable that in October, November, and December there were an unusually large number of cases of typhoid in Philadelphia, and it seemed altogether probable that in some of these there must have been a mistaken diagnosis, the disease really being typhus. Since early last autumn there had been a continuous series of cases in London, Liverpool, and Dublin, and in some weeks there had been as many as ten deaths from it in the latter city. In other foreign cities also it had prevailed, and in St. Petersburg there were twenty or thirty deaths from it in February. In Camden, New Jersey, there were fifty deaths from typhus between November 15, 1880, and January 17, 1881.

In considering the history of the present outbreak of typhus fever in New York, two facts of importance present themselves. The first is that there were cases of the disease in the city before it made its appearance in the "Shiloh" lodging-house, at the corner of Prince and Marion Streets, and the second that this lodging-house for tramps constituted a favorable *nidus* for the fostering of the fever. In substantiation of the first statement Dr. Janeway mentioned a number of cases which had occurred previously, and stated that he had no doubt that there were still others in which the true diagnosis had been mistaken by the physicians in attendance, since the disease had been so comparatively rare in New York during the past ten years. The outbreak had commenced in March, and thirty, at least, of the cases had been distinctly traced to the lodging-house mentioned. Of the first fifty-six cases reported four deaths had occurred from other causes, and six from the typhus fever. The first post-mortem examination was made on the 19th of March on a patient who died on the 17th at Bellevue Hospital. The whole number of cases and deaths, tabulated according to the ages of the patients, was as follows:—

Under 15 years		8 cases	no deaths.
From 15 to 20 years		17 cases	3 deaths.
" 20 " 25 "		44 "	5 "
" 25 " 30 "		48 "	6 "
" 30 " 35 "		38 "	10 "
" 35 " 40 "		41 "	9 "
" 40 " 45 "		28 "	10 "
" 45 " 50 "		15 "	5 "
" 50 " 55 "		13 "	4 "
" 55 " 60 "		17 "	5 "
" 60 " 65 "		5 "	1 death.
" 65 " 70 "		6 "	3 deaths.
" 70 " 75 "		2 "	2 "
" 75 " 80 "		1 "	1 death.

Making in all 283 cases and 64 deaths. The greatest mortality had occurred among the patients received from Hart's Island, out of eleven cases there being only two recoveries. After the disease had once obtained a lodgment it spread, as a rule, by personal contact, although this could by no means be proved in every instance. In this connection Dr. Janeway mentioned several interesting cases in which the fever had been contracted with a minimum amount of exposure to it. Eight orderlies in the fever hospital had been attacked, and one had died from the disease, but not a single physician had as yet suffered from it, although many of those at the hospital, as well as those in the service of the Board of Health, had been very freely and constantly exposed to it.

Dr. Janeway then went on to speak of the measures which had been adopted by the authorities to prevent the spread of typhus. Unless complete isolation could be secured (which was rare in the class generally attacked by the disease) the patients were removed to the hospital on Blackwell's Island, while the premises which had been occupied by them were disinfected and fumigated with sulphurous acid, and, if it was deemed advisable, ordered to be altogether vacated by the families. The clothing was burned, and in cases where the poverty of the individual rendered this necessary new clothing was furnished by the Board of Health. An extra corps of physicians was appointed for the purpose of visiting and inspecting the various cheap lodging-houses in the city, and insisting that there should be at least three hundred cubic feet of air for each inmate. A most rigid and constant inspection both by night and day was maintained by this corps, and still another corps was appointed for the special purpose of tracing the history of each individual case. On Blackwell's Island the disease was treated in tents, and the patients were fed upon milk and beef tea, and allowed as much stimulus as the circumstances of each case required. When the degree of temperature demanded it cold sponging and the use of Kibber's cot were resorted to.

The matter of cheap lodging-houses Dr. Janeway considered to be one of importance from a sanitary point of view, and there could be no doubt that even when they were well conducted there was in them a source of more or less danger in the way of infectious diseases. Thus the very one which was started with a semi-philanthropic view, the "Shiloh" house, had given the most trouble in the present outbreak of typhus. Such places attracted a large number of tramps and other worthless characters to the city in the winter, and really made New York the cheapest place in which they could live. The allowance of three hundred cubic feet of air for each individual, which was insisted on in the New York lodging-houses, was fifty feet in excess of the requirement of the London poor-law. As to the various hospitals in the city, he thought that every such institution should have an isolated pavilion, containing several rooms, in which every suspicious case of disease could at once be placed. There was a pavilion of this kind attached to the German hospital, and he hoped that before long all the hospitals in New York would be similarly provided.

The president, Dr. Fordyce Barker, after alluding in complimentary terms to the energy which Dr. Janeway, in his capacity as health commissioner, had displayed in dealing with the fever, called upon Professor Flint, who remarked that the facts of the paper touched upon

some very interesting points, especially in regard to aetiology. The first question suggested was, whether typhus fever always required a special cause or germ (either literal or figurative) developed in the body of an individual affected with the disease, or whether this cause was capable of being originated *de novo*. Some years ago he had known of an outbreak of typhus which occurred in an isolated county almshouse that was overcrowded, and whose rooms were small and badly ventilated, and in this instance, at least, it was quite impossible to trace the disease to importation from without. Other similar and equally well authenticated cases were on record; but in no one of them could it be positively asserted that the disease might not possibly have been imported, and the matter must still be regarded, he supposed, as an open question.

Assuming, however, for the time being, that the disease required a germ for its development, it must be granted that we did not know how long this germ might retain its vitality so as to be capable of full activity under favorable circumstances. It might, perhaps, remain long latent, like the kernels of grain buried with an Egyptian mummy.

Another important point brought out by Dr. Janeway's paper was the vast difference in susceptibility to the disease which was found to exist in different individuals; so that it seems to be a fact that certain accessory causes were necessary for its development in addition to the germ itself. Especially did effluvia from human bodies and defective ventilation seem to stand in this relation, and those who believed that typhus was capable of originating *de novo* held that it could be produced by a concentrated effluvia.

In regard to the prevention of the diffusion of the disease the importance of the matter was sufficiently apparent, and he had no doubt that the present outbreak would soon be stamped out by means of the active measures which had been adopted by the Board of Health. In this connection Dr. Flint referred to the suppression of cholera some years ago by the New York Health Board, which he regarded as one of the most brilliant achievements in its history, and also to their more recent triumph in completely stamping out small-pox in the city.

Professor Loomis said that he was especially interested in the paper because it brought vividly to mind his experience with typhus in 1862 and 1863, when he himself was called upon to deal with an epidemic of greater severity than the present outbreak. At Bellevue Hospital as many as fourteen cases of it were sometimes admitted in a single day; the patients being brought from various parts of the city, although the greater part of them came from Baxter Street and the streets and alleys adjoining. In making his investigations concerning the history of the outbreak, he finally ascertained that the outbreak probably originated in the case of a little girl who came out from Ireland to visit an aunt here. The aunt, who lived on the top floor of a rear tenement-house, took the disease and died, and the fever then gradually made its way down through the other floors of the house; after which it spread to the building in front. Some of the families soon became alarmed and went to other habitations, and thus, no doubt, the disease was carried to different parts of the city.

He was not one of those who believed that it was necessary to trace any outbreak of typhus to importation at the time: but he considered it a disease which

was indigenous to certain localities, where it could always be found, while in all other localities it was always imported. The same was true of yellow fever, which we should not expect to originate in New York, although when once introduced it was well known how it could develop there under suitable conditions. The poison of typhus, he believed, was brought to this city more frequently than was generally supposed; but the conditions were not always favorable for its development and spread.

The questions suggested by the paper were: (1.) Is typhus fever a disease of spontaneous origin? (2.) Is it propagated in other ways than by personal contact? (3.) What are the best means for arresting its development and diffusion? The miserable tramps which infested the city in the winter were in every way fitted to bring contagion, and it was always a very difficult matter to find out where they came from. In all large cities it was, indeed, often impossible to trace the origin of epidemics. The case mentioned by Dr. Flint was the strongest one of which he knew in favor of the spontaneous origin of typhus, and yet it by no means afforded certain proof of this. Then, as to the second point in the outbreak of which he had spoken, the clothing of the typhus-fever patients in Bellevue was stored in pigeon-holes, and a certain portion of it was washed; yet, so far as he knew, not a single individual who was engaged in handling these clothes contracted the disease. On the other hand, all those who carried the patients and all the nurses and physicians who were sufficiently exposed were taken with it. In order to contract typhus, he believed that the exposure must, as a rule, be long and intimate; and he thought that the reason why the hospital physicians had escaped in the present outbreak was because the patients were treated in tents, and the ventilation was thus as perfect as possible. In the way of prevention fresh air was the *sine quâ non*, and he knew of nothing which had the same power not only of preventing it, but also of relieving the symptoms after the disease had become developed. In many cases a vast improvement had been noticed in patients immediately after their removal from badly ventilated rooms to tents. In conclusion Dr. Loomis remarked that the disease was always most fatal in those past middle life, and stated that among sixty cases which he had seen in children there was scarcely a death.

Dr. John C. Peters said that he had felt certain that the famine in Ireland last year would be followed by typhus fever, and feared that with the enormous amount of immigration that was taking place the disease would quickly spread to New York; yet there was no history of any such importation in the present outbreak. For his part, he believed in the spontaneous origin of typhus fever from the decomposition of organic matter, and he had never known the city to be in a filthier state than it was last autumn; so that the conditions are altogether favorable for its development here. Typhus fever was a filth disease, and the tramps among whom it spread were more dirty than they would otherwise have been on account of the disgraceful condition of the streets. He had no doubt that it would be stamped out, but at the same time he could not but believe that if we had had a cleaner city the outbreak would have been prevented. He considered that there was now abundant proof that certain diseases like diphtheria and typhus might originate *de novo*, and was convinced that they arose thus spontaneously both in New York and Philadelphia.

Dr. E. H. Janes, assistant sanitary superintendent, explained that the Shiloh lodging-house had not been closed at once on the discovery of typhus there, because it was believed to be safer to keep a constant and thorough supervision over it than to scatter the disease to other localities by driving out the lodgers.

In the course of some concluding remarks Dr. Janeway said that he could not understand why those handling the clothing of typhus-fever patients in the epidemic to which Dr. Loomis had referred had all escaped the disease, for it was certainly contrary to the usual experience in typhus; and Dr. Barker then related two instances in which the infection was conveyed by the clothing alone.

Before adjournment some resolutions similar to those passed by the County Medical Society were adopted, congratulating Spencer Wells (who is an associate Fellow of the Academy) on the completion of one thousand cases of ovariectomy, by means of which the lives of seven hundred and sixty-nine women had been saved; and the president, Dr. Barker, who expected to sail for England on the 21st, was instructed to present the resolutions to Mr. Wells in person.

THE AMERICAN NEUROLOGICAL ASSOCIATION.

THE annual meeting of the Neurological Association was held in the hall of the Academy of Medicine, New York, on Wednesday, Thursday, and Friday, June 15th, 16th, and 17th, with the president, Dr. Roberts Bartholow, of Philadelphia, in the chair. At the first session, Wednesday afternoon, the following papers were read: Tendon Reflex in General Paralysis of the Insane, by Dr. J. C. Shaw, of Brooklyn; The Central Nervous System of Reptiles, by Dr. John J. Mason, of Newport, R. I. (read by the secretary); The Action of an Irritant, by Dr. Isaac Ott, of Pennsylvania; and Peculiar Effects of Bromide of Potassium in Insane Epileptics, by Dr. H. M. Bannister, of Chicago (read by the secretary). At the evening session on Wednesday, Dr. A. D. Rockwell, of New York, read a report of a case of peripheral paralysis resulting from pressure, after which the report of a most remarkable case, designated as one of destructive lesion of the left hemisphere, which had been presented by Dr. H. D. Schmidt, of New Orleans, was read by the secretary. Dr. J. S. Jewell, of Chicago, then read a paper on the Early Use of Strychnia in Myelitis, the title of which he afterwards changed to the following: On the Early and Free Use of Strychnia in Subacute Myelitis and Allied Forms of Disease of the Spinal Cord.

At the Thursday afternoon session the first scientific business was the discussion of Dr. Jewell's paper, after which Dr. W. J. Morton, of New York, read a paper on A New Induced Current of Electricity, a title which was subsequently modified so as to read, The Static Induced Current of Electricity. The following papers were also read at this session: The Hypothetical Auditory Tract, by Dr. Graeme Hammond, of New York; The Medical Use of Static Electricity, by Dr. George M. Beard, of New York; and How to Use the Bromides, also by Dr. Beard. In the evening an elegant reception was given to the Association and their friends by Dr. W. A. Hammond at his residence on Fifty-Fourth Street.

At the session on Friday afternoon the following papers were read: Nerve-Stretching in Progressive Locomotor Ataxia, by Dr. W. A. Hammond; Ciliary Spasm of Central Origin, by Dr. H. Gradle, of Chicago; A Case of Diffuse Myelitis, by Dr. F. T. Miles, of Baltimore; and A New Foot Dynamometer, by Dr. W. R. Birdsall, of New York. Dr. Graeme Hammond also gave a description of a new instrument of similar character which he had devised. At the concluding session, Friday evening, the following papers were presented: Case of Tumor of the Pons, with Specimen, by Dr. F. T. Miles, of Baltimore; Case of Tumor of the Pons, with Conjugate Deviation of the Eyes and Rotation of the Head, by Dr. Charles K. Mills, of Philadelphia; Case of Chorea Major, by Dr. Frank P. Kinnicutt, of New York; Resistance of Tabetic Patients to Aconitia, by Dr. E. C. Seguin, of New York; and a Case of Post-Diphtheritic Paralysis, also by Dr. Seguin. In the latter the diphtheritic trouble was located in the anus, and had ensued upon a slough caused by the use of carbolic acid in the treatment of piles at the hands of an empiric. During the meeting of the Association the following papers were read by title only: Brain of Hydrocephalus from a Dog, by Prof. Burt G. Wilder, of Cornell University, Ithaca, N. Y.; Investigations into the Earlier and Obscure Symptoms of Lead-Poisoning, by Dr. J. J. Putnam, of Boston; On the Function of Nerve-Cells, by Dr. A. B. Clevenger, of Chicago.

The following officers were elected for the ensuing year: president, Dr. W. A. Hammond, of New York; vice-president, Dr. L. C. Gray, of Brooklyn; secretary and treasurer, Dr. E. C. Seguin, of New York; extra members of the council, Dr. J. S. Jewell, of Chicago, and Dr. Isaac Ott, of Pennsylvania. The following new active members were elected: Drs. H. Gradle and A. B. Clevenger, of Chicago, Drs. Charles K. Mills and Wharton Sinkler, of Philadelphia, and Prof. Burt G. Wilder, of Cornell University. Up to the present time there had been no provision in the constitution or by-laws for the creation of honorary members of the Association, but during this meeting amendments were made which permitted the appointment of both honorary and associate members, and the following gentlemen were elected to these positions: Honorary members, J. M. Charcot, of Paris; J. Hughlings Jackson, of London; W. Erb, of Leipsic; C. Westphal, of Berlin; and Theodore Meynert, of Vienna. Associate members: Thomas Stretch Dowse, of London; W. R. Gowers, of London; David Ferrier, of London; H. C. Bastian, of London; J. Russell Reynolds, of London; Moritz Bernhardt, of Berlin; Camillo Golgi, of Reggio, Italy; and Dr. Obersteimer, of Vienna. Dr. N. B. Emerson and Dr. Lombard, who had formerly been active members, were also constituted associate members, the one having moved to Honolulu, Sandwich Islands, and the other to London. The Association adjourned to meet in New York, as usual, on the third Wednesday in June, 1882.

— At a stated meeting of the New York Academy of Medicine, held June 2d, the papers of the evening were as follows: (1.) The Use and Value of Artificially Digested Food, Peptone, by Dr. George B. Fowler. (2.) Photo-Micrography and its Application to Histology (illustrated), by Prof. J. W. S. Arnold.

Recent Literature.

The Sanitary Care and Treatment of Children and their Diseases. Boston: Houghton, Mifflin & Co. The Riverside Press, Cambridge. 1884.

This book is made up of a series of five essays, by Drs. Elizabeth Garrett-Anderson, Samuel C. Busey, A. Jacobi, J. Forsyth Meigs, and J. Lewis Smith, prepared by request of the trustees of the "Thomas Wilson Sanitarium" of Baltimore, Md. For the establishment of this sanitarium, the late Thomas Wilson, of Baltimore, bequeathed the munificent gift of five hundred thousand dollars, "for the purpose of securing a summer retreat for sick children from the heat and unhealthfulness of the city, and for such other kindred purposes as may be hereafter determined upon by the corporation." The trustees appointed by the testator for carrying out the provisions of the above trust decided, preliminary to the formation of any definite plan of procedure, as they tell us in their circular, "to correspond with a few persons at home and abroad who are eminent for their experience and success in the treatment and care of sick children, and to obtain essays from them, to be published for the benefit of this and similar institutions."

In these essays are considered, at the request of the trustees: "The best method of establishing a summer retreat for sick children under the most favorable hygienic and local conditions; the regulations suitable for receiving and administering medically and otherwise to those who shall be the proper objects of their care; the character of the buildings that may be requisite; how best to provide for mothers or nurses accompanying their children; and generally such incidental recommendations as experience or reflection may commend as valuable and useful." Suggestions were also asked for in reference to the most practicable means of lessening the risks and dangers incident to children exposed to the heated and impure atmosphere of a large city during the summer months; also as to the best methods of extending a general knowledge of simple hygienic rules for the treatment of children at home among the poorer classes.

The field of inquiry, it is thus seen, has been a wide one, and includes all practical points involved in the management of children. The high and scientific character of the authors of these five essays is a sufficient guarantee that the work has been well and thoroughly done; and it will subserve the double purpose of being a valuable work of reference for those who may be engaged in carrying out similar trusts, and at the same time most interesting and instructive reading for all concerned in the care and welfare of little children. The essays of Drs. J. Forsyth Meigs, and J. Lewis Smith should be read by all practitioners engaged in the treatment of children, dealing largely, as they do, with infant diet in health and disease, and with much detail.

The book is a credit to the publishers, and would make a handsome ornament to any parlor table.

TINCTURE FERRI CHLORIDI.

Dr. H. Hager recommends that tincture ferri chloridi be mixed with simple syrup and then with milk; this mixture not affecting the teeth, nor the usual stypitic taste being apparent. — *Druggists' Circular*.

Medical and Surgical Journal.

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ATHLETICS AND TRAINING.

Just at this season of the year, in this country, athletic competitive exercises are most pursued and attract the most attention, and this is especially true of those in which young and enthusiastic amateurs take part. During the last weeks of June or the first weeks of July the various friendly contests between the different college and university crews, nines and elevens, occur; and to these have been added of late years running races, which also tax the heart and lungs. The results of the previous months' judicious or injudicious training and practice are put to the test of a struggle, more or less short, sharp, and severe. Many of the contestants are benefited by the process; some do themselves at least no harm; whilst a few, undoubtedly, are temporarily or permanently injured. This must sometimes be the case in a close rowing race, for instance, over a four-mile course, in which the least fit man fails to do his part toward sustaining the honor of his college unless he utterly "pumps himself out," or in which the best man finds himself suddenly called upon to do his own work and that of a disabled comrade beside. These are not moments when results and relative values are viewed through the spectacles of the calm and cold psychologist, and efforts are sometimes made in haste which have to be repented of at leisure. At the age of the average college athlete, even at a period when to sneer is more cultivated than to cheer, ambition and vanity predominate over prudence and discretion. The dangers of overtraining, and of shirking training and still attempting to do the expected work, are also real; moreover, although the training of the amateur athlete is more correct and sensible than it was ten or fifteen years since, it is still not uncommon that the best intentions merely emphasize the worst methods, at least for the individual. This must occur unless it is constantly borne in mind that it is the individual and not a class which is to be considered, and unless the regulation of training and the selection of candidates are controlled by some one with an education, as well as practical experience, which will enable him to estimate all the factors involved in the equation.

We took occasion to touch on the question of athletics in our brief editorial remarks, under the head of Physical Exercise and Human Endurance, last September, and will have something more to say on the physiology of training and of athletic competition in a future number. Macdon touches important points on pages 16 and 17 of his book on training when he

says, "In fact, a boat race has now become a matter of wind rather than of muscle, and, as an old water-man at one of our races, last year, remarked, in my hearing, 'the crew that can bucket it the fastest will win the race, if they don't bust.'" Again, "The best men fall off when the racing or the exclusive training exercise for the racing begins; under it a powerful man dwindles."

The question is to find out just how near the "busting" and the "dwindling" point the individual dare venture for the final contest. Some of the ware necessarily gets spoiled in the firing, and the amount is likely to be proportioned to the skilled intelligence of the person in charge.

SKODA, ROLLESTON, LITTRÉ.

In the deaths of Prof. Josef Skoda, of Vienna, and of Professor Rolleston, of Oxford, their respective universities have lost distinguished ornaments, and medicine and medical science investigators not easily replaced. In Skoda not a few of our readers lose a former much-valued teacher. Dr. Skoda was seventy-six years of age; Professor Rolleston but a little over fifty. The latter was elected an honorary member of the Massachusetts Medical Society at its last meeting.

M. Littré, although best known as a lexicographer and philologist, studied medicine in the school and hospitals of Paris, and at one time looked to its practice as his future career. His edition of the works of Hippocrates with a French translation and his Dictionary of Medicine have the stamp of honest, thorough work, which marks all he did, and that was an immense amount. He was an indefatigable worker, which, though he lived to be eighty years of age, his dictionary of the French language alone would attest. His famous contest with Bishop Dupanloup for admission to the French Academy will be recalled by many of our readers. His election was for some time prevented by the bishop, but when M. Littré was finally admitted, in spite of this persistent opposition, — had their places been reversed it would have been termed *persecution*, — the bishop withdrew from the Academy, and never attended another meeting.

MEDICAL NOTES.

— Three cases of small-pox, the origin of which could not be traced, were brought to the notice of the Boston Board of Health during the past week.

— We are sorry to notice that in our report last week of the after-dinner speeches of the centenary celebration some of the chairman's toasts were improperly included in quotation marks. Our report does not claim to be an exact reproduction of all that was said, but is as near an approximation as a skillful stenographer could produce. We are conscious that unavoidable haste has done injustice to some of the toasts and speeches. The eventual publication of the proceedings by the society will probably give the most accurate report.

—The city council of Dover, N. H., becoming alarmed at the frequent occurrence of small-pox throughout New England, at its meeting in the first week of June, passed resolutions appointing a physician in each ward of the city, whose duty it should be to visit every dwelling-house, hotel, workshop, and store, and vaccinate, at the expense of the city, with kine virus, each person who needed it. It was decided by the physicians named in the resolutions to recommend that every person who had not been vaccinated during the last seven years (unless protected by variola) be vaccinated. The work was commenced on the 11th inst., and is about completed. Some thirty-three hundred people, out of a population of twelve thousand, have been vaccinated, making the most thorough work of its kind for many years.

—The following is reproduced by the *Medical Times and Gazette*: Professor Depaul, giving an account to his class of the magnificent obstetrical clinic (constructed at the moderate cost of twelve thousand francs per bed), and stating that an amphitheatre had been provided in which remarks might be made that it would not be proper to make at the bed-side, observed that it reminded him of some words which, to his infinite regret, had once escaped him when examining a poor woman, who, to all appearance, had succumbed to a uterine hemorrhage. Turning to the persons who surrounded him he said, "This woman is dead." But to his great stupefaction the patient replied, in a feeble voice, "*Pas encore!*" So little dead, indeed, was the poor woman, in spite of all appearances, that in three weeks she left the clinic perfectly well. This "*pas encore*" corresponds pretty well to what occurred to Récamier one day when he was called by a colleague to see a man, the subject of typhoid fever. Récamier complained of having been called to the case too late, saying that the patient apparently could not survive the night. The latter, on hearing him, emitted a certain noise from the lower passages, accompanying it with the words, "*Qui crepita vit!*" And in fact, not only did he not die of the typhoid fever, but he is alive at the present time. — *Gaz. des Hôpitaux*.

NEW YORK.

—Commencing with the July number, the *New York Medical Journal* is in the future to be devoted more particularly, though not exclusively, to obstetrics and gynecology, and an addition will be made to its present title which will indicate this new departure.

— "Dr. Romaine, from Paris, the king of dentists," who for some time past has been making a sensation in the streets, has lately come to grief, having been arrested and fined the other day for collecting a crowd and blocking the public way. This is a mountebank who has been in the habit of riding about the city, dressed like a circus performer, in gaudy colors and tinsel, in a four-horse open carriage, having a huge placard with the above inscription, and preceded by another, which was drawn also by four horses, and containing a brass band of six or eight pieces. At certain intervals this magnificent *cortège*

would come to a halt, and the king of dentists, from his seat in the barouche, would begin pulling the teeth of any individuals who might desire to have the operation performed, and "all for the sake of charity," as he announced. In the mean while an immense crowd would be attracted by so novel a spectacle, and an assistant of the illustrious personage would then commence disposing of certain bottles of patent medicine, which were eagerly bought up by the wonder-stricken assemblage. "Dr. Romaine" seems to have been doing a thriving business, notwithstanding the fact that (as he incidentally remarked to a newspaper reporter) his sole purpose in the world is to be charitable, for he nonchalantly paid the fines that had been imposed upon him and his attendant medicine-vender from a one-hundred-dollar bill, and as he drove off in his carriage from the Yorkville Police Court, where he had been arraigned, threw a handful of change among the crowd waiting outside, who gave him a most enthusiastic reception when he reappeared. The truth of a statement of his, however, to the effect that he had been offered ten thousand dollars by the dentists of Brooklyn to leave that city, where he had been "practicing" before he came to New York, may be open to some question.

—Dr. Beard has been making some experiments in "transvoyance," in the person of a Mrs. Carpenter, the wife of a popular lecturer on mesmerism, which have attracted considerable attention, and which, to say the least, are certainly very curious. Hearing that this lady was a subject of extraordinary susceptibility, who, while in trance, had the power of seeing objects around her when she was blindfolded, he obtained permission to apply any tests that he might desire in her case. When she had been put in a trance state by her husband, who was not permitted to come within twenty feet of her afterwards, Dr. Beard and a medical friend of his, who was a surgeon, bandaged her eyes with all the skill that they could devise, first using cotton-batting and then three bandages of cotton cloth. When this was completed, Dr. Beard drew from his pocket a pack of cards, and held them, one after another, to her forehead in such a manner that neither he himself nor any one else in the room could see their faces, yet in almost every case she told the card at once, hesitating only between the nine and ten spot cards. He then held some large type print to her forehead, and this he found she could read slowly, though she failed to decipher fine print. On coming out of the trance Mrs. Carpenter could remember nothing that had taken place. On a subsequent occasion the same experiments were repeated, but failed completely, a result which the subject attributed to the wet weather which then prevailed, saying that she had found that this was always unfavorable to trance experimenting in her case. The third time the tests were applied, however, the same success was met with as at first. Dr. Beard states that he exhausted every means of preventing deception which occurred to him or his friends, and he is convinced that it could not possibly have been practiced.

—The City Board of Health has asked the board of estimate and apportion to appropriate the sum of thirty thousand dollars for the salaries of inspectors, physicians, and nurses to be appointed during the next six months to aid in the suppression of contagious diseases.

—Prof. T. Gaillard Thomas having resigned his position in the College of Physicians and Surgeons on account of the pressure of private work, Dr. Paul F. Mundé, editor of the *American Journal of Obstetrics*, has been appointed lecturer on gynecology in that institution. Dr. Mundé is at present one of the assistant surgeons to the Woman's Hospital, and professor of diseases of women in the medical department of Dartmouth College.

CHICAGO.

—The Tenement-House Inspectors of Chicago have recently reported over fifty houses in a bad sanitary condition, many of the buildings being overcrowded and impregnated with sewer-gas from untrapped and leaky plumbing, and others in a rickety condition, filthy, and unfit for habitation. Of 220 houses, containing 2741 rooms, examined by the inspectors, containing 757 families, aggregating 3471 persons, 54 were served with notices, 54 nuisances were abated, 63 rooms whitewashed, 35 vaults and catch-basins cleaned, 13 defective drains repaired, and 8 filthy premises cleaned. There were 1609 houses reported on in writing and inspected in nine weeks. According to newspaper accounts, small-pox seems to be firmly established in Chicago, the Poles, Bohemians, and Germans being the most subject to the disease.

Miscellany.

THE RELATIONS OF THE MARINE HOSPITAL SERVICE TO COMMERCE, THE PUBLIC, AND THE MEDICAL PROFESSION.

MR. EDITOR. — I have had sent me what purports to be an official publication of the Medical Society of the State of California, which to appearance presents for discussion by the society *The Relations of the Marine Hospital Service of the United States to Commerce, the Public, and the Medical Profession*; but which, by open charges, and that more dangerous because more insidious style of attack, by cunning implications and innuendoes, arraigns that important government service, without opportunity for defense, before a tribunal which has no jurisdiction or interest in the matter. What step, except to refer it to the committee on legislation, the California society took in the matter I do not know. Action which would condemn without trial, and without a full knowledge of facts, is inconsistent with the discretion and sound judgment of fair-minded men; and such a course, I am confident, would not be likely to govern our brethren on the Pacific coast.

The report on the Marine Hospital Service is at once ill-judged and ill-timed; it bears an ill animus throughout; it is founded on perverted statements, and puts together, as bearing on each other, facts which have no proper correlation. I purpose to take up and answer some portions of this singular production.

The author of the report states that the natural inference is that "a government hospital is kept for those in the service of the government, such as United States marines; while the fact is that our marine hospitals are kept by the government for those not in its service, employees of individuals and corporations." Except that the Service cares for the officers and men of the Revenue Marine Service, who by the Regulations are required to pay Marine Hospital dues, and, upon proper application, for those of the United States Navy and those engaged in vessels of the Coast Survey and Light-House Board, this is strictly true. The author, however, fails to note in the same connection that marine hospitals are not, in the true sense, *government* hospitals, as are those belonging to the war and navy departments; that, although the buildings and grounds belong to the government proper, the Service is maintained by a private fund, accumulated from monthly dues *paid by seamen of the mercantile marine* while in health, for their own use, as a means of insuring proper care during sickness; and that the government is merely the trustee of this fund, and authorized to employ it, under strict regulations, only for legitimate purposes. As a matter intimately connected with our shipping, and vital to its integrity, the care of the merchant seaman becomes a national concern and worthy the nation's care.

"Recently published reports of the Service estimate the number of such persons cared for in its marine hospitals at 170,000, a number greater than our army and navy combined." The author of the report made a perfectly true statement, but left a wrong impression; he should have said "a clientele of 170,000, of which about twelve per cent. [omitting readmissions, etc.] become patients every year." He might also have said, in favor of the Service and in testimony of the work it is doing, — but without depreciation of the medical men of the army and navy, — that, while the army with 25,000 men has a medical staff of about 200, not including contract surgeons, and the navy with 8000 a staff of *about* 100, the Marine Hospital Service cares for its 170,000, with 25,000 actual patients in each year, with but thirty-five medical officers and as many active assistant surgeons.

"Your committee find that the crippled and infirm or permanently disabled are not provided for by this Service." Granted! Neither are they in any of the *hospitals* of the land. It is a fortunate circumstance, however, that several of our States have snug harbors and similar institutions in which our worthy and tempest-tossed seamen can be well cared for in their declining years. It is noticeable, also, that no mention is made in the report (bearing date April 21, 1881) of the fact that the Surgeon-General, in his last two published reports for 1879 and 1880, has urged the establishment of a national snug harbor, under the care of the government, to meet this very end. In closing his remarks on this subject, in the report for 1879, the Surgeon-General says, "Soldiers and naval seamen have for many years been provided by law with a permanent home when worn out in the service or disabled by casualty, and a similar provision for the seamen of the Mercantile Marine would tend greatly to improve the character of American seamen."

The author states that "the marine hospital system furnishes relief at designated seaports and river stations inland, and *only at such points*," and follows up his statement with a quotation from the Regulations, which would be very effective in corroboration of his state-

ment, but, unfortunately, it relates to an entirely different topic. The fact is that seamen are cared for at all ports of the United States. Application is made to a medical officer of the Service, if such be stationed there, or, "in the absence of such officer, then to the proper customs officer, acting as the agent of the Marine Hospital Service." No *bona fide* seaman who is in need of medical care is ever intentionally refused hospital or office treatment by the Service, so long as he has not abandoned his vocation. The choice of another profession, in which the man believes he can do better, very naturally cuts him off from relief. Boarding-house keepers, longshoremen, bummers, and frauds are ruled out. From such as these complaints of neglect generally come.

"The official reports show that from 1860 to 1878 the tax collected from seamen amounted to \$4,368,757, and the appropriation by Congress, for the same period, \$3,061,303." A singular forgetfulness undoubtedly prevented the mention of the fact that for at least thirteen of these nineteen years the Service was simply a machine, — the toy and prize of politicians; that large sums were expended in that time unwisely and perhaps dishonestly; hundreds of patients were admitted to hospitals without the shadow of right; surgeons and their families were subsisted, and members of Congress, collectors, and other officials entertained, at the public expense; and pickings and stealings were persistently winked at. On the other hand, since the reorganization of the Service in 1873 it has been practically self-supporting. For the fiscal year ending June 30, 1880, 24,860 seamen were furnished relief by the Marine Hospital Service; the receipts were \$399,129.90, and the expenditures \$402,185.49. The receipts were entirely from the collection of hospital dues, with no appropriation from Congress, no such assistance having been received since 1873, and since November, 1873, no deficiency estimate has been presented to Congress; prior to the reorganization from \$150,000 to \$200,000 were appropriated annually. The expenditure of \$402,185 in 1879-80 includes an extraordinary disbursement of \$31,440 for the bedding and outfit of two new hospitals.

In 1869 (before the reorganization) 11,356 patients were treated; the receipts were \$474,719.70, including an appropriation by Congress of \$200,000; the expenditures were \$406,089.23. We find at this day more than twice as many seamen treated at a less total cost, and a service self-supporting.

"Applicants for relief must first satisfy the collector that they have paid their tax for the three months prior to their application for relief; without such evidence they are not seamen according to the law, and have no claims upon the Marine Hospital fund." Only at ports where there are no medical officers is the patient obliged to seek the collector who acts as agent of the Service. The Regulations expressly provide that but *two months' service* are required; that a reasonable absence does not preclude a seaman from relief, provided he has not abandoned his calling; and, moreover, relief to a seaman of a *single day's* service is not refused if he is injured or has been taken sick while in the line of his duty, or in *any* case of emergency where humanity dictates a lenient construction of his case.

"The Service, as a charity, is opposed to the best interests of the sailor in this, that it offers an encouragement to debauch and vice; . . . a large majority of the cases treated are venereal diseases and other con-

sequences of debauch on shore." The high moral tone of this quotation loses some of its point in that the latter part is untrue, the former absurd. According to the statistical tables of annual reports published from 1873 to 1880, the percentage of venereal diseases has not exceeded twenty-four per cent. (varying from sixteen to twenty-four per cent.). Moreover, as the moral and humanitarian aspect of the case is called up by the author, the fact is clear that the sick or disabled seaman, whatever his disease or its cause, is a *patient*, in need of assistance; to be treated as the army surgeon treats friend or foe, *nullo discrimine*. The seaman is a child in manners as he is in facility of falling into temptation; *he is at the same time a human being, and calls for humanity*.

I have criticised some of the statements made in this report. There are others equally baseless and equally absurd. I do not, for want of space, touch the deductions at the close of the report, except to express my dissent from them. Thus far I have looked at this document as it stands. On seeking its authors I find the chairman of the committee to be a physician of San Francisco, *late* Surgeon of the Marine Hospital Service, who resigned "rather than obey orders;" in fact, a man attached by many ties to San Francisco and to the Service — so long as he was allowed to draw his pay in that city. *Hinc ille lacrimæ!* The second is his friend. The third is unknown to fame.

From a somewhat intimate acquaintance with the Marine Hospital Service for eight years, and from an active participation in its duties for more than three, I cannot fail to express my hearty dissent from this report, its statements and conclusions; it bears the impress of malice, and deserves contradiction. On the other hand, *I know* the Service, as now constituted, to be effective and active, and in every way to be working for the good of the seaman; its present chief is wise, honest, and just, and its medical officers, chosen after a rigid examination, are selected from young men who will compare favorably with any in our midst.

I quote the words of Dr. E. J. Doering, *late* Surgeon in the Service, and now in Chicago, in confirmation of the statements I have made: —

"I have been connected with the Service for six years, and am familiar with its workings, and having resigned, and now being engaged in private practice, I have no further interest in this matter than to see justice done to a Service which asks no defense, but desires to be judged on its own merits, and not on the basis of an underhanded attack of one of its enemies, made behind the shield of a so-called committee of the California Medical Society."

FRANCIS H. BROWN,
Late Passed Asst. Surgeon M. H. S.

PODODYNIA.

MR. EDITOR, — In reading the interesting paper by Dr. T. B. Curtis on Pododynia in a recent number of the Boston Medical and Surgical Journal, it has seemed to me rather remarkable that he should have overlooked overstretching of the plantar fascia and an incipient flat foot as a cause of heel-pain in the first case narrated by him, as well as in the second case quoted from Desprès.

Without doubting that such a pain may be of a reflex character in some cases, it is very reasonable to

suppose that in heavy persons, who may perhaps have suffered from a slight injury of the sole, which serves as a starting point, overstretching of the plantar fascia, or an inflammation of slight degree at its posterior insertion, may be the cause of the trouble. Such disturbance might very likely be acquired by those whose duties obliged them to be much on foot, and especially in the case of those who had become rapidly fleshy. In such a case the development of similar trouble in the other foot is not difficult to understand; for, owing to the pain caused by standing, the weight is instinctively thrown upon the better one of the two feet, and when excessive weight is the original cause of the trouble such additional weight thrown upon the other foot might soon cause it to show signs of like trouble.

I had an experience in my own person of the correctness of this explanation when, a few years since, an injury of my left knee caused me to throw too much of my weight upon my right foot. As soon as the state of affairs was appreciated a rubber muscle with adhesive plaster was attached to the inner side of the leg so as to raise the arch of the sole, and after a few days the trouble ceased. I never became aware of any reflex cause, and since the recovery from the trouble in the left knee have never had a return of the plantar pain.

I may further remark that I now have under treatment a lady past the menopause who has of late grown rapidly stout, and who for several weeks has had "pain in the heel" of the right foot, which gradually increased in severity and extended over the region of the plantar arch, being nowhere very well localized, until, at last, walking became almost impossible. When I saw her, a few days since, a similar pain had developed in the left heel, but had not yet extended to the rest of the foot. By inspecting the right foot, undressed and raised from the floor, no local trouble can be detected, and the patient is entirely comfortable; but on extending the foot strongly with one hand, and, with the thumb of the other, making pressure on the inner margin of the plantar fascia, the pain in the heel and in the plantar region is at once reproduced. By directing the patient to stand up and rest the weight on the affected foot, it is at once apparent that there is some flattening of the instep, which is not appreciable when the foot is raised.

Now it is not to be expected that any "rubber muscle" that can be applied to a patient who weighs over two hundred pounds (as is the case with the one here referred to) will do more than palliate the tendency to flattening of the arch under such a strain; but it does *something*, and together with enforced rest for a time will help to cure the trouble. It is working better than I expected in the present instance, and I shall put another "rubber muscle" on to the better of the limbs to-morrow.

One of the causes of the widely-diffused and with-difficultly-located pain about the foot is the displacement of the bones of the tarsus by the spreading of the arch, and it is *this* pain rather than that which is located in the os calcis which, in my experience, interferes with walking.

I had not intended, when I began to write, to inflict so much upon you, but another case occurs to me which helps to illustrate the nature of the initial pain as felt in the receders of these patients.

I remember a gentleman who has had slight but well-marked rheumatic attacks, while exploring the

works of a Nevada silver mine, overstrained the insertion of the tendon of his right deltoid into the humerus. It was a long time thereafter before he could use the muscle without causing a recurrence of pain *limited to the insertion of the tendon*. I gave him anti-rheumatic treatment, but I have no very good ground for belief that it effected a cure. At all events, he got over it in time.

I think that what I have said would warrant the addition of an *eleventh* condition, characterized by "pain in the heel or sole, unattended by any objective symptoms," to those enumerated by Dr. Curtis, and in reading the two cases first enumerated by him I am inclined to place them in this category.

F. A. CASTLE.

NEW YORK, June 9, 1881.

INUNCTION AS A REMEDY FOR ACUTE INFLAMMATION.

MR. EDITOR,—I feel it almost a duty to add my testimony to that of Dr. Parker¹ as to the value of oil or grease as an external application. I have for ten years used it as a matter of routine in almost all forms of acute inflammation of the thoracic and abdominal viscera; also in inflammatory sore throat, abscesses, and some cutaneous eruptions. I generally order lard, which is to be found in every house, simply rubbed upon the skin, and covered over with a piece of flannel. It acts precisely like a poultice, for which it is a most convenient substitute, especially for children. In fact, I almost habitually use it instead of poultices, except in the case of discharging sores and abscesses; in short, wherever the skin is unbroken. If I want a stimulating effect I mix a little salt with it, making a very good substitute for camphorated oil and other liniments. The practice is not at all a new one, but seems to me not as well known nor as much used as it ought to be. The books, as Dr. Parker says, are strangely silent about it, though its efficacy in quelling inflammation is marked, and has the advantage of leaving no depressing effect behind. It is one of those little things of which successful practice is so largely made up, yet so simple and so small as to be almost beneath the notice of the too prevalent school of "intellectual myopes" and medical pundits.

Respectfully yours,

EDWARD T. WILLIAMS, M. D.

ROXBURY, June 18, 1881.

A QUERY IN ETHICS.

MR. EDITOR,—I think it reads "conduct unbecoming and unworthy a member of the Massachusetts Medical Society." Now, I have a medical friend who is a constant contributor to our local newspaper, and his items always end, "Dr. — was called." Week after week from one to a dozen of these interesting paragraphs adorn the columns of this paper. Wounds and bruises are transformed into fearful lacerations, fractures, and dislocations. Difficult surgical operations are reported which never took place except in the mind of the doctor.

Will you, or some gentleman versed in the proprieties which should govern the practice of our noble art,

¹ JOURNAL of June 16, 1881.

give me some idea to what extent we can "blow our own horn" without being liable under the clause first quoted?

I am, very respectfully, your obedient servant,

CANTHARIDES.

LETTER FROM PHILADELPHIA.

MR. EDITOR.—The Philadelphia Medico-Legal Society held its first annual celebration June 9th. Previous to the supper a conversational meeting was held, Dr. E. R. Prall in the chair. The subject of the several points at issue between physicians and druggists were considered, and the best means of meeting the evils of over-the-counter prescribing, unauthorized renewal of prescriptions, substitution and sophistication on the part of druggists were freely discussed. Several of the members of the society, having previously practiced in the country, said that they had found it advantageous to continue dispensing their own medicines in the city; others stated that they had been forced to adopt this course in order to protect their patients from extortionate charges of druggists, and to insure their obtaining the medicines ordered without adulteration or substitution. Dr. G. M. D. Peltz, by invitation, gave a very interesting account of the circumstances which had led him to take this step and dispense his own drugs. After referring to and giving illustrations of the excessive charges, amounting in some cases to a prohibitory tariff, he said that sophistication was very common among ordinary drug-shops; tinctures are generally made from fluid extracts, and not according to the Pharmacopœia; other preparations are likewise improperly made, and of varying strength; very little reliance could be placed upon the freshness or purity of remedies obtained indiscriminately from druggists, whose principal business is selling patent medicines. These remarks were not intended to apply to all pharmacists, but to the large number who are unprincipled and are governed solely by self-interest. Having decided to keep his own medicines, Dr. Peltz found that the wholesale druggists, with one exception, refused to give him a price-list, or to sell to him on the same terms as to retail druggists. This decided him; he accordingly laid in a stock of good drugs, and set to work making his own preparations according to the United States Pharmacopœia. Contrary to his expectations, his patients preferred to send to him for their medicines, rather than to trust to a disinterested apothecary to put them up. An incidental advantage of this plan is that it makes the doctor an excellent collector, which in dealing with many people is of prime importance; a direct advantage is, however, that the physician knows exactly what the patient is taking. The doctor had carried on this method only for six months, but had found it so successful that he was glad he had tried it, and was determined to continue it.

A vote of thanks was unanimously tendered Dr. Peltz for his interesting and important communication. In the discussion generally an evident want was exhibited for better control over the physician's prescription. Besides the method already referred to, it was stated that a physician with a large office practice employed a graduate in pharmacy to call at the close of his office hour for all the prescriptions, which had been retained on file; these were now compounded *secundum artem* and delivered at the patients' residences, the physician

keeping his prescriptions. This plan has been in practice several years, and works well. The members of the society seemed much interested in the remarks made upon the subject, and it was evident that the example cited would have a number of followers. A supper terminated the evening's exercises, to which about forty members sat down.—a large number, considering the fact that the night was very stormy and unpropitious.

From the above it is seen that in this city the irrepressible conflict continues. The animus of the druggists may be inferred from the fact that at a recent meeting of their board of trade a resolution was adopted declaring that in their relations to the public they occupied an equal standing with physicians. This was apparently in reply to a resolution recently adopted by the Philadelphia County Medical Society asserting the fact that, in compounding prescriptions, the druggist acts simply as the agent of the physician.

An important step has been made by the Faculty of Jefferson College in lengthening the term four weeks, making the annual commencement come at the last of March or early in April, the lectures beginning as usual with the preparatory course in September. There are some changes in the roster in the arrangement of didactic and demonstrative lectures, which are to begin at nine o'clock each morning instead of ten, as heretofore.

The alterations in the building are going on rapidly; by which it is said that the seating capacity of the two lecture halls will in each be increased by about one hundred seats.

The case of the young girl (referred to on page 284 of this volume of the JOURNAL) who was tried for infanticide last week resulted in acquittal. It was testified that she had made application at a number of institutions for attendance during confinement, but was uniformly met with refusal, and was taken from the street by two poor women, who gave her shelter. The villain who brought her to Philadelphia had deserted her and left her, friendless and without means, in her unfortunate condition, to the mercy of strangers. The case excited the attention of the Women's Christian Association, who provided counsel for her at the trial, and sent her to her friends after acquittal.

Bishop Stevens has announced his intention of instituting a home for foundlings in this city during this summer, preparatory to inviting the assistance of the clergy and laity in the work next fall.

At the last meeting of the County Medical Society Dr. Carl Seiler exhibited a new form of office battery for galvano-cautery. Twelve pairs of plates (about four by six, zinc and carbon), connected for intensity, are dropped into and removed from the electrolyte contained in two large jars, inclosed in a box, by means of a treadle which is counterbalanced. By this means the physician does away with the need of an assistant, as the treadle is worked by the foot; the amount of depression controlling the degree of heat by regulating the immersion of the plates into the fluid, the current being started or stopped almost instantly. For operations in air-passages, requiring the actual cautery, this form of battery is the most convenient that has yet been brought before the profession; and in ordinary cases it would seem to be much simpler and easier of application than even the thermocautère of Paquelin.

Mayor King has determined that the coming Fourth of July shall be celebrated in this city in a more rational

manner than heretofore, and has therefore notified dealers in fireworks that they will be prosecuted, according to the law of 1721, for exposing certain explosives for sale; and every one is forbidden to fire pistols, bombs, crackers, etc., upon the public streets. A year ago, as the result of the general use of small toy pistols, nearly twenty children perished from tetanus in this city alone; and several columns in the daily papers were occupied with a list of the accidents to life and property, which we hope will be much less on the next "Independence Day."

Among those who will attend the International Congress at London from this city, we notice Professor Gross and Dr. S. H. Gross; Dr. J. Minis Hays, editor of the *American Journal of Medical Sciences*; Dr. Horatio C. Wood, editor of the *Philadelphia Medical Times*; Dr. J. Solis Cohen, Dr. R. A. Cleemann, and others.

LETTER FROM VIENNA.

OBSTETRIC INSTRUCTION.

MR. EDITOR, — The manner of teaching obstetrics in the wards of the General Hospital of Vienna may be considered as extremely advantageous for advanced students, as most of those who go there from America are.

An operative course in obstetrics on the dead body is given by Dr. Powlik, Prof. Karl Braun's assistant. This allows each student the opportunity of performing the various operations at least once, and sometimes twice.

An operative course very similar to this is given by Dr. Richardson at the Harvard Medical School.

Those students who have taken the operative course are permitted to take a touch course under Dr. Powlik by paying an additional fee. This is really a very instructive course, as very few of the students have had the opportunity of examining so many pregnant women previous to delivery as they get here. Dr. Powlik usually takes four students, one hour each day, and assigns to each for examination a pregnant woman. Each student makes a thorough external examination of the abdomen by palpation and the ear, and reports upon what he has found, the position of the child and the number of children being the things sought for by abdominal examination. His diagnosis is then confirmed or shown to be erroneous by Dr. Powlik and the other students. Especial stress is laid upon making out the position by grasping the child's neck between the thumb and fingers of the right hand, and by deep pressure, not sufficient to be painful at all to the woman, distinctly feeling the chin of the child, which, by approximating the thumb and fingers underneath the neck, can be easily grasped, and in most cases readily moved from side to side. This point, I think, has never been described by any writer.

After the external examination is finished the diagnosis is confirmed, as far as possible, by an examination per vaginam. Most of the women are in the eighth or ninth month of pregnancy, and are examined by Dr. Powlik previous to the student's examining. The student reports upon what he finds per vaginam, namely, the height and softness of the fornix, the size of the os, the length of the cervical canal, and whatever may be found on the presenting part, if it may be felt. From these the student gives his opinion as

to the time of gestation, and about when the woman may be confined. Each student taking this course has the opportunity to examine four women each day for one month. The fee is \$22.00. All students who have taken out Professor Braun's ticket, which is a general one, similar to a matriculation ticket, are permitted to examine pregnant women twice per week for an hour at a time, in one of the large wards. But there is such a rush of students to this that it is hardly worth attending, as one can rarely get an opportunity to examine more than one patient, even if he may be so fortunate as to secure one. There are about ten confinements a day in the hospital, and it is only every third day that pregnant women are admitted in Braun's wards, to which the students have recourse, so that really the students do not have a very large number of confinement cases to attend. Those students who desire to take cases can do so by leaving their names on the ward list, and cases are assigned them. Many of the students do not care for normal cases, and if they find the case assigned them is normal they will often leave it to one of the midwives who are attached to the ward. If the student finds he has an abnormal case, or it is likely to be instrumental, then he watches it along, hoping that he may be permitted to use the instruments, if it should come to that. If it is a simple forceps case he is often allowed to operate, but if a difficult forceps or some other operation it is usually done by Dr. Powlik, unless it is near the hour for Professor Braun to lecture, when the latter performs the operation and uses the case as the topic of his lecture.

Of these different courses the one which perhaps is of the most value to students is the touch course, since it cannot be practiced in our country as it can be at Vienna, where so many pregnant women are brought together. If it should be attempted to any extent at our lying-in hospitals the probable result would be a depopulation of the hospitals in a very short time, as in our cities there are many places where women can be confined with good care, while at Vienna the General Hospital is about the only place for them.

I will merely speak of one very interesting case which was operated upon by Professor Braun at his clinic this winter.

A woman of thirty-five had been in labor thirty-six hours, and was nearly exhausted. Pains very feeble. She was delivered by forceps with some difficulty, when it was suddenly ascertained that the uterus was ruptured. When this accident occurred was uncertain. The only thing to do was to open the abdomen and remove the uterus, which was done. The uterus was drawn out through the abdominal opening and divided by the galvano-cautery, so as to make the hemorrhage as slight as possible. The division was made just above the cervix, which was left behind in the abdomen. There were a number of clots in the abdomen, but not much hemorrhage from the operation. Carbolic spray and dressing were used.

No obstruction was determined to cause the rupture, which occurred at the right posterior portion, and extended upward about three inches from the cervix. The woman lived about eighteen hours after the operation. The child was nearly dead when delivered, and could not be resuscitated. It was normal as regards size and shape. The presentation was considered normal, with no obstruction.

ROBERT B. DIXON, M. D.

VIENNA, April 2, 1881.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 18, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diphtheria and Croup.	Lung Diseases.	Diarrhoeal Diseases.	Scarlet Fever.
New York.....	1,206,590	637	303	34.22	12.40	11.96	6.12	3.92
Philadelphia.....	846,984	276	92	22.83	5.07	4.35	2.90	3.62
Brooklyn.....	566,689	206	77	27.18	13.11	10.19	4.85	1.94
Chicago.....	503,304	187	108	29.95	8.02	7.49	8.56	1.07
Boston.....	362,535	157	51	14.65	9.55	7.64	1.91	1.27
St. Louis.....	350,522	189	98	12.70	.53	6.35	—	.53
Baltimore.....	332,190	131	68	30.53	6.87	3.05	6.87	4.58
Cincinnati.....	255,708	—	—	—	—	—	—	—
New Orleans.....	216,140	189	90	26.45	—	2.12	16.93	3.70
District of Columbia.....	177,638	70	34	27.14	4.29	5.71	17.14	—
Pittsburgh.....	156,381	68	30	44.12	11.76	7.35	8.82	13.24
Buffalo.....	155,137	67	21	19.40	1.49	5.97	8.96	2.99
Milwaukee.....	115,578	57	29	19.30	3.51	12.28	5.26	3.51
Providence.....	104,855	47	9	14.89	—	8.51	—	4.26
New Haven.....	62,882	27	9	14.81	7.41	11.11	—	7.41
Charleston.....	49,999	51	23	31.37	—	—	19.61	5.88
Nashville.....	43,461	25	13	28.00	—	—	24.00	—
Lowell.....	59,485	16	6	25.00	6.25	—	6.25	—
Worcester.....	58,295	13	5	23.08	15.38	7.69	—	—
Cambridge.....	52,740	16	4	12.50	12.50	—	—	—
Fall River.....	49,006	21	12	14.29	—	—	9.52	4.76
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	9	3	11.11	11.11	—	—	—
Springfield.....	33,340	7	2	—	—	14.29	—	—
Salem.....	27,598	5	1	—	—	—	—	—
New Bedford.....	26,875	16	3	18.75	12.50	6.25	—	6.25
Somerville.....	24,985	5	1	20.00	20.00	—	—	—
Holyoke.....	21,851	8	3	12.50	—	—	12.50	—
Chelsea.....	21,785	10	5	20.00	20.00	10.00	—	—
Taunton.....	21,213	5	2	40.00	20.00	—	20.00	—
Gloucester.....	19,329	3	1	33.33	33.33	—	—	—
Haverhill.....	18,475	5	0	—	—	20.00	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	4	2	—	—	—	—	—
Fitchburg.....	12,405	1	0	—	—	—	—	—
Twenty-three Massachusetts towns.	176,086	62	13	27.42	19.35	1.61	—	3.22

Deaths reported 2590 (no reports from Cincinnati); 1118 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 677; consumption 314, diphtheria and croup 201, lung diseases 188, diarrhoeal diseases 165, scarlet fever 81, small-pox 51, cerebro-spinal meningitis 45, measles 39, typhoid fever 32, malarial fevers 22, whooping-cough 19, erysipelas 10, typhus fever seven, puerperal fever five. From *small-pox*, New York 23, Philadelphia 20, Chicago four, Pittsburgh two, Brooklyn and Boston one. From *cerebro-spinal meningitis*, New York and St. Louis 11, Chicago eight, Providence three, New Orleans, District of Columbia, Pittsburgh, and Milwaukee two, Philadelphia, Brooklyn, Worcester, and Webster one. From *measles*, New York 21, Baltimore five, Brooklyn and Chicago three, New Orleans and Providence two, Philadelphia, Buffalo, and Milwaukee one. From *typhoid fever*, Chicago, St. Louis, and Baltimore five, New York, Philadelphia, and Brooklyn three, Pittsburgh and Lowell two, Boston, New Orleans, District of Columbia, and Charleston one. From *malarial fevers*, New Orleans six, Brooklyn four, New York three, Baltimore and Charleston two, St. Louis, District of Columbia, Pittsburgh, Buffalo, and Milwaukee one. From *whooping-cough*, Philadelphia five, Baltimore four, New York three, Brooklyn and Chicago two, Boston, Buffalo, and Attleborough one. From *erysipelas*, New York and St. Louis three, Philadelphia, Brooklyn, Buffalo, and Malden one. From *typhus fever*, New York seven. From *puerperal fever*, St. Louis two, New York, Chicago, and Nashville one.

Thirteen cases of small-pox were reported in Brooklyn, 42 in Chicago, three in Boston, 11 in Pittsburgh; diphtheria 32, scarlet fever 11, in Boston; scarlet fever 19, diphtheria 10, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,037,824 (population of the State 1,783,086), the total death-rate

for the week was 18.24, against 17.75 and 17.62 for the previous two weeks.

For the week ending May 28th in 149 German cities and towns, with an estimated population of 7,763,482, the death-rate was 26.1. Deaths reported 3895; 1856 under five: pulmonary consumption 565, acute diseases of the respiratory organs 425, diarrhoeal diseases 159, diphtheria and croup 131, scarlet fever 74, typhoid fever 47, measles and *rötheln* 39, whooping-cough 33, small-pox (Königsberg two, Munich, Berlin six, Kottbus, Hamburg, Cologne, Aachen two) 14, puerperal fever 13, typhus fever (Tilsit, Erfurt) two. The death-rates ranged from 17.8 in Cassel to 43.3 in Augsburg; Königsberg 34.7; Breslau 32.5; Munich 33; Dresden 19.4; Berlin 25.8; Leipzig 26.8; Hamburg 26.6; Hanover 21.2; Bremen 32.9; Cologne 23.4; Frankfort 18.6; Strasburg 35.3.

For the week ending June 4th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 20.3. Deaths reported 2967: acute diseases of the respiratory organs (London) 249, measles 116, whooping-cough 91, small-pox (London 82) 85, scarlet fever 60, diarrhoea 43, fever 37, diphtheria 14. The death-rates ranged from 12.6 in Brighton to 25.5 in Manchester; Leeds 17.8; Birmingham 17.9; London 20.5; Liverpool 21.9; Sheffield 22.7; Bristol 23.9. In Edinburgh 20.8; Glasgow 22.7; Dublin 26.4.

In the 21 chief towns in Switzerland, for the week ending June 4th, population 479,934, there were 26 deaths from acute diseases of the respiratory organs, diarrhoeal diseases 23, measles 12, typhoid fever five, diphtheria and croup four, small-pox four, puerperal fever three, whooping-cough three, scarlet fever two. The death-rates were: Geneva 9.9; Zurich 29.1; Basle 28.5; Berne 26.9; St. Imier 50.8.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.		Thermom-eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 12	29.170	56	71	47	79	73	100	84	Calm.	E	E	0	3	4	C	C	G	—	—
Mon., 13	29.081	51	57	46	99	78	95	91	E	E	E	3	1	6	G	O	O	—	—
Tues., 14	29.825	63	72	52	95	76	85	85	SW	SW	SW	3	14	8	O	O	F	—	—
Wed., 15	29.894	68	77	59	67	36	47	50	W	W	W	12	19	12	C	F	C	—	—
Thurs., 16	29.957	61	70	49	36	16	26	26	W	W	W	14	24	3	C	C	C	—	—
Fri., 17	29.717	64	78	51	55	34	79	56	W	SW	SW	4	9	6	F	C	F	—	—
Sat., 18	29.714	68	77	60	57	43	61	54	W	W	W	3	19	3	C	O	F	—	—
Week.	29.908	62	78	46				37										9.20	.10

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

THE LATE DR. C. T. COLLINS. — RESOLUTIONS OF RESPECT BY THE BERKSHIRE MEDICAL SOCIETY.

WHEREAS, The death of the late Dr. C. T. Collins has removed from this society one of its oldest and most honored members; —

Resolved, That the Berkshire Medical Society and the profession at large have sustained an irreparable loss; the community in which he lived a valued and honored citizen; and the sick and suffering a successful and beloved physician.

Resolved, That we ever bear in mind his genial presence and wise counsels at the meetings of the society, of which he was one of the most regular attendants.

Resolved, That we extend to the family and friends of the deceased assurances of our grief and deep sympathy with them in their great affliction.

Resolved, That the foregoing resolutions be published in the county papers and in the Boston Medical and Surgical Journal.

W. W. LEAVITT, }
F. K. PADDOCK, } Committee.
H. J. MILLARD, }

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 18, 1881, TO JUNE 24, 1881.

MIDDLETON, J. V. D., major and surgeon, having reported in person is assigned to duty at Fort Hays, Kans., relieving Assistant Surgeon Munn. S. O. 122, Department of the Missouri, June 21, 1881.

GARDNER, W. H., captain and assistant surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 138, A. G. O., June 18, 1881.

MESS, C. L., captain and assistant surgeon. When relieved by Surgeon M. O'Brien to proceed to Fort Bayard, New Mexico, and report to the commanding officer for duty. S. O. 122, C. S., Department of the Missouri.

DEWITT, C., captain and assistant surgeon. Granted leave of absence for four months. S. O. 137, A. G. O., June 17, 1881.

BOOKS AND PAMPHLETS RECEIVED. — The Disposal of the Dead, a Practical Catechism. By Edward J. Birmingham, M. D. New York: Birmingham & Co., 1881.

France and French and Studies in the Lower Animals. By George M. Beard, M. D. (Reprint.)

Principles on the Duty and its Preventible Causes. By H. Warner, M. D. (Reprint.)

Remedies in General Phases of Poisoning, by Alcohol. By I. C. W. Jones, M. D. (Reprint.)

Principles of the Interior, Bureau of Education. Library A 14.

Principles of Medical Education, being the Doctorate Address at the First National Annual Commencement of Rush Medical College, June 21, 1881. By J. Adams Allen, M. D.

Principles of Surgery in Medicine. An Address by E. C. S. Jones, M. D. (Reprint.)

A Lecture on the Localization of Diseases in the Spinal Cord, delivered before the Anatomical and Surgical Society of Brooklyn. By Edward C. Seguin, M. D. (Reprint.)

Fourteenth Report of the Medical Staff of St. John's Hospital. Submitted at the Annual Meeting, April 4, 1881. Lowell, Mass.

Hysteria in Boys, with the Report of a Case. By S. Henry Dessau, M. D. (Reprint.)

The Ninth Annual Report of the Board of Directors of Zoological Society of Philadelphia. Read at the Annual Meeting of the Members and Loan-Holders of the Society, April 28, 1881.

The Ninth Annual Report of the Charlestown Free Dispensary and Hospital.

The Differential Diagnosis of Fractures and Dislocations of the Femur at the Hip-Joint. Tabulated by H. Augustus Wilson, M. D. (Reprint.)

Observations on Pertussis, based upon an Analysis of Three Hundred and Sixty-One Cases. By S. Henry Dessau, M. D. (Reprint.)

A Medico-Legal Treatise on Malpractice, Medical Evidence, and Insanity, comprising the Elements of Medical Jurisprudence. By John J. Elwell, M. D. Fourth Edition, revised and enlarged. New York: Baker, Voorhis & Co., 1881.

Simple Methods to Stanch Accidental Hemorrhage. By Edward Borek, M. D. (Reprint.)

The Hygiene of Emigrant Ships. By Thomas J. Turner, M. D., Medical Director United States Navy. Read before the American Public Health Association, December, 1880, at its Annual Session in the City of New Orleans, La. Boston: Rand, Avery & Co., 1881.

Contributions to the Physiology of the Spinal Cord and Adjacent Parts. By George B. Wood Field, M. D. (Reprint.)

A Centennial Address delivered in the Sanders Theatre, at Cambridge, June 7, 1881, before the Massachusetts Medical Society. By Samuel Abbott Green, M. D. Groton, 1881.

Announcement and Catalogue of the Medical Department of Dartmouth College, Hanover, N. H.

On the Early Diagnosis of some of the Organic Diseases of the Nervous System. By E. C. Seguin, M. D. (Reprint.)

Clinical Illustrations of Favus, and its Treatment by a New Method of Depilation. By L. Duncan Bulkley, M. D. (Reprint.)

Rupture of the Urethra, with Extravasation of Urine, etc. By Thomas R. Wright, M. D. (Reprint.)

The Treatment of Strains and Sprains by Collodion. By Albert N. Blodgett, M. D. (Reprint.)

Reports of the Executive Committee, Physician, Treasurer, and House Committee of the Sea Shore Home, for the Summer of 1880. Boston, 1881.

Monthly Weather Review, April, 1881. General Weather Service of the United States.

L. v. Lesser. Demonstration zur lokalen Anaesthesirung. (Separat-Abdruck.)

Sixth Annual Announcement of Mehany Medical Department of Central Tennessee College.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M. D. With one hundred and twelve Illustrations. Seventh Edition, re-written, enlarged, and improved. New York: D. Appleton & Co., 1881.

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Original Articles.

MEDICAL EXPERT TESTIMONY.¹

BY WALTER CHANNING, M. D.

PROBABLY most of those present have read the valuable paper of Dr. F. W. Draper on Medical Expert Testimony, published in the Medical and Surgical Journal of November 4, 1880. This paper, which is remarkably clear and exhaustive in the presentation of the subject, shows how defective our present system is, and gives the draft of a new law, which is intended to remedy these defects. We have been, in times past, favored with many papers on the subject of expert testimony, but, notwithstanding, I feel that it is none the less the duty of every one to aid in correcting what may be regarded as a public evil, and to keep the ball in motion until the needed reform is instituted.

The principle of expert testimony, in this country, is theoretically an eminently fair one. To all suits there must of necessity be two parties, to all questions two sides, and, *primâ facie*, there is, therefore, no theoretical objection to each side calling such expert witnesses as it may choose. It does not follow, by any means, that one side is entirely in the right, for the matter in hand, looked at from different points of view, appears very different. The difficulty in a law suit is, however, that one side must be so overwhelmingly right that the minds of the jury shall be satisfied that such is the case. To do this it is necessary, in some cases, to resort to dishonest methods. The question is, How may we influence the twelve ignorant men whose opinion is to decide the case? No ordinary arguments are sufficient, in some cases even truth itself is powerless. We do not strive to present the matter as it really is, and leave it to be decided on its merits, but endeavor to color it in such a way that it shall appear what we wish it to be.

An honest medical man will be put to the greatest embarrassment in our courts to-day if, regardless of all personal feeling, he persistently asserts what he regards as strictly the correct and scientific opinion of the matter to be passed upon. To go more into detail, we will assume that a physician is asked to go into court as an expert. The lawyer who is to try the case goes to him and frankly states the various circumstances. The very fact that the lawyer goes to him is complimentary, and at once places them on good terms. As the lawyer details the facts, unconsciously, and with the best of motives, the expert finds himself endeavoring to disengage from the mass of evidence submitted to him sufficient data to weave into a thread of as great consistency and strength as possible in favor of the lawyer's side. He will not go out of his way, very naturally, to put himself on the other side of the case. Perhaps the facts have been a little colored to make a more favorable impression upon his mind; he is not unwilling to add a laurel to his wreath or a snug sum to his coffers by appearing in court as a medical expert, and altogether he falls a not unwilling prey to the legal hook that has been skillfully baited for him. It may be because I lack imagination, I must at any rate confess that it is hard for me to imagine a case in which an expert would not be ready to testify unless the lawyer or the case itself

were of such a character that the association would be an injurious one. Given, a lawyer with an equally respectable reputation with that of the physician, and the latter, in nine cases out of ten, would accept service in his cause. Once having entered the field as an ally and he will find himself even more endeavoring to put those such points as are in his favor, and rejecting those which are in the favor of his antagonists.

We must grant that it is right for counsel to engage medical expert testimony, and for physicians to accept service at their solicitation. The difficulty is that this principle of testifying for one side is frequently carried so far that the medical expert clearly shows himself to be entirely given over to this side, and tries by every means in his power to defend his opinions given in its favor, and ignores any evidence, scientific or otherwise, in favor of the other. In cross examination he will resolutely adhere to opinions invented on the spur of the moment, with scientific arguments equally manufactured out of whole cloth, for this occasion only. To see two medical men of fair reputation opposing each other's testimony with the most fallacious and far-fetched of theories is one of the strange spectacles presented in our court rooms. Place these same men together under ordinary circumstances and they would be found in full agreement on points to which, on the witness-stand, they attach a diametrically opposite value. The consequence of this conflicting testimony, of these strange and fallacious statements, and the invariable agreement of the testimony with the argument the lawyer is trying to establish, is to detract seriously from the worth of medical evidence in court. Such evidence can, however, be said to be honestly given; for the time being the expert becomes a party to the suit, and is so far infected by the spirit of the argument which the counsel follows that he is able to believe that what he desires to be right is right. There is another grade of experts, many steps lower than these to whom we refer, that are absolutely dishonest, and who, though possessing little weight professionally, are instrumental in bringing medical expert testimony into disrepute. These men will testify on any subject, be it pathology, surgery, insanity, or microscopy. They hang about courts, are eager to offer their services, and will sell themselves to the highest bidder. The court and the jury shrug their shoulders at the lame statements made by such men, and, unfortunately, when the honest expert appears on the stand he finds himself listened to with a lack of attention, sometimes even impatience. "Oh!" one can imagine the jury saying to themselves, "it makes no difference what the doctors say, they never agree." As the case now stands medical expert testimony possesses little dignity and often degrades the science of medicine. The word of the expert is doubted, and his scientific statements are subjected to the same vulgar cross-examination as those of the meanest witness in a bar-room brawl.

Interested as I am in a specialty where expert testimony is of great importance, and, I may say, in constant demand, the necessity of a pure and dignified system comes home to me with great force. Perhaps on the subject of insanity the average doctor, in times past, has been more willing to express his opinion than any other. Insanity being a disease of the most obscure organ of the body, whose symptoms are manifested by changes in the conduct or character of man. Up to the beginning of the present century the theolo-

¹ Read before the Norfolk District Medical Society, December 28, 1881.

gian, the metaphysician, and lawyer were in the habit of advancing various vague and indefinite theories which became, in one way or another, the common opinion of the world in general. Every man knew what sanity was, and insanity being merely a greater or less transposition of the elements of which it was composed, it followed that it was to be viewed in a somewhat similar light. Leaving out the theories of the theologians and metaphysicians, it is interesting to consider for a moment, as having a direct bearing on the question under discussion, a few of the legal definitions of insanity. The English law at first recognized only two kinds of insanity, known as idiocy and lunacy, the subjects of which were *non compos mentis*. Lord Coke pointed out four classes of persons who could be regarded as in this condition, namely: (1.) Idiots. (2.) He that wholly loseth his understanding. (3.) A lunatic that sometimes hath and sometimes hath not his understanding. (4.) He that is drunken. Later Lord Eldon asserted that a person was *non compos mentis* if incapable of managing his own affairs. Still later Lord Hale attempted to define total and partial insanity. The latter being a condition where there was still as much reason as in a child of fourteen. According to Lord Hale, partial insanity would not exempt from punishment in a criminal case. In 1723 Mr. Justice Tracey describes a true lunatic "as a man that is totally destitute of memory and understanding, and doth not know what he is doing no more than an infant, than a brute, or a wild beast." Some time after this the power of distinguishing between right and wrong was regarded as the necessary test, then the presence of delusion, the understanding of the nature and quality of the act, etc. Though to-day our courts do not blindly follow the dicta of the old English judges, they still are largely influenced by them, and often counsel rest the whole strength of their arguments on these wholly inadequate and fallacious tests. That insanity is, however, a physical disease, and therefore a subject to be considered by the physician, is a fact more clearly brought out at every trial where experts of high character appear on the stand and fair-minded counsel conduct the examination. The extreme difficulty of accurately defining insanity and the old superstitions will probably render the position of the insane expert in court a most uncomfortable one for a long time to come. In an ordinary case, for instance, as to the necessary or probable consequences of a surgical injury, it is easy enough for a physician of extensive experience to give exact, definite evidence, which can be sustained under any and all kinds of cross-examination. Should opposing counsel seek to invalidate his testimony he can find no authorities to bear him out, and he must yield to the force of pure science. But in a case of insanity authorities differ on so many points that it is easy to oppose the statement of one with that of another. Furthermore, a man's motives, conduct, or character can be explained in a great variety of ways, and at present, in a doubtful case, involving large interests, courts generally prefer to take the testimony of the lay friend or relative to that of the expert, who, however learned, has had no opportunity to make a personal examination, and, therefore, cannot be so competent to pass judgment on the statements of others. The fact is entirely forgotten that the more a man studies character and treats cases of insanity the greater must be his power of detecting slight shades of difference.

In cases of insanity it is customary to ask the most intricate and incomprehensible "hypothetical questions," as they are called. In some instances they stretch out to an hour in length. The counsel of either side frames the question after such a fashion that it must inevitably be answered according to his wishes. It is, in fact, getting the expert to express his opinion on the case at issue, for the points in the hypothetical question are facts taken from the evidence. The original object of such a question was to draw out impartial testimony, but it is entirely lost by the course counsel pursue. The jury are confused by the long question, they hear the expert stultify himself, and are left with even a more imperfect knowledge of the case than they had before.

The class of unscrupulous, self-styled experts, already spoken of, are more willing to testify in cases of insanity than any others, and I have myself heard them express opinions and give definitions of insanity entirely unheard of up to the time they took the witness-stand. It may truthfully be said that a case of insanity is rarely tried in which there is not some incompetent medical witness called, and unless we can find some way of eliminating these bad men from our court-rooms it will grow more and more uncomfortable to appear on the witness-stand.

I give below the draft of the law presented in Dr. Draper's paper, which I hope will be freely discussed. Certainly some law is necessary to properly regulate medical expert testimony. I wish that some kind and period of experience were necessary to render it possible for a physician to appear in court as an expert. For instance, some such clause as this might be added to a good law: "No medical practitioner shall be regarded as competent to appear as an expert in court unless he can clearly show that he has had a continuous experience of at least ten years in the active practice of the branch of medical science in which he is called to testify." A certificate from the faculty of a medical school embodying these facts would also be a good requirement.

The original draft of the accompanying law was made by a member of the Massachusetts Medico-Legal Society:—

AN ACT IN RELATION TO MEDICAL EXPERT TESTIMONY.¹

Be it enacted, etc.

Section 1. In any action, suit, or proceeding, civil or criminal, in which the testimony of a medical expert witness is desired by the parties, they may at any time before the trial file in the clerk's office a written agreement that such witness shall be summoned, designating him by name if agreed upon. The clerk shall thereupon issue a subpoena to the person designated, to be served in the manner provided by law. As soon as may be after service thereof the witness shall make such examination of the case as may, in his judgment, be necessary and practicable, and he shall attend, as commanded in the subpoena, and answer such questions as may be put in relation to the case.

Section 2. If no person is designated by the agreement of the parties, the court, or any judge thereof in chambers, or in vacation, in any county, upon the filing thereof, shall designate a proper person, learned in the science of medicine, to be summoned as such expert

¹ This act was published in connection with Dr. Draper's paper in the JOURNAL for November 4, 1880.

witness, and the clerk shall thereupon issue a subpoena as hereinbefore provided. If the parties do not agree that a medical expert witness shall be summoned in the case, the court or judge, upon motion of either party and upon hearing, may determine the question, and may designate the person to be summoned, if any, as hereinbefore provided.

Section 3. Such witness shall be paid for his attendance, travel, and services a reasonable compensation, to be allowed by the court, and paid out of the treasury of the county. In all civil actions and proceedings the defeated party shall be liable to refund the amount so disbursed, and after final judgment an execution may issue against him therefor in favor of the county commissioners, or, in the county of Suffolk, the city of Boston.

Section 4. In any case the court, upon its own motion or for cause shown, may order more than one, and not exceeding three persons, to be summoned as medical expert witnesses, and such additional witnesses shall be designated and summoned, and shall perform the same services and receive the same compensation as hereinbefore provided.

[Section 5. In any criminal proceeding the defendant may call and examine other medical expert witnesses in addition to those hereinbefore provided for, but at his own cost, and in such case other medical expert witnesses may be called and examined in behalf of the Commonwealth.]

Section 6. No medical expert witness shall be admitted to testify before any court or magistrate except as hereinbefore provided.

OTIS'S TREATMENT OF STRICTURE OF THE URETHRA.¹

BY GEORGE W. GAY, M. D.
Surgeon to Boston City Hospital.

OTIS's method of treating stricture is a combination of divulsion and urethrotomy. It is designed for all classes of the affection located anterior to the membranous portion of the urethra, and aims at a radical cure.

The operation is performed by putting the stricture on the stretch, slightly cutting it with a concealed blade, and then at once dilating it to a little more than the full size of the normal canal, this having been previously determined by the use of the urethra-meter. The calibre of the canal is to be maintained by the passage of steel sounds till the rent or incision is healed, when, if the operation has been properly performed, and the after treatment faithfully carried out, the stricture, in nine cases out of ten, is permanently cured.

The operation may usually be done without an anæsthetic. The patient is confined to the house but a few days, and in the lighter cases not at all. Dr. Otis claims that accidents are comparatively infrequent, and the danger slight. He has operated in over seven hundred cases "without a death or any permanent disability." But it should be noted that in several of his cases the constriction was so slight that the necessity for an operation may well be questioned. It will be very difficult, for example, to convince practical surgeons that a urethra which admits a No. 36² steel sound requires cutting so that a No. 38 will pass; or in

more general terms that a urethra which takes a No. 30 or over requires any operation to allow of the passage of a larger instrument.

Although our experience in this method of treating stricture is limited, yet it is quite sufficient to justify the opinion that in *deep* strictures it is by no means free from danger, and should be resorted to only after other and safer modes of treatment have failed.

CASE I. A robust man, twenty-three years of age, came under my care in October, 1879, with an obstinate stricture of the urethra of four years' duration. It followed gonorrhœa, and was located in the bulbous portion. The symptoms were: frequent and painful micturition, constant urethral discharge, a heavy dragging sensation over the bladder, and urine loaded with pus and triple phosphates.

The urethra was extremely sensitive and the stricture unyielding, so that after six months' constant efforts, twice a week, at gradual dilatations, I could only pass a No. 22 sound. As the symptoms were only partially relieved and his nervous system was breaking down, a more radical treatment was indicated.

In June, 1880, I cut and dilated the stricture till a No. 31 steel sound readily passed through it, after the meatus had been divided.

The second day after the operation this patient had chills followed by partial suppression of urine, fever, emaciation, and loss of strength. During his convalescence he had an attack of epididymitis, and subacute inflammation of the bladder, so that it was six or seven weeks before he regained his usual health. He now, at the end of a year, passes No. 24 sound once a fortnight; micturition is free and easy, and his only trouble is a little of the old dragging sensation in the region of the bladder.

CASE II. Mr. B. had gonorrhœa twenty-five years ago, but had no trouble in passing water till within five years. He was admitted to the hospital in September, 1880, for complete retention, which was relieved by aspiration, catheter, and hot bath. A week later the patient was etherized, the urethra dilated sufficiently with Gouley's sound to allow the use of Otis's urethrotome. A stricture two inches from the meatus, and another in the bulbous portion, were then cut and dilated till a No. 25 readily passed through them.

The patient soon began to have chills and high temperature, followed by loss of strength, and emaciation. The sound could be used but a few times, as an abscess formed in the perinæum, which required opening; fortunately it did not communicate with the urethra, and soon healed.

He was laid up three months, but now, eight months after the operation, uses a No. 24 sound, has no trouble in passing water, and considers the operation a great success.

CASE III. Mr. C. entered the hospital in October, 1880, with a stricture in the bulbo-membranous urethra which admitted only a small bougie. It followed a gonorrhœa about seven years ago. Dr. Thorndike performed Otis's operation on the 18th of October, cutting and dilating the stricture up to No. 26. Operation followed by chills, some hæmorrhage, retention, and high fever. Pyæmia set in and eight large abscesses were opened within three weeks. They were located on the arms, legs, and back; none were in the vicinity of the stricture. The patient was delirious, lost flesh and strength, and came very near losing his life. There were no other cases of pyæmia in the hospital at the

¹ Read before the Boston Society for Medical Observation.

² The numbers refer to the French scale.

time; on the contrary the sanitary condition of all the wards was good. Three months after the operation he was occasionally using a No. 25 sound, micturition was normal, and his general condition was satisfactory.

In October I operated on another patient, who had two strictures admitting, respectively, a No. 9 and 12 sound. No. 28 passed easily after dilatation. He had a chill within twenty-four hours, but no further trouble while under observation. The patient having been discharged from the hospital for misconduct at the end of ten days the case is incomplete.

The above cases include all that have been treated by this method in the City Hospital thus far, and the experience is not such as to encourage further trial. The strictures were fair samples of those most commonly met with in practice, but the accidents were much more serious than those which usually follow internal urethrotomy or division as formerly practiced.

The grave complications in the above cases were undoubtedly due to the great violence done to the deep strictures of the perineum. The walls of the urethra were widely torn, the nerves and blood-vessels were stretched and lacerated, and the cellular interspaces were opened up, thereby furnishing depots for the collection of urine, blood, and pus. These fluids rapidly decompose, infiltrate the tissues, and furnish all the conditions necessary for septic poisoning.

Although our patients are at present in a very satisfactory condition as regards their strictures, it is as yet too soon to determine whether the improvement will be permanent. But even if a radical cure should be the result in all of them, we cannot but feel that the danger attending this operation, when performed as directed by its distinguished author, is too great to justify its use in ordinary cases of deep strictures of the urethra.

SOME OBSERVATIONS ON THE SURGICAL TREATMENT OF RECTAL AFFECTIONS.

BY WALTER FEA, M. D., OF CAMBRIDGE, MASS.

THE frequent occurrence, pain, and discomfort of rectal diseases makes any contribution tending toward curing or alleviating them more speedily, thoroughly, or certainly, not wholly unwelcome. Several cases of rectal diseases which had been unsuccessfully operated on have lately come under my care, and as the writer has had some opportunities to compare the methods and results of the surgical treatment of these affections here and elsewhere, he has deemed it worth while to note the advance that has been made in this particular branch of surgery.

Said a well-known local surgeon in an amphitheatre before a class of students, "the operation for fistula is simple, any one can do it. Mr. — can do it. Here, shut up this fistula," after he had introduced a director through the external and internal openings. The rapid pacing of a pledget of lint and a T bandage made the performance seem simple enough. But this very patient soon after leaving the hospital returned with a recurrence of his malady, which had been experimentally but not thoroughly operated on. So it was not so much healed by so simple an operation as we were led to believe it would be.

Symptoms of this, that in performing the operation

for anal fistula it is sufficient to divide the parts between the external and internal openings, regardless of farther-reaching sinuses, is not followed by beneficial results, except in a few persons of a strong, healthy constitution. His theory, which has been entertained by some authors, that a fistulous sinus running up above the internal opening can be safely left untouched, is not borne out by experience. Failure of the operation thus performed is the result in the majority of cases. The inference to be drawn is obvious.

As a reward of an imperfectly-performed operation for anal fistula we have often seen a fresh sinus appear directly beneath the one operated on, and perhaps nearly cicatrized, or the wound not heal, owing to a branch or farther-reaching sinus which had not been properly laid open.

There is a distinction to be made whether a discharge comes from a healing, pus-secreting wound, or whether, coming from another source, it courses over a healing surface. In the latter case the discharge may catch under the healing edge of the wound, burrow, and finally form a sinus beneath the healing surface.

The old and unjustifiable process of excision of the tube-like fistulous track, as practiced now by an eminent professor of surgery in Paris, and also by a noted surgeon in this neighborhood, will often be followed by failure if a lateral branch sinus exists, which has to be cut across in the operation; and this method cannot be commended, since it shows an ignorance of the pathology of anal fistula, and non-success is the usual result.

In a healthy subject an uncomplicated anal fistula occasionally heals spontaneously, or with the simplest treatment; so it does sometimes by various caustics, injections, ligatures, elastic or otherwise, but the result by these means is always doubtful. In a complicated case, as frequently occurs, the free use of a cutting instrument is our main-stay, and we can never make sure of the result of a case unless we use it. To guarantee a cure the main and branch sinuses must be freely laid open, and the edges of the wound liberally trimmed off.

If severe hemorrhage is apprehended after incising tracks reaching far up the bowel, the screw tourniquet with twine, as Luke's, or, better, the elastic ligature, may be used for cutting through the cul-de-sac above the internal opening. The solid elastic ligature, with a metallic ring, is quicker in action, easily applied, and absolutely painless. The most successful prefer usually to cut, and depend on efficient plugging to arrest the hemorrhage.

Beyond a thorough and solid packing of the wound with absorbent cotton (not lint as is used here), which serves greatly to consolidate the lax tissues, the wound requires but little active after-treatment, but jealous care and watching must be observed to detect early any small or perhaps unnoticed branch sinus.

The after-treatment is often delegated to a ward tender, a green medical officer, or may be to an inexperienced practitioner, and an unsuccessful result is sometimes due to this, much to the patient's disappointment and surgeon's chagrin.

Personal supervision for three or four weeks is necessary, then it may be entrusted to attendants, who are to notify the surgeon on the occurrence of any pain about the wound.

The discharge of pus in a case which has been properly operated on is insignificant in comparison with the

often profuse and fetid discharge which comes from the branch sinuses of an incomplete operation. This is specially noticeable, and after a thorough operation, pus is remarkable by its absence, and also the wound soon becomes a healthy granulating ulcer. The fearful gash one sees after the proper operation on a complicated case of anal fistula reminds one of an amputation of the thigh. This is due to the thorough slitting up of all sinuses and crevices, the liberal trimming off of the edges, and the removal of the overhanging tabs, which swell (as the irritated gum does) and obstruct the free flow of the discharge. By so doing we have a shallow wound, all bottom and no top, and the rapidity with which these wounds heal under favorable conditions is surprising.

The solid packing of the wound in the first instance, compressing the vessels and thus arresting hæmorrhage, is allowed to remain to come away with the first motion of the bowels, which is to take place in three or four days. The curious treatment of removing the lint on the morning following the operation, I deem wrong, as too much and constant dressing I consider productive only of harm. If the flat wound gets flabby it may need the stimulating qualities of the usual remedies appropriate in such cases.

In the after-treatment it is usually sufficient to lay a light pledget of cotton on the wound, being on the look-out for new sinuses or crevices by running over the wound's surface with a probe.

If we would guarantee a cure, the operation must be properly done and subsequent treatment carefully attended to. In anal fistula dependent on stricture of the bowel dilatation of the stricture must be done to insure a permanent cure.

The blind internal variety of anal fistula is not uncommon, and is readily detected by an experienced hand, and by attention to the patient's history.

It is to this class of fistula that I would especially call your attention, baffling, as it does, physicians, and most surgeons, yet giving great pain and discomfort to the patient if allowed to go unrelieved, such a case being classed as an obscure case. The remedy consists in making it a complete fistula, and operating as stated.

The futility of attempting to cure all cases of fistula ani by caustics, or injections, as by the charlatans, may well be taken to task by reference to cases of this variety. It is the happy result in these obscure cases which is gratifying to the surgeon.

We may attempt the use of an injection or caustic in a fistulous track, if great objection is made to other means, but it is not serviceable, takes a long time, may be a year or more, and in general is ineffectual, as in the cases so treated by the order of Louis XIV.

From the appearance of a fistula, experience very often tells us without questioning the patient, that he has some lung lesion, which, if in an active advancing stage, would influence us against performing any operation, other than for the mere relief of pain — nothing radical.

If the lung affection is stationary a fair prospect of relief may be entertained by the elastic ligature, if the track is simple, or by the knife. Of course all these cases are not suitable for the latter means.

In all cases with rectal symptoms in which nothing pathological can be seen or felt to account satisfactorily for them, an enema should be administered, and bearing down of the lower bowel encouraged before an examination is made.

Such a procedure will often reward the surgeon by the detection of some lesion unattainable by other means, such as hæmorrhoids, prolapsus, certain tumors, etc.

The use of the anal speculum is limited, being used rarely by competent specialists in this department of surgery; in London they depend upon the information obtained by the "tactus eruditus" of a trained forefinger.

During a protracted service at St. Mark's (a hospital devoted specially to rectal diseases) I saw a rectal speculum used only once, and then at my request, so its employment is not as necessary an aid for a correct diagnosis as many imagine.

Through a simple incision the clot of blood in a case of external hæmorrhoids can be readily squeezed out, and oftentimes the severe, acute pain leaves as by magic.

In the operation for the cure of internal hæmorrhoids the ligature, clamp and cautery, crushing, and acids have each their advocates.

Every case of piles does not mean surgical interference, but it should receive a proper examination to determine what method of treatment is suitable.

The use of nitric acid or the acid nitrate of mercury or other caustics on the surface of a hæmorrhoid, even in the milder capillary form, is not to be relied on; the relief is not sure nor permanent, especially if the patient leads an active life, and its employment is well nigh discarded by those who were its warmest adherents. The injection by a subcutaneous syringe of an acid, like carbolic acid, or of a styptic, as solution of the persulphate of iron, into the substance of the pile has been followed in mild cases by a shriveling up of the pile, but its use is not advised as it is often painful, inefficient, and dangerous. Its use causes more inflammation than is desirable, a lengthy treatment with a doubtful result.

The recently advocated method of crushing, being about the same as the clamp without the cautery, does not promise any better results than are attainable by other and safer means.

The clamp and cautery, invented by Cusack, of Dublin, and improved by Mr. Henry Smith and others, has as great a reputation as facts warrant, and is suitable chiefly for slight cases. To hope for a good result the iron should be heated to a *dull red heat*, and applied over the *whole* cut surface so as to seal all the vessels completely.

The operation for prolapsus by the clamp and cautery is exactly the same as for hæmorrhoids, though it is generally supposed to be different.

Galvano puncture, producing interstitial canterization, has been lauded by a few, but its use is not sure, is accompanied with great pain, inflammation, abscesses, and slow recovery.

The use of the ligature in the operation for hæmorrhoids in aggravated cases is the safest, surest, and best method for their obliteration, and has the most decided testimony in its favor for facility, efficiency, and safety. The advocates of the clamp and cautery attribute to the ligature greater liability to tetanus, pyæmia, and secondary hæmorrhage, but a well-known surgeon told me that in fifteen hundred cases of the employment of the ligature he lost but one by pyæmia, and in his whole experience had seen but two die of tetanus, and then its appearance could be attributed to an extraneous cause. The liability to secondary hæm-

orrhage by the ligature is certainly less than after the separation of the escar after the cautery. Pyæmia, ulceration of the bowel, and fistula follow the use of the clamp and cautery quite as often as the ligature. The operation by the ligature, as done here, namely, transfixion with a double thread and tying each way, has always appeared to me a curious one, and one which does not have a true anatomical justification, and I think the pile is less thoroughly removed, and more likely to return than if Salmon's operation is employed. This consists in seizing the pile with a vulsellum, cutting from the white mark which is seen where the skin and mucous membrane meet with strong scissors parallel to the axis of the bowel, to a varying distance up the gut, then applying a single ligature which will be horizontal to the axis of the gut at the uppermost limit of the cut. By this means the larger vessels, which in the main come from above and supply the pile, are completely isolated. The vessels lie just beneath the mucous membrane, and are securely tied if the ligature is placed well at the bottom of the groove. If the operation is properly done return of the disease is rare, but it may return if the surface only of the pile is removed.

It certainly is a sensible operation, and has a sound anatomical justification from the disposition of the rectal vessels in the lower part of the bowel, and, moreover, there is less destruction of tissue than by other means.

Partial prolapse of the bowel, which is often connected with or mistaken for hæmorrhoids, may be cured by the ligature or the clamp and cautery, the operation being the same as for piles, but true prolapse in the adult involving the whole calibre of the bowel is best treated by the actual cautery at a dull red heat. The number of the longitudinal scores on the prolapsed bowel should depend on its extent, but we should not omit to apply the hot iron in two or three places at the verge so as to get a contraction of that end of the bowel.

The treatment in cases of fissure does not consist solely of an incision through the sphincteric fibres, as suggested by Boyer, or through the mucous membrane, as maintained by Syne, or forcible dilatation of the sphincter ani, as suggested by Recamier, and later by Van Buren, but can very often be soundly and readily healed by appropriate medical treatment, — a laxative and an ointment.

Sometimes nothing short of an operation is effectual; this is specially the case when a polypoid growth hangs down from above into the fissure, as it not unfrequently does. The cases of fissure not ordinarily cured by the medical or surgical treatment stated are those in which this papilla-like body has been left, and its destruction is required before the fissure will heal soundly.

Some notes on the surgical treatment of the remaining rectal affections will be considered in a subsequent communication.

RECENT PROGRESS IN OBSTETRICS.

BY W. L. RICHARDSON, M. D.

THE INDUCTION OF ABORTION AS A THERAPEUTIC MEASURE.

IN an admirable paper, read before the Obstetrical Society of London,¹ Dr. Wm. O. Priestley states briefly the circumstances which would justify the induction of an abortion as a therapeutic measure. The paper dealt only with the artificial termination of pregnancy at an early stage. The pathological reasons adduced, as justifying the induction of abortion, were as follows: (1.) Such narrowing or deformity of the female pelvis as would absolutely preclude the birth of a living child. If the largest diameter of the pelvis is less than two and three fourths inches it is known that no living child can at full term be delivered. (2.) When the genital canals are so narrowed by the presence of tumors, cicatrices, or of malignant disease that a living child cannot pass through. The force of this rule is being constantly weakened by the success that now follows the use of antiseptic methods in abdominal section. Great care must also be exercised in deciding what obstacles are permanent and what ones can themselves be removed.

The next set of reasons were based upon different grounds. They included (a) diseases which, being caused by the pregnancy, become dangerous to the life of the mother, and (b) the complication of pregnancy with diseases which, when so combined, would become a source of danger. Under the first head he mentioned: (1.) Obstinate vomiting, depending on pregnancy, whenever the patient's strength is so reduced that a fatal result is anticipated if relief cannot be afforded. (2.) In eclampsia, occurring during early pregnancy, with or without albuminuria, where the attacks are so frequent and severe as to imperil the life of the patient. (3.) In some instances of irreducible retroversion or flexion of the uterus. The mere existence of this form of displacement and the impossibility of immediately reducing it does not necessarily call for the induction of abortion, but only when it gives rise to symptoms which show that the patient's life is in danger. It must always be remembered that an adjustment often takes place spontaneously at the time of quickening, even after attempts at replacement have previously failed. (4.) In cases of severe and uncontrollable hæmorrhage which threatens the life of the patient.

Under the second head the writer alluded to those cases in which in certain acute and chronic diseases the complication of pregnancy undoubtedly endangered the life of the patient, and in which the speedy termination of the pregnancy enhanced her chances of recovery. This rule included cases of acute dropsy, in which the patient was brought into a dangerous state of anæmia; cases of hæmorrhage from the bowels threatening to end in death; diseases of the heart attended with urgent and dangerous dyspnoea; severe chorea; mania depending on pregnancy. In cases of pregnancy complicated with ovarian tumors it has now been found to be compatible, both with the safety of the mother and her pregnancy, to remove the tumor during gestation. As a general rule Dr. Priestley claims that the induction of abortion is only a legiti-

Is accurate or not, that is the question;
Whether it is better for a man to suffer
The painful pains, and lasting scars of small pox,
Or to have him before the surgeon's hand,
And by being vaccinated, end them? Yes!
I do not say you, and I say we all
I do not say you, a thousand awful scars
I do not say you, or a consumption
Do you say, with a soft you now,
Or say you say, with the rounds
Is it not a question where?

¹ Transactions of Obstetrical Society of London, vol. xlix, 1880, p. 241.

mate operation when the life of the mother is so imperiled by the continuance of pregnancy that emptying the uterus presents itself as the only alternative to save the patient.

DRESSING FOR THE NAVEL.

In order to avoid the evil results which sometimes follow after the stump of the umbilical cord has dropped off, Dr. Dorhn advises¹ the use of the following antiseptic method of treatment. After having tied and cut the funis, the stump and the surrounding parts should be washed with a solution of carbolic acid (two and one half per cent.). A second carbolized ligature should then be applied inside of the first ligature, and the funis cut off with the ligature which had been previously tied. Some carbolized lint is applied over the stump, and a piece of sticking-plaster, about the size of the hand, is placed over the wound. This dressing is allowed to remain untouched until the seventh day; when removed the funis will be found either wholly or nearly separated. In the latter case it should be cut off with scissors.

CANCER OF THE CERVIX COMPLICATING PREGNANCY.

Dr. Richard Frommel (Berlin) gives² in detail the history of two cases of this complication which have occurred in his own practice. In both cases the malignant disease existed prior to the beginning of the pregnancy. The first case was terminated by the delivery by the Cesarean section. The child was made to breathe with difficulty and lived three months. After the extraction of the child the placenta and membranes were found to be adherent, and therefore were removed with considerable difficulty, and a drainage tube was introduced. The patient, however, died the second day after the operation. At the post-mortem examination hæmorrhagic peritonitis, Bright's disease of the kidney, and endocarditis were found. In the second case the child was dead; the presentation was transverse. The diseased tissue was removed, and the child was extracted by version. The malignant disease rapidly advanced, and although the patient bore the delivery of the child well, she died in about two weeks. Using these two cases as illustrations, Dr. Frommel adds that in cases in which pregnancy is complicated with malignant disease the choice of the operation to be performed should be made with direct reference to the degree of advance made by the carcinoma. If possible, the whole diseased tissue should be removed without any reference to the stage of the pregnancy or to the possible chances of its removal causing an abortion. He furthermore states that such removal is not likely to interfere with the course of the pregnancy. If, however, the carcinoma cannot be wholly removed, then, if the child is viable, Cesarean section, taking, of course, all possible antiseptic precautions, should be performed, it being understood that such an operation is done solely with reference to saving the life of the child. If the child is known to be dead the course that he followed in the second case is to be preferred.

As regards the diagnosis of malignant disease, the writer does not agree with Spiegelberg as to the value of the fixation of the mucous membrane to the underlying tissues, inasmuch as the investigations of Ruge and Vert have shown that such fixation is by no means

as common as Spiegelberg has claimed. The only reliable method of making a diagnosis is by a careful microscopic examination of a detached portion of the diseased tissue. When operative interference has been decided upon he advises the wedge-shaped excision of both lips of the os uteri, as recommended by Simon.

RUPTURE OF THE UTERUS.

Dr. R. P. M. Ames (Philadelphia) contributes³ a valuable paper on the subject of rupture of the uterus, based on a careful study of one hundred cases, the important details of which are given. The conclusions which he arrives at are:—

First. That rupture of the uterus is exceedingly rare, occurring only once in four thousand eight hundred and eighty-three cases.

Second. That the most frequent causes are, in their degree of frequency: deformed pelvis, more especially diminished antero-posterior diameter; disease of the uterine tissue; malformation and abnormal positions of the child; ergot and traumatism.

Third. That the symptoms are easily recognized, almost always present and generally very severe.

Fourth. That the prognosis is exceedingly variable, the greatest number of recoveries being one in three.

Fifth. That the greatest number of ruptures takes place from twenty-five to thirty years of age, and in the third and fourth pregnancies.

Sixth. That gastrotomy is the preferable mode of delivery, when the child has escaped into the abdominal cavity.

As regards the site at which the rupture takes place it is found that, when the rupture takes place during gestation it is nearly always in the fundus or its immediate vicinity; while, on the contrary, if it occurs during the labor, the seat of the rupture is in or about the neck or at least the inferior portion of the body.

DELIVERY IN NARROW PELVES.

Dr. Aug. F. Erich (Baltimore) gives⁴ the details of eighteen cases of delivery in women whose pelves were more or less narrowed. He then criticises them with a view of determining the relative value of the different operations which are recommended as applicable to such cases. The practitioner called to a case of dystocia due to a narrow pelvis finds himself required to make usually a prompt choice between the following means of delivery, namely: (1) long forceps; (2) podalic version; (3) craniotomy; (4) laparotomy; (5) gastro-hysterotomy or its modification, as suggested by Porro, gastro-hysterectomy. Having critically examined these different operations he gives the following conclusions:—

First. The propriety of the induction of premature labor is still questionable.

Second. That version, while it should never be the alternative of the forceps, should be tried in contracted flat pelves before resorting to craniotomy, but is worse than useless in a uniformly contracted pelvis after the forceps have failed.

Third. The forceps, when properly applied and used, are the safest means of delivery for both mother and child. After failure with them craniotomy is indicated, except in cases of narrow flat pelvis, where version should first be attempted.

Fourth. When there is not room enough for the

¹ Centralblatt für Gynäkologie, 14, 1880.

Zeitschrift für Geburtshilfe u. Gynäkologie, v. 158.

² American Journal of Obstetrics, April 1881, p. 361.

³ Maryland Medical Journal, October 1, & 15, 1880.

application of the forceps, and when the smallest diameter of the pelvis is less than two inches, laparoclytrotomy is indicated. . . . The forceps should always be used whenever the smallest diameter of the pelvis seems to be somewhere above two inches.

Fifth. In cases of rupture of the uterus where the child has escaped into the abdominal cavity, and in cases of extensive carcinoma of the cervix, Porro's operation (gastro-hysterectomy) should be performed in the interest of the child.

Sixth. The unmodified Caesarean section (gastro-hysterotomy) has been superseded by Porro's operation, which meets all the indications with less danger to the mother.

DILATATION OF THE CERVIX UTERI.

In a recent lecture by Dr. Leopold Landau¹ (Berlin) attention is called to the value of tupelo tents in effecting dilatation of the cervix uteri. These tents are made from the root and stem of the *nyssa aquatica*. They expand much more uniformly than laminaria tents and their power of expansion is also greater than that of any other tent, while, at the same time, they produce an equal amount of softening and infiltration of the tissue of the cervix. They are free from any tendency to produce septicæmia. A tupelo tent, having been properly inserted within the cervical canal, should be allowed to remain *in situ* for three or four hours when a larger one can be substituted for it. Dr. Landau has used these tents successfully for over two years without any unfavorable results.

Hospital Practice and Clinical Memoranda.

NEW YORK HOSPITAL.

CASES IN THE SERVICE OF DR. W. J. BULL, CHAMBERS STREET HOSPITAL, NEW YORK.

REPORTED BY DR. W. E. WRIGHT, HOUSE SURGEON.

COMPOUND INTERCAPSULAR FRACTURE OF RIGHT FEMUR WITH SIMPLE FRACTURE OF LEFT FEMUR AND LACERATED WOUND OF PERINEUM, WITH PROTRUSION OF INTESTINES.

W. W. B., aged forty-eight, United States porter, admitted December 11, 1880, 5.13 P. M. Patient brought to hospital by ambulance from — Street, where he had fallen three stories through a hatchway, striking on his feet astride of a barrel. On admission was in state of collapse. Examination revealed simple fracture of left femur at the middle, a lacerated wound in right gluteal fold, leading down to intercapsular fracture of right femur, and a rent in perineum, with protrusion of intestines, was also discovered. Intestines being uninjured were properly cleansed and replaced, and wounds washed with one to forty carbolic, and a large sponge, wet with one to forty carbolic, applied to rent in perineum. Very little hemorrhage. Fragments of fractured bones held in apposition by means of sand bags. Bladder found to be intact.

Ordered hot-air bath, Magendie's Solution, six drops, hypodermically, and one drachm ether hypodermically. Ether repeated every ten minutes. Patient could not be aroused from state of collapse, and died December 14th, 7.4 P. M.

¹ *Verh. d. Berl. Ges. f. Geburtsh. u. Gynæc.*, 1877.

Autopsy revealed simple transverse fracture of left femur; an intercapsular fracture of right femur communicating with air by means of a lacerated wound extending from tuberosity of right ischium to middle of descending ramus of right os pubis; a rent in perineum beginning at scrotal junction and extending back through anus to coccyx; a rent in anterior wall of rectum extending upwards four inches from margin of anus.

STRYCHNIA POISONING TREATED WITH CANNABIS INDICA AND CHLORAL HYDRATE.

George H., aged eighteen, German, in the United States two weeks, admitted November 25, 1881, 11.30 A. M. Brought to hospital by ambulance, having been found lying on the sidewalk, where he had fallen. Complained of feeling "weak in legs." On arriving at hospital he told ambulance surgeon that he had taken strychnine, "about as much as could be placed on a silver quarter." He had bought the drug in France, and had taken it in a fig about one half hour before arrival of ambulance.

On admission, pulse, respiration, and temperature normal; pupils also normal; legs somewhat rigid; fingers and forearms quite strongly flexed. As soon as patient was placed in bed he had a slight convulsion. Head drawn back, jaws fixed, fingers and forearms flexed, and legs and body very rigid. As soon as muscles had relaxed administered thirty grains sulphate zinc with large quantity of warm water. Immediately after swallowing emetic patient had a most violent convulsion; jaws firmly closed, muscles of face and neck very rigid; body arched, resting upon occiput and heels; muscles of abdomen very hard and tense; respiration ceased entirely; hands clenched, and arms and forearms strongly flexed and adducted; Face greatly cyanosed; eyes blood-shot, with dilated pupils; no radial pulse.

During spasm administered twelve drops Magendie and three grains extract cannabis indica hypodermically, artificial respiration being kept up. Spasm lasted one and one half minutes, when muscles relaxed, and emesis took place; vomiting encouraged by administering warm water until stomach was well emptied. As soon as vomiting had ceased, twenty-four grains chloral hydrate were administered by the mouth. Patient fell into light slumber. Slept quietly for three hours, when he awoke complaining only of a feeling of lameness and soreness in muscles over entire body. Legs still quite rigid. Administered fifteen grains chloral hydrate, after which patient slept quietly the rest of afternoon and night, and awoke the next morning feeling well, aside from slight headache and muscular pain.

Abscess formed at point of injection of cannabis indica. Patient was discharged four days after admission. If statement of patient is to be believed he took at least five grains of strychnia.

OPIUM POISONING TREATED WITH ATROPIA.

Mrs. B., aged thirty, married, domestic. Admitted January 18, 1881, 6.30 P. M. Patient brought to hospital by ambulance from — Precinct Station House. Had taken, with suicidal intent, one half ounce laudanum one half hour before admission. Patient in very bad general condition, showing a life of dissipation. On admission very stupid and aroused with great difficulty. Pupils contracted to pin points, and could not

be made to respond; respiration 12; pulse 100, full; temperature normal.

Washed out stomach thoroughly with stomach-pump. Administered one twenty-fourth grain atropia hypodermically, and ordered patient to be kept awake by walking and flagellation. In spite of all efforts patient became more and more stupid. Half past seven p. m., respiration 7; pulse 120; pupils minutely contracted. Administered one twelfth grain atropia hypodermically. Ordered electricity with flagellation. Half past eight p. m., respiration 6; pulse 120, very irregular; almost complete anaesthesia; conjunctivæ and soles of feet alone sensitive; pupils minutely contracted; face very pale; temperature 100° F. Administered one twelfth grain sulphate of atropia hypodermically; electricity continued. Nine p. m. Anaesthesia of conjunctivæ; respiration 6; pulse 120; pupils still minutely contracted. Administered one twelfth grain atropine hypodermically. Ten p. m. Respiration 4; pulse 120, very feeble; perfectly comatose; complete anaesthesia; no response of muscles to current; temperature 101° F. Administered one sixth grain atropine hypodermically. Eleven p. m. Respiration 6; pulse 140, but regular; pupils somewhat dilated, and respond feebly; face and neck flushed; conjunctivæ and soles of feet sensitive; muscles respond well to current. Half past eleven p. m. Respiration 9; pulse 120, soft and regular; pupils of nearly normal size; surface very cold. Ordered hot-air bath. Twelve m. Sensation over entire body; respiration 11; pulse 120.

January 19th, 12.30 A. M. Respiration 16; pulse 110, regular, and no longer of bounding character; pupils normal in size and reaction. Patient perfectly conscious. Sat up in bed with great difficulty, and asked to be walked about room. Patient talks thickly, and articulates with great difficulty. On being taken from bed by assistants patient could not stand, and with great difficulty could she lift her foot from the floor. Is still very stupid, but is easily aroused. Drank a cup of black coffee; stomach would not retain it, and act of vomiting did much to arouse patient. Two A. M. Respiration 16; pulse 110; temperature 100° F. Patient is kept awake by nurse; articulates more distinctly and with less difficulty; paralysis disappearing; retains strong coffee. Nine A. M. Pulse 100; respiration 20; temperature 100° F.; articulation rather difficult, but distinct; complains of pain in head and stomach; pupils normal; mouth and throat very dry; lips covered with bloody crusts. Drinks much milk.

From this date patient rapidly recovered, but for several days suffered greatly from neuralgia; pains in different parts of body, but mostly in face and neck.

It will be seen in the above case that not until eleven twenty-fourths of a grain of atropia were administered was there any effect obtained from the atropia, and that a very prompt effect followed the giving of the last sixth of a grain.

— Tobacco is prohibited to the students of Oberlin College, Girard College, and the Naval School at Annapolis. A similar rule has been recommended for West Point by the board of visitors. At Cornell University nearly all the students have voluntarily signed a pledge of abstinence.

— A petition from the British medical men in Rome in favor of vivisection has been presented to the House of Commons by Mr. J. C. Campbell.

Reports of Societies.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

SEA-AIR AND SEA-BATHING.

DECEMBER 28, 1880. At a meeting held on this date DR. T. H. DEARING read a paper on Sea-Air and Sea-Bathing, which were considered under the following heads:—

(1.) Anatomy of the skin, its physiological action, especially in relation to absorption, regulating temperature of the body, and influence upon the nerve centres.

(2.) The danger that might arise from free absorption of salt from the water, the benefits of baths as vehicles of temperature, and the relation of temperature to the combustion processes going on in the body.

(3.) Ultimate results of hot and cold bathing.

(4.) Two groups of the chronic sick, as to bathing, one, with systems capable of strong reaction, the other not.

(5.) Difference in temperature of water at the different beaches, the kind of baths available, and the indications requiring the several kinds.

(6.) Customs as to bathing at the various beaches, the precautions necessary, and the extent to which it may be carried.

Temperature of air, time of tide, time of eating, and means for producing reaction.

(7.) What children and old people may be benefited, and kinds of bathing suits.

(8.) Danger of bathing in acute diseases and during menstrual periods.

(9.) The chronic diseases benefited, cases of delayed or rapid growth of the young, also, sea-shore localities in which asthma is benefited.

(10.) Atmosphere at the shore, comparison with mountain air, with what elements impregnated, and the effect upon those who breathe it.

(11.) Cottage life at the sea-shore, an important phase of social life in summer, and necessity for children during vacation.

(12.) The family physician should be able to indicate proper places, time for departure and return, and give proper rules for guidance of their patrons while at these places.

DR. A. H. NICHOLS said that he was able to confirm from his experience what Dr. Dearing had said, but there were one or two points he would like to speak of further on. People in Boston say they live by the sea, and must go to the mountains for change of air, but they are really nine miles away from the sea, and unless in a storm they lose the ozone and iodine of the sea-air. He had made experiments at Rye Beach as to the summer temperature of the water and found that even a difference of one half a degree was perceptible. He was unable to account for the differences of temperature in salt water, unless from the influence of the gulf stream. In selecting a sea-shore residence care should be taken to see that the atmosphere contains the desirable elements. He cited Swampscott as being objectionable from its proximity to flats which stood exposed at low water.

MEDICAL EXPERT TESTIMONY.

DR. WALTER CHANNING then read a paper on Medical Expert Testimony, published in this number of the JOURNAL.

In the discussion which ensued, DR. HENRY A. MARTIN spoke against the appointment of the expert by the court. He thought that expert testimony was too apt to be confined to specialists; in his opinion, in most cases the general practitioner was quite as competent a witness as the specialist.

DR. BENJAMIN CUSHING remarked that while he agreed with the reader as to the present bad system of expert testimony, he was not satisfied with the proposed law quoted from Dr. Draper.

The president of the Massachusetts Medical Society, DR. H. W. WILLIAMS, being called upon as having already served on a committee on expert testimony, said that the American Academy of Arts and Sciences had coöperated with two or three of the medical societies in bringing the subject to the attention of a former legislature. It had seemed desirable that change should be made in the present method by which incompetent persons were often placed on the witness stand with no other qualification as experts than their own assertion. If these were plausible and audacious, and especially if long experience as venal witnesses had made them skillful in testifying, they were often able to impress a jury more than a really qualified man who had not equal facility in stating his opinions. The abuse was not one affecting merely our profession, but existed in all cases where men of science were called on for opinions as to facts laid before them; instances being common where a directly opposite explanation is given to the facts by scientific men employed by one side and the other, who cannot avoid partisan bias.

If one or more experts appointed by the court, or selected by the opposing counsel with the approval of the court, should hear the scientific evidence and give their interpretation and estimate of its value with their reasons therefor, if required, such testimony, being regarded as impartial, would have more weight than that of others; and though it would not preclude the calling of additional expert witnesses, it would tend to limit their number and influence. It would also make such other witnesses more cautious as to their testimony, and bring to light much which is now often purposely kept back by evasions which would be detected and exposed by an expert having the requisite knowledge of the subject.

DR. F. S. BILLINGS, veterinarian, who was present, said:—

Veterinary medical science occupies a position somewhat to be compared to that of medical science some three hundred years ago. The very name Veterinary Surgeon is a misnomer, there being very little resort to surgical operations in the practice. So far as the duties of the veterinarian extend to expert testimony in our courts it may be said to be most unsatisfactory. There seems to be no distinction made between the veritable quack, or empiric, and the educated man from the best schools. All are assumed to be doctors and the testimony of the one seems to be held equally valuable to that of the others. Again, the law seems to have very singular ideas of the value of true expert testimony. Like a juryman, it is assumed that the less we know about the particulars of the case in point the more valuable our testimony. Instead of allowing experts to hear the testi-

mony of witness before being called up, we are summoned in, and, although utterly uninformed of everything except the merest outlines of the case, we are at once called upon to give our opinions, before the main witnesses are called upon. Frequently we are so unceremoniously summoned as scarcely to know what the case is about before being called upon the stand. The absurd nonsense of looking upon the testimony of a veritable quack, although he may treat diseased animals, from the same standpoint as an educated man is a disgrace to an intelligent community.

MARCH 22, 1881. DR. E. G. WEST reported a case of Epithelioma of the Conjunctiva Bulbi, with microscopic specimens of which the following is a synopsis:

EPITHELIOMA OF THE CONJUNCTIVA BULBI.

Mr. Elliott is seventy-six years old, of good health and rather fleshy. He retired from business in the summer of 1879, and at this time first noticed two small white nodules in the external angle of the left eye, about the size of the head of a pin. These were mistaken for fleshy particles. By the summer of 1880 they had increased in size and others were added, and blood-vessels radiated from them. For two months preceding the 17th of September the growth was very rapid, becoming two thirds the size of the cornea, and encroaching on the latter one fifteenth of an inch. The discharge from the eye was creamy and considerable, but there was no pain. In consultation with Dr. Williams, it was decided to try to snip it off, inasmuch as most if not all these growths originate in the conjunctiva. During the operation the growth was found to be very brittle, but it was thoroughly removed and examined and found to be an epithelioma. The wound did not heal well and by four weeks after the operation the whole base was covered with little nodules. Eight weeks after the operation the mass had become even larger than it was before, and two deep pockets had formed, where the growth had extended under the conjunctiva, which would fill up with excretions and then discharge. After seeing Dr. Williams again, Dr. Wadsworth was seen and advised a total eunecleation, for the conjunctiva had been all removed in the first operation and therefore the growth must now be on the sclera, and so it could not be thoroughly removed without opening the cavity of the eye. That this opinion was correct was afterwards shown by microscopic examination. Removal of the outer half of the eye was rejected since there was no certainty how far the growth had gone, and the wearing of a glass eye might cause it to reappear. It was removed on December 4th, and since that time (four months) there has been no return, and he now has only a slight discharge from the eye.

The interesting points of the case are: the rarity of the disease, situated as it was; the great danger of its being overlooked, as it was in this case, when it is in that stage where it is most amenable to treatment, for this is the history of the majority of the cases on record; and the third point is its rapid return, being about as large in four weeks after the operation as it was before. The operation seeming only to stimulate the growth to greater activity.

DR. C. E. WING then read a paper on Unnecessary Surgical Operations in the Treatment of the Diseases of Women, published in a former number of the JOURNAL.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. T. CABOT, M. D., SECRETARY.

MARCH 7, 1881. DR. G. W. GAY read a paper upon OTIS'S OPERATION FOR STRICTURE OF THE URETHRA, which is printed upon page 3 of this number of the JOURNAL.

DR. POST thought that the reader's experience was not very different from that of Mr. Berkeley Hill, who had taken pains to follow out Dr. Otis's ideas in a number of cases after Dr. Otis's personal instructions. He had found internal urethrotomy followed by serious consequences in a large proportion of cases, altogether too large to justify the operation for trivial causes, and his results were successful in but a small proportion of his operations. These cases were made the subject of a clinical lecture by Mr. Hill, which was answered by Dr. Otis, who claimed that the division of the stricture was not thoroughly done and needed to be repeated, and was inclined to make light of the complications. This lecture of Mr. Hill and his own answer Dr. Otis incorporated in his book. Certainly in the cases just reported the consequences of the operation were sufficiently alarming to make one cautious in its repetition.

DR. WATERMAN doubted whether the freedom from contraction of strictures after Dr. Otis's operation is as entire as the inventor claims. He himself would always prefer dilatation with sounds and overdistention with these if found of advantage.

DR. C. H. WILLIAMS remarked that oculists experienced difficulties in the treatment of strictures of the lachrymal duct very similar to those met with by surgeons in urethral stricture. The practice formerly was to incise these strictures with a probe-pointed bistoury, and afterwards to try to keep them open while healing by the passage of probes. It has finally become evident, however, that this procedure, far from producing a cure, often results in a closer stricture than before, and the best practice now seems to be to dilate such cases slowly by means of graduated probes.

DR. INGALLS said that few of these cases were followed up long enough after the operation to give valuable testimony as to the amount of success to be expected after the various methods of operating. He thought gradual dilatation the proper method of treatment for most of these cases. Especially would he avoid the Holt's dilator which he believes to be often productive of much harm with little hope of permanent good.

DR. GAY said that he did not wish to appear as an advocate for Otis's operation, although he thought that, when properly done, it might be useful in certain cases. He thought that Dr. Otis must be mistaken in some things mentioned in his book, as, for example, the location of stricture. It seemed to him that Sir Henry Thompson's researches proved conclusively that the majority of strictures were located in the deep portions of the urethra. Again, he could not believe that strictures were produced as easily as claimed by Dr. Otis, or that very slight contractions of the urethra caused as formidable an array of symptoms as he would have us believe.

DR. GAY spoke of two men whose strictures he had dilated ten years ago, and who had had no further trouble, as proving that this affection is not always as serious as is supposed by many.

PROCEEDINGS OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

STATED meeting, first Thursday of April, H. O. MARCY, M. D. in the chair.

M. L. BROWN, M. D., read a paper entitled

THE GYNÆCIC AND OBSTETRIC USES OF CHLORAL HYDRATE.

He first gave a brief historical survey of the employment of this remedy since its introduction by Liebreich in June, 1869, and gave his adherence to the theory that its action is procured through conversion of the salt into chloroform when brought in contact with the alkaline reaction of the blood. He also emphasized the absence of disturbance of the sympathetic, — of the unfortunate after-effects which follow upon the action of opium. Proceeding to the subject proper of his paper, he accepted as a kind of text the declaration of Richardson: "Chloral hydrate produces muscular relaxation, which relaxation extends to the muscles of volition, and alike to the iris and muscular arterial system. Its action on the nervous system is primarily on the sympathetic ganglia, afterwards on the cerebrum, and finally upon the heart."

First of all was asserted the power which the drug possesses, in preëminent degree, to antagonize and control all irregular, excessive, and abnormal muscular contraction, whether it be the spasmodic action of uterine fibres in dysmenorrhœa, uterine colic, exceptionally painful labor, or, again, in traumatic tetanus. Such property makes it especially valuable in obstetric and gynæcological practice. The reader illustrated by giving the points of a case previously reported in the JOURNAL. In a second case recalled, the patient came temporarily under his care during an attack of dysmenorrhœa which had been in progress several days. Chloral hydrate speedily relieved spasm and consequent suffering, and menstruation proceeded without further difficulty. Still again, a patient in her third confinement suffered so severely that a chloral hydrate mixture was ordered, but the birth was accomplished before it could be procured. Soon after parturition extreme after-pains set in, although the os uteri and vagina were in normal condition. Twenty grains were administered, and this, soon repeated, afforded temporary relief; but occasional recourse to the same was required for two days longer, to subdue the constantly recurring spasmodic pain. Good recovery.

In dystocia from irregular uterine contraction, or when contraction is continuous, as in the so-called uterine tetanus, in spasmodic stricture of the os externum, and in hour-glass contraction, in these, and allied conditions due to spasm, and not to organic changes, chloral hydrate may be expected to afford speedy and complete relief, and will be found superior to bleeding, tepid baths, opiates, etc., etc.

Still again, the asserted power of chloral hydrate to prevent coagulation of the blood should render it a prophylactic of great value where might otherwise have occurred cardiac thrombosis or pulmonary embolism, — one of the most sudden and terrible accidents ever witnessed by the physician. The following summarized statement, based upon the writer's studies and observation, closed the paper: —

(1.) Chloral hydrate may be safely and efficiently

used in labor to relieve the pains of normal and of abnormal uterine contraction.

(2.) It suspends all undue reflex action and resulting pain of a tendency to retard labor.

(3.) Labor under its influence is of much shorter duration.

(4.) Its use with intent to relieve pain is most striking and satisfactory when pain is caused by abnormal and spasmodic muscular contraction.

In the discussion which followed, DR. WEEKS remarked that he had had a similarly favorable experience with the drug with Dr. Brown, but he was afraid of it. In a case of pneumonia in a child two grains had been ordered every two hours, up to a certain point. His directions were somewhat exceeded in respect of repetition and in the morning he found the child in collapse, which speedily ended in death. The doctor quoted from a tabulation of deaths attached to a series of papers published by Dr. Kane in the *Medical Record*, in support of his position. The uncertainty of the remedy had made him distrustful of it; at times it occasioned uncontrollable excitement, and again profound sleep. He still further gave the particulars of a case in which extreme collapse suddenly set in a short time after the completion of a severe labor. The patient required persistent measures of relief for four hours before she was brought round to a condition of commencing security. Nothing in the history or treatment of the case sufficiently accounted for this seizure, which had been wholly unexpected; but the doctor could not doubt if chloral hydrate had been used in the free manner recommended by the reader, and its sedative action added to the other adverse influences, the situation of his patient must have been much more critical.

DR. WARNER was not, for obvious reasons, familiar with the drug in obstetric practice, but he had used it considerably in medical and chronic gynecological cases, and regarded it with much less favor than formerly. He had also been annoyed by its occasional excitant influence.

DR. WEEKS again referred to the table of deaths previously noticed.

DR. WARNER made allusion to a physician, known to members of the society, who gave but three grains to a young child, and it never woke up.

DR. W. S. BROWN had observed the excitant influence complained of under circumstances of continuous employment, and thought it should seldom be thus used. Furthermore, we must use caution in our resort to the drug, as we would in resort to opium. There was the same danger of formation of habit. He related a striking case in point, which came to his knowledge soon after the introduction of the remedy into this country. Still, he agreed with the writer of the paper in its general scope. Chloral hydrate is the best antispasmodic we possess. If its therapeutic activity depends upon its conversion into chloroform in the blood, we can understand its uncertainty of operation, for chloroform is the most treacherous drug known to the profession.

DR. WARNER emphasized the difference in mode of death from toxic action of chloral hydrate and chloroform. Was accustomed to use chloroform frequently before he came to Boston; had never seen a death from it; when this seemed threatened it was customary to catch the patient up and hold him by the heels, with feet suspended.

DR. W. S. BROWN had learned not to keep chloral

hydrate in solution, especially when it is to be exposed to the sunlight; it should always be freshly prepared.

DR. WEEKS again urged his main objection to the drug in obstetric practice: we are always more or less exposed to a degree of collapse or to hemorrhage. Chloral is an uncertain remedy; we are never quite safe in its use, and in case of either accident remarked our patient is but poorly prepared for it, if she have been previously, for any time and to any extent, under the influence of this powerful depressant.

DR. M. L. BROWN, in reply to a statement of Dr. Warner that opium had equal antispasmodic virtues with chloral hydrate, insisted that with the latter we wholly escape the unfortunate after-effects which constitute a main objection to opium. He had formerly lived in a place where several deaths had resulted from hypodermic morphia, but he did not propose to abandon so invaluable a resource on this account. So with chloral hydrate; but we must use caution, and select our cases. He believed, however, that it was especially indicated and exceptionally safe where pain is present, and pain depending upon extensive reflex irritation accompanied by spasm.

DR. W. S. BROWN added that the presence of the excessive muscular action of parturition gave additional security.

DR. WARNER remarked upon Dr. Brown's recommendation of chloral hydrate where there is delay in labor because of rigidity, spasm, etc. Now nature will bring everything right if time is given. He considered the physician had no right to prescribe a powerful remedy, as is often done, and so perhaps hazard life, because of a little inconvenience to himself from waiting, or because of a slight ailment of which the patient is in haste to be relieved.

DR. FIELD, being asked by the chair for his opinion on the subject under discussion, confessed to a strong feeling of surprise and disappointment at the general distrust or disapproval expressed in regard to a remedy which he had come years since to regard as both indispensable and beneficent. He had not used chloral hydrate in parturition because, when he used anything, he had depended upon chloroform, and was perfectly satisfied with it. This powerful remedy, dangerous or uncertain elsewhere, was safe here. The researches of Simpson could discover no case of death or injury, either of mother or child, from its employment, both in private and in hospital obstetric practice; and Campbell, of Paris, had extended this investigation from 1869, where Simpson left it, to 1876, with like results. Believed chloral hydrate was particularly safe with the young, and should feel much at loss were he obliged to correct this opinion. Had repeatedly prescribed 5 gr. to a child under two years of age, as a sleeping draught, with orders to repeat once after one hour if effect were insufficient; and in conditions demanding such resource, and with proper selection of cases, he felt perfectly safe in following this course. Chloral hydrate, in toxic dose, is believed to act primarily upon the heart and subordinately on the respiratory centre, and the heart, at least, ought to be especially strong in the young subject. But there must be no grave interference, on the part of disease, with the respiratory centre when chloral is to be given, and he could understand how the remedy might act adversely in the pneumonia case reported by Dr. Weeks.

As respects the *modus operandi* of its action, he be-

lieved the theory of Liebreich had been disproved. As Gubler has pointed out, we cannot satisfactorily explain the action of chloral hydrate through its supposed conversion into chloroform, for, first, the quantity of chloroform resulting from a safe medicinal dose of chloral hydrate would be too small to produce any appreciable influence; again, the action of the remedy is not anæsthetic but soporific, is not promptly set up and speedily over with, as in case of chloroform, but is rather slow in inception and of continuance for many hours. Had always acted upon a principle, which he emphatically enunciated in his teachings, that a sufficient dose of chloral hydrate should be given to produce positive physiological effect. To an adult, give 15, 20 or 30 gr. To trust to 5 or 10 gr. is mere trifling, and the remedy would be better let alone altogether. Had always felt great security in its use, and was not often disappointed in its effects; but had been careful to keep in mind certain *contra-indications*. Chloral hydrate should either be avoided or be given in greatly diminished quantity and with close watchfulness in conditions indicating marked hyperalkalinity of the blood, whether this be procured by a course of alkaline medicine or be the result of disease. Second, in decided asthenia of the heart, and, third (probably), in emphatic central congestion or inflammation. The doctor added, his only unfortunate experience in a ten years' use of the drug, and a free use, attended neglect of caution in respect of *contra-indications*; but this was before the profession was informed on this subject. A medicinal dose exhibited to a patient for some time previously under alkaline treatment for rheumatism, and who had also a weak heart, produced alarming symptoms, and such as for nearly an hour seemed seriously to threaten life.

Again, it is of the utmost importance that the chloral hydrate we use should be pure. Liebreich, within two or three years, had written a notable article in which he attributed a large proportion of all deaths reported from the use of his hypnotic to the employment of an impure salt. The statements of the variety and prevalence of impure specimens in the market—and particularly the American market—are well nigh appalling. But, fortunately, this evil has been in large measure corrected, and the careful physician should never be at a loss obtain pure hydrate of chloral. Dr. Field said, in conclusion, he should indorse, for the most part, the conclusions and observations of Dr. Brown, as presented in his paper.

Dr. NOURIS was then called upon to give his opinion out of his extended obstetric experience. Replied, he would make one point: had never used chloroform in parturition, but of late years had largely resorted to hydrate of chloral. Whereas formerly it had been his practice to sit round all night awaiting the slow motions of the patient, he now gave chloral hydrate; got through with the case more speedily, and went home, quite likely long before morning. His practice is to give 15 gr., and very often to repeat every fifteen minutes until the patient has taken one drachm in all; he generally adds bromide to the mixture in the ratio of one part of the latter to two of the chloral. He illustrated his remarks by reference to a case whose previous parturient experience had prepared him for a tedious labor of a day and a half or longer, but with whom the relaxing influence of the chloral was so marked that the child was born almost before he could get ready to receive it.

Dr. FIELD would add one remark to his previous

statement, and that had to do with the concentration of the mixture to be used. Was sure much mischief had been done by giving the salt in insufficient dilution. It must always be freely diluted (for example, one grain to one drachm); it is of necessity a bulky medicine, and there is no escape from this inconvenience. In some reports of deaths it was made quite evident that herein lay the secret of the mishap, although the reporter was apparently unconscious of the fact. Concentrated chloral hydrate is a dangerous remedy, even within the limits of therapeutical dose, and may kill as a massive dose of oxalic acid sometimes does, almost instantly, as by shock and paralysis of the heart.

Dr. CLARKE, after allusion to the exaggerated doses which were formerly advised and used soon after the introduction of the drug.—an error now corrected,—remarked that his experience with it at the time of and after delivery had been very satisfactory; and he had never seen any accident from it. Gave it with great relief for after-pains. Had been brought, however, to a considerable extent, to substitute croton chloral,—originally through the recommendation of an English physician. Likes it because it can be given in smaller dose, with less water, and it occasions less burning of mouth and throat. Of chloral hydrate is accustomed to give 10 to 15 gr., and repeat as occasion requires.

Dr. STODDARD had seen no bad effects from chloral in obstetric practice, but was accustomed to use it with much satisfaction. If prostration were to follow after delivery he should hesitate to attribute it to the remedy; as it may depend upon so many other causes and appears often with one who has not taken the drug.

Dr. FIELD added it had already occurred to him, in Dr. Weeks's case, that had chloral been given the alarming shock or collapse might have been mitigated or wholly absent. The patient was exhausted by her efforts; had she received chloral in proper quantity her efforts should have been much less severe, and she would have been better sustained under them.

Dr. STODDARD asked Dr. Field how he made consistent his statement that chloral did not owe its physiological action to its conversion into chloroform through the alkaline reaction of the blood, and his other assertion that hyperalkalinity of the blood constituted a *contraindication* to its use. Dr. FIELD acknowledged the apparent inconsistency; herein would appear an argument in favor of Dr. Liebreich's theory; but there are too many arguments against it. Did not attempt to explain, but reported as a clinical fact, established by repeated observation. It is possible, however, that the formation of chloroform, which doubtless takes place somewhere before the chloral is eliminated, may be so suddenly accomplished in the hyperalkaline blood as to present the whole body of resultant chloroform in an instant, as it were, and in such way as to overwhelm with toxic effect.

Upon call for the views of the Chair, Dr. MARCY replied he was in Berlin when Liebreich introduced his new remedy, had daily opportunities to witness its remarkable effects, and afterwards saw what was done in London with it. Dr. Mead in Dublin gave a mixture, in all containing one ounce of the salt, to a stout Irishman, a teaspoonful to be taken at a time and repeated as often as pleased; and the man took the whole of it. He slept four days and everything was tried to awaken him without avail; he then awoke of himself and suffered no further discomfort except the

he said he had been on a spree. From all this he believed the drug must be a safe one. Soon after getting home was called to a healthy-looking girl plunged in violent hysterical mania; gave her one drachm chloral in divided doses; she went to sleep; he thought her comfortable, but she never awoke. He felt at the time and had always since believed that the drug killed her and that he was himself, in a sense, *particeps criminis*. A most thorough autopsy could discover no lesion anywhere, all looked sound and healthy. Had since believed chloral should be most thoughtfully watched, if given at all.

Dr. CLARKE called attention to the antipyretic action of chloral, but the time allotted to the discussion had fully passed.

On call for instruments, etc., Dr. MAKEY showed certain surgical appliances, and first, an *antiseptic cloth*. This answered in principle to absorbent cotton, all oily matter being eliminated. It was impregnated with a mixture consisting of vaseline and paraffine, of each two parts, resin five parts, and pure carbolic acid crystals one part. After having tried several specimens of cloth, he had fixed upon the same variety he had formerly used for plaster bandages. It cost but five or six cents a yard.

He also showed specimens of *animal ligature*. Had discarded ox tendon, after trial, because it was too fatty, as might have been expected in a stall-fed animal. In catgut the fibres are not strictly parallel,—the ligature is likely to yield, and it becomes necessary to apply more than one. The desideratum was animal tendon presenting parallelism of fibres and free from fatty matter; and this he had found in the tendon of the caribou. The ligatures were carbolicized, especial attention being given to purity of carbolic acid. Society adjourned.

RHODE ISLAND MEDICAL SOCIETY.

THE seventieth annual meeting of the Rhode Island Medical Society was held in Providence, June 8th, the president, Dr. Charles O'Leary, in the chair. Stephen H. Mears, M. D., of Newport, Joseph C. Maranda, M. D., of Woonsocket, and Alvin H. Eccleston, M. D., of Charlestown, were elected Fellows.

The annual report of the treasurer, Dr. C. H. Leonard, exhibited an unexpended balance of \$316, of which surplus \$200 was by vote transferred to the printing fund.

The report of the trustees of the Fiske Fund was presented by Dr. C. W. Parsons. The trustees made no award on subjects proposed for 1881. The following subjects were proposed for the year 1882:—

(1.) Neuralgia: its Causes, Pathology, and Treatment, with special reference to Nerve Stretching and Nerve Section as a Method of Cure.

(3.) Is the General Disuse of Blood-Letting in accordance with Sound Physiological Principles as applied to the Treatment of Disease?

For the best essay on either subject worthy of a premium the trustees offer the sum of one hundred and fifty dollars on the usual conditions.

The committee on the library reported, through Dr. T. Newell, that the society's library is rapidly growing. The collection comprises 1600 volumes, exclusive of pamphlets and unbound journals.

Dr. Job Kenyon, from the committee on expert testimony, reported that a petition was presented to

the legislature in 1879, showing the disabilities under which physicians suffered, and asking that relief might be granted to witnesses when testifying as experts. The General Assembly, a few weeks since, passed an act giving additional fees to "witnesses summoned and testifying as experts in behalf of the State," but affording no relief in private cases. Dr. Garvin, of the committee, offered the following resolution, which was unanimously adopted:—

Resolved, That the Fellows of this society, in serving as witnesses for parties other than the State, refuse, both when summoned and while upon the stand, to give expert testimony without suitable additional compensation.

The committee also tried to secure an act giving courts power to summon any competent person to testify as an expert whenever there are obscure or contradictory facts in the case, precisely as is now done in cases where civil engineers disagree regarding boundary lines. This idea of regulating expert testimony was for some cause or other ignored by the legislature, though urged upon their attention as a matter of great importance.

An amendment to the by-laws was adopted by which the annual meeting will hereafter be held on the third Thursday instead of the second Wednesday in June. The quarterly meetings are to be held on the third Thursday of September, December, and March.

The following officers were elected for the year 1881-82: President, Charles O'Leary. First Vice-President, Job Kenyon. Second Vice-President, O. C. Wiggin. Recording Secretary, George D. Hersey. Corresponding Secretary, E. M. Harris. Treasurer, C. H. Leonard. Board of Censors, David King, Ariel Ballou, Otis Bullock, J. H. Eldridge, George P. Baker, J. W. C. Ely, Lloyd Morton, S. S. Keene. Publishing Committee, H. G. Miller, R. F. Noyes, G. W. Porter. Committee on the Library, I. Newell, H. G. Miller, G. D. Hersey, O. C. Wiggin, G. W. Porter.

The president, Dr. O'Leary, delivered the annual address, a carefully prepared essay on *The Use and Abuse of Hospitals and Medical Charities*.

Following adjournment, upwards of one hundred Fellows of the society, with invited guests, sat down to the annual dinner, which was bountifully served at the City Hotel.

—The Washington Training School for Nurses has, in a public commencement, just issued (May 21th) its certificate of qualifications to three nurse graduates. The exercises were well attended, and proved quite interesting, as, in addition to the usual addresses and forms by the officers of the school, extended remarks in favor of the school were made by General Eaton, commissioner of education, and the Hon. Dr. Loring, commissioner of agriculture. The school was organized in 1877, has no endowment, *no congressional appropriation*, but has quietly and effectively worked its way along. The Art Loan Exhibition, held for its benefit some weeks since, brought something less than one thousand dollars into its treasury. There have been a number of pupils in attendance since it was organized, but some have removed from the city. Bellevue Training School has taken two, and others have given up the idea of becoming nurses.

Recent Literature.

Medical Electricity: A Practical Treatise on the Applications of Electricity to Medicine and Surgery. By ROBERTS BARTHOLOW. Philadelphia: Henry C. Lea's Son & Co. 1881. Pages xx, 262.

Professor Bartholow's reputation is a favorable recommendation to any book of which he may be the author. This treatise is, as its title claims, practical. Throughout the book care has been taken to give in detail the kind of electricity which would be of most value in treating any disease, and the method of applying the electricity; the size of the electrodes, the places where they should be put, whether moved about or held stationary, in what direction the current should flow, the strength of current most desirable, and the frequency of application, all these and other details, important for the proper use of the agent, are mentioned, so that the book is in truth a practical guide. No attempt has been made to describe diseases, but various groups of affections are considered together, where such an arrangement is possible, and the value of electricity as a remedial agent in those groups of affections is stated once simply and precisely, and necessary variations are then given. While the author evidently speaks from personal experience, no cases are given to load the book with unnecessary accounts of symptoms in individual cases. The introductory chapters on electro-physics and electro-physiology are short and concise, giving all the information really necessary for the intelligent use of electricity in the treatment of disease, not, of course, giving a complete explanation of electricity as a physical agent or power. Probably the law of Ohm, as briefly explained on page 38, and the definitions of the Weber, the Volt, the Farad, etc., would not be understood by one who had no previous knowledge upon the subject: the explanations are altogether too brief to be easily understood; but these terms are of comparatively little importance in electro-therapeutics, and this brevity does not mar the usefulness of the book.

A few of the claims put forward for electricity as a therapeutic agent seem to be rather too strongly stated. The author seems to claim rather too much for galvanism as a means of restraining hyperæmia and promoting absorption of the effusion following cerebral embolism. In considering spinal paralysis a descending stable current is recommended, to be passed from the neck to the sacrum; also if tender points exist on the spine, the positive pole should be placed on them; then it is said that the spinal nerve roots, having an intimate relation to the lesions, ought also to be included in the circuit, by lateral application of the cathode to each side, taking each nerve in turn, the anode resting on its point of origin. This is, perhaps, a point in treatment too often neglected. It is generally thought sufficient to apply the current along the spine alone.

In treating neuralgia frequent *seances*, two or three daily, are advised. In severe cases this is wise; the only difficulty would probably be found in the expense, unless a properly trained nurse could be employed.

In many instances a large number of cells is advised, as many as thirty, forty, or even sixty; and where advised a strong current is of advantage, but it should be remembered by the general practitioner that the battery used is Siemens and Halske, the cutaneous irritation

from which is much less than when ordinary portable batteries are used.

Electrolysis is treated briefly, excepting the electrolysis of aneurisms, which is more fully considered.

The chapter on galvano-cautery is principally taken up with description of the batteries and other instruments, no attempt being made to describe the surgical diseases in which its use is indicated, only a few affections being mentioned to give certain cautions, or to show the value of the cautery.

For simplicity, conciseness, and its practical character in many useful hints scattered through its pages, this work is one of the most valuable that has yet been contributed upon the medical uses of electricity.

S. G. W.

Imperfect Hearing and the Hygiene of the Ear, including Nervous Symptoms, Tinnitus Aurium, Aurai Vertigo, Diseases of the Vaso-Pharyngeal Membrane, Middle Ear, and Mastoid Region. With Home Instruction of the Deaf. By LAURENCE TRENBELL, M. D., Ph. G., etc., etc. Third Edition, with Illustrations. Philadelphia: J. B. Lippincott & Co. 1881. Pp. 147. 8vo.

This little book, the third edition of which now appears, is rather a series of monographs upon the different subjects enumerated in the title given above than a continuous treatise upon the diseases of the ear. In it the author shows a familiarity with the literature of the subjects upon which he has drawn very largely, and at the same time his own experience is given in numerous histories of cases. The studious practitioner will find food for thought in some of the suggestions of the author, even where it is impossible to agree with him, but the lack of continuity in the work and the large number of quotations do not seem to adapt it for general reading, for which its title would imply it was intended.

A Treatise on the Diseases of the Nervous System. By WILLIAM A. HAMMOND. Seventh Edition, rewritten, enlarged, and improved. New York: D. Appleton & Co. 1881. Pp. 929.

Dr. Hammond's work is well known, and the fact that a seventh edition is now issued, ten years after the appearance of the first, is sufficient evidence of its popularity.

One of the improvements in this edition is the omission of the chapter on insanity. Additions have been made to chapters on cerebral congestion, syphilis of the brain, spinal cord, and nerves, and new sections introduced on diseases of the sympathetic nervous system. Other additions are also noticed in other chapters.

S. G. W.

—The British Medical Association will hold its forty-ninth annual meeting at Ryde, Isle of Wight, on August 9th, 10th, 11th, and 12th, under the presidency of Mr. Benjamin Barrow, a local practitioner of eminence, much respected in the Association, and several times mayor of Ryde. The meeting will be opened, as usual, with a short service, at which Bishop McDougall, a member of the Association, will deliver the sermon. The address in medicine will be given by Dr. Bristowe, that in surgery by Mr. Jonathan Hutchinson.

Medical and Surgical Journal.

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TRAINING AND ATHLETIC EXERCISES.

ALTHOUGH, as we stated in our previous remarks on this subject in the last JOURNAL, it is our belief that an intelligent study of the physiological requirements of the individual athlete, as well as of the class, is very necessary for securing the advantages and avoiding the possible evils of the various exercises at present in vogue, such positive facts as have been collected in regard to the health of men taking part in university boat races show pretty conclusively that scarcely any injurious effects can be traced to such contests, even at a period when training was far less rational than at present. It might naturally be expected that a preparation extending over a considerable period and increasing gradually in severity would of itself make a selection of the fittest for the final test, and offer a better record than the spasmodic efforts of scratch races or of individual rivalries.

Dr. E. H. Bradford, of Boston, published in the *New York Sanitarian* for January, 1877, the results of his inquiries in respect to the health and longevity of members of the Harvard University crews between the year of the first university race in this country (1853) and 1870.

The report, based upon answers received from the men themselves or from friends, covers one hundred and eleven individuals. Of these ten were killed during the civil war. The sum of the actual life of the other one hundred and one at the time of investigation already exceeded the expectation of life at the time of graduation, calculated according to Farr's tables, by a small amount. Six deaths from consumption were returned, but in all of these men either an hereditary tendency or an irregular life was satisfactorily established. In reply to a query as to personal opinions on the point, only one of the correspondents considered himself to have been injured by rowing, and one other, with an hereditary tendency to consumption, the actual disease developing sometime after graduation, thought that he might have been. Bradford was unable to learn of any authentic cases of sudden exhaustion in university races.

These results coincide, as far as they go, with the prior investigations of Morgan in regard to university oarsmen in England. Morgan's inquiries covered a larger number of men than Bradford's, and also a somewhat longer series of years; they were very thorough, his final statements representing the labor of some three years. No case of heart disease fairly

attributable to rowing is recorded, and no case of sudden exhaustion.

The results of these inquiries do not support the theoretical forebodings of Dr. B. W. Richardsou, expressed in his *Diseases of Modern Life*. The whole subject is one for the proper appreciation of which, however, facts are essentially desirable. A methodical tabulation of the careers and longevity of race horses would not be unprofitable in this connection. Horses are not prone to dissipation, nor do they conceal or misrepresent unflattering passages in their lives. There have been cases of deaths of race horses during a race, and we recall one such from rupture of the heart. As a rule, however, they improve in every way during the active part of their careers, and many attain old age. Much instructive information may accrue from the expert professional supervision to which exercises in some college gymnasia are now subjected.

At present the practicing physician, when consulted as to the advisability of a given youth's engaging in athletic exercises, has, apart from a possible knowledge of the family idiosyncracies, but very unsatisfactory data on which to base his opinion.

In the mean time, that training and athletic competitions ward off far more disease than they produce cannot be doubted, and even if we were compelled to regard these exercises as a sort of modern Minotaur, demanding the annual sacrifice of a specific number of our youth, we are still inclined to think that the indirect advantage to the State at large would justify the tribute.

JOSEPH SKODA.

WE were able in last week's issue merely to mention the fact of the death of this remarkable man, so remarkable as a medical teacher and reformer of medical education as to merit a much more extended notice. And we are the more impelled to speak of him at length inasmuch as the torments of the gout compelled him, some ten years ago, to resign his chair in the university, and so, to a degree, effaced him from men's minds; moreover, his reputation does not rest upon his writings, for he published no book save his *Treatise on Percussion and Auscultation*. Thus many are ignorant of what manner of man he was, and of the part which he played in the advancement of medical science and education.

Joseph Skoda was born in Pilsen, Bohemia, in 1805, began his medical studies in Vienna in 1825, took his degree in 1831, and then returned to Bohemia to practice. A year or two later, however, we find him again in Vienna as assistant physician in the General Hospital, where, side by side with Rokitsansky and other earnest but less eminent workers, he devoted himself especially for a time to the study of thoracic disease, at the post-mortem table as well as at the bedside. He also gave successful private courses on diseases of the chest. The outcome of this study was his work on *Percussion and Auscultation* in 1839, which has run through six German editions and was translated into English in 1853. About this time a

special department for diseases of the chest was set aside for him in the hospital, and in 1846 he was chosen professor of clinical medicine, a position which he held until his enforced retirement in 1871.

Of the group of great men to whose labors the fame of the Vienna school is chiefly due, Oppolzer was the first to depart; two years ago he was followed by Rokitsansky; it is scarcely a year since the news of Hebra's death reached us; now Skoda has gone; and Hyrtl alone remains, living out his declining years quietly in Hungary, and enjoying the rest which he has so richly earned.

These were the men who spread the renown of the Vienna school throughout the civilized world; and who, between 1850 and 1860, turned the tide of Americans and English seeking to complete their medical education in Europe from the French to the Austrian capital.

Until the early part of this century the science of medicine scarcely existed. Tradition and authority were all powerful, smothering common sense, and encouraging the public to regard medicine—as the existence of “homœopathy and kindred delusions” shows that it is even now too prone to do—in the light of a mysterious sort of black art, in the exercise of which aptitude was of far more value than special and painful training. Members of the profession themselves either found or thought it necessary to assume a certain preternatural wisdom in dealing with their patients; and few men dared to look facts square in the face, acknowledging their ignorance and setting their feet resolutely in the narrow scientific path which alone leads to true knowledge. In no countries, perhaps, was this state of affairs more strongly marked than in Germany and Austria. The subdivision of the former into miserable petty despotisms, and the centralized autocracy of the latter, did not offer conditions favorable for vigorous and independent thought in any direction.

Now there was no one man in Germany who did more than Skoda toward the improvement of medicine in these respects. In a truly scientific spirit he sought to establish a fact, and then by the careful use of every means at his disposal to arrive at its true explanation, utterly rejecting all hypotheses, and refusing to theorize save on what seemed to his critical mind a reasonable basis of fact and observation. He appeared on the scene when the great discoveries of Laennec were fresh, and had opened infinite possibilities to men's minds. He subjected Laennec's doctrines to rigid analysis, and insisted that the deductions to be drawn from physical signs lead *directly* to physical conditions and only *indirectly* to diseases. It is true that we do not now subscribe to all the doctrines of Skoda,—his theory of consonance, for instance. But that is of little consequence compared with the main fact that his spirit and line of work were the true ones, and that, actuated by no motives of personal jealousy, at a time when undue respect for authority had not passed away, he did not hesitate, after painstaking preparation, to criticise the authority even of the highest.

A medical friend suggested to us, the other day, in conversation, that Skoda was to Germany much what the late Jacob Bigelow was to us Americans in calling attention to the inherent tendency of many diseases to spontaneous recovery. As to medication he was very skeptical, a natural reaction from the over-reliance on drugs of his predecessors.

It was Skoda who suggested to his friend and pupil, Hebra, that he should turn his attention to dermatology, and the results which followed this advice are known to all the world. It was Skoda whose hard, good sense contributed in no small degree to the abandonment of the Latin language as a vehicle for medical lectures in Vienna about 1848.

Our authority for these two statements is that of Hebra himself. There are doubtless many of our readers who remember hearing the great dermatologist praise the Latinity of Hildebrand, one of the old school of professors, whose attention was so absorbed in turning elegant sentences in the classic tongue as to lead him to forget that it was his mission to teach his hearers medicine, or, to use the familiar, pithy words of Hebra, “Der alte Hildebrand, der kummerte sich viel mehr schön Lateinisch zu reden als die reine Wahrheit zu sprechen.”

Skoda's independence is well illustrated by the following anecdote about him, which was current in Vienna. He was summoned to the empress in his professional capacity, and when he arrived at the palace objection was raised by the attendants to admitting him to her majesty's presence, on the ground that his coat was shabby or unsuitable; thereupon the professor simply said, “If her majesty desires to see my coat I will go home, but if she desires to see me she will see me as I am.” It is scarcely necessary to say that the doors were then thrown open.

Before closing we cannot forbear alluding to a touching incident which occurred at Rokitsansky's funeral. Skoda had himself lifted into his carriage to pay the last respects to his life-long friend, and at the grave exclaimed, “I cannot die, and yet is my pain no less than his.” He is now at last released, and our calling is the better for his having lived.

MEDICAL NOTES.

—From the medical point of view there is one thing which the recent sad and criminal calamity at Washington—the shooting of President Garfield—does emphasize, and that is the great importance of restraining those of ill-balanced minds, the insane, before they proclaim their disease by extreme acts. At present the expert is hooted at if he advises early restraint to anticipate mischief, and hooted at just as much if he raises his voice against society's cry for the protection sought in vengeance.

—A memorial address was delivered by President Porter, of Yale College, on Monday evening, June 27th, commemorative of the life of Dr. David P. Smith, late professor of surgery in the medical department of Yale College.

—The following is the subject for the Jacksonian Prize of the Royal College of Surgeons of England for the ensuing year, namely, Wounds and other Injuries of Nerves: their Symptoms, Pathology, and Treatment. For the present year it is the Pathology and Surgical Treatment of Diseases of the Hip-Joint.

—Dr. Heschl, the professor of pathological anatomy in the University of Vienna, died on May 27th, in the fifty-seventh year of his age. The cause of death was an affection of the lungs, from which he had suffered during several months. Dr. Heschl succeeded the celebrated Rokitsansky in the professorship but a few years ago.

—The arrangements for a temporary museum of pathology, etc., to be held during the approaching International Medical Congress, are reported as making satisfactory progress. All objects of medical and surgical novelty, relating to pathology or the illustration of disease, will be acceptable, but the *British Medical Journal* has been requested to direct the attention of the profession definitely to two or three points.

(1.) Arrangements will be made, in respect to some very rare diseases, or those of especial interest, to show groups of living patients. In this way it is proposed to illustrate the following rare diseases: Addison's disease; coincidence of gout and rheumatic arthritis; Charcot's joint-disease; myxedema; syphilitic bone disease in children; mollities ossium; primary muscular atrophy; rupture of large nerve-trunks; morphea; keloid of alibert; true leprosy; lupus erythematosus; xanthelasma.

(2.) The committee wish especially to borrow, both from private individuals and from hospitals, good pictorial illustrations of disease.

(3.) In addition to the special subjects to be illustrated, which have been mentioned in the museum circular, it is desired to comprise the following: specimens of vesical calculi of unusual character, or those which have been removed by unusual methods, more especially those for which Bigelow's operation has been performed. Also specimens of biliary calculi of large size which have been passed by the bowel or removed by operation.

—The Philadelphia daily press reports an application for a charter for another medical association by graduates of the diploma mills. The objects of this independent medical association are stated to be to promote the purposes and defend the rights of all medical schools which are conducted in the legal way, etc. The attorney-general objected to the granting of the charter on the ground that some of the incorporators were graduates of certain colleges whose charters have been recently forfeited. In reply it was stated that it was a mere social organization, gotten up by a number of physicians who were respectable and honorable men, and that, moreover, it made no difference who the incorporators were provided the objects of the association were good. The court held the matter under advisement.

—Mr. Horstall, in a letter addressed to the *Manchester Guardian*, arising out of a statement by Dr. Boddoo and Mr. Tuckett that "British heads are

smaller than British heads used to be," points out that the conditions under which the youth of the country are brought up in these days are such as to favor the development of a stunted race. No playgrounds, no public gymnasias, and an enforced resort to early drinking and smoking are the main factors at work, according to this authority, in the production of a general enfeeblement, unknown in the freer and robust times of old. And there is, as the *Lancet* points out, considerable truth in the argument. With all our endeavors at improved sanitation, there remains much to be done in the way of physical education, and the gospel of a healthy body which shall be capable of all the demands made upon it needs to be strenuously preached and acted upon in the interests of the nation. The mode of life of a great number of our urban population is the great evil of civilization. Deprived of fresh air and healthy exercise, combined often with an improper and an inadequate supply of food, and a consequent resort to artificial stimulants, such people are growing up under conditions which can only lead to one result, that of defective development. We sadly want in this matter the exercise of that common sense which has usually been regarded as the peculiar feature of the British character, but which in some matters is kept wholly in the background, and never asserts itself.

—Diphtheria is said to be epidemic at Ludington, Mich. One hundred and twenty children have died recently in a population of four thousand people. The schools are closed, and special policemen have been stationed at the houses where sickness exists, to prevent ingress and egress.

NEW YORK.

—At the last meeting of the County Medical Society before the summer recess, June 27th, the following papers were read: The Japanese Otacoustic Fan and other Aids to Hearing, by Dr. Samuel Sexton; Report on Quebracho in Dyspnea, by the Therapeutic Society; and The Private Care of the Insane, by Dr. Ralph L. Parsons. Dr. Sexton stated that the Japanese instrument mentioned had been used with considerable success in the deaf and dumb asylum at Tokio, and claimed that it was an improvement on the Rhodes telephone, although it was of service only for a distance of three feet. The fan is made of lacquered wood, and does not differ materially in construction from the audiphone, the principle of action being the same in the two appliances. In commenting upon Dr. Sexton's paper, Dr. O. D. Pomeroy, one of the most prominent otologists in the city, stated that no cases in which the hearing was improved by means of the audiphone had come under his notice, although he was one of the first practically to test its powers.

—A conference was held on the 28th between the members of the Board of Health and the new street-cleaning commissioner, Mr. Coleman, when there was a general interchange of opinions and suggestions, with especial reference to the problem of the separation of ashes and garbage in the tenement-house dis-

tricts, the dumping of ashes and street refuse in open lots, and the filling in of sunken lots and swamp grounds with ashes free from garbage and other unwholesome material. The members of the Health Board assured Mr. Coleman of their earnest coöperation with him, volunteering to aid him in any proper way that he might suggest, and the latter stated that he would be compelled for the present, at least, to continue the system which had been handed down to him by his predecessors, the street-cleaning bureau, until he had had time to perfect a better one.

— On the same day Governor Cornell gave a hearing to the chief, consulting, and resident engineers of the Croton Aqueduct, Messrs. Newton, Chesbrough, and Church, who visited Albany for the purpose of requesting the governor to sign the bill which recently passed the legislature providing for the construction of a new Croton aqueduct. Among the documents presented in favor of the bill was a letter from Mayor Grace, in the course of which he said, "The critical condition of the supply during the past winter is an admonition that measures to obtain an abundant addition to the supply cannot be longer delayed without imperiling the health and property of our citizens. . . . Having arrived at a period when the Croton Aqueduct, although still performing its functions with unceasing regularity, has become inadequate to meet the city's wants, it seems to be our duty to profit by the example set by its projectors and builders, and make commensurate provision for an abundant water supply for the future, and the necessity for such provision is urgent." The president of the Board of Health, Professor Chandler, also sent a letter strongly urging the governor to sign the bill. For many years, he stated, the citizens had suffered seriously from the inadequacy of the water supply. There was an abundance of water of unexceptionable quality in the Croton water-shed, but it could not be brought to the city in additional quantity because the present aqueduct was already taxed to its utmost capacity, which was less than one hundred million gallons per day. It was now impossible in most of the dwelling-houses to get water to the third floor, even in those provided with the most complete system of plumbing. As a consequence the closets were not properly flushed, the houses were permeated with sewer-gas, and there was a constantly increasing number of complaints of sickness and ill-health resulting from this cause. "The health officers of the city," he continued, "have viewed with increasing alarm this deficiency of water. No sanitary measures which they can devise are sufficient to prevent the evils which result from it. In my opinion the demand for an increased supply of water, and a large increase, which can only be secured by a new aqueduct, is imperative. No matter what the cost to the city, we must have for the health and comfort of our constantly increasing population a new aqueduct, nor can we afford to postpone the commencement of the work." The letter concluded as follows: "The recent report of Mr. Isaac Newton, the very competent engineer of the Croton Aqueduct, supported by the opinion of E. S. Chesbrough, the oldest and

most experienced hydraulic engineer in the country, carried conviction to my mind, and is in full accord with all that I have learned on the subject of water supply during the past twenty years, during which it has been a subject of study with me. I believe that this bill will accomplish in the most satisfactory manner all that is required in this direction, and I fail to detect anything in the bill, as amended and now before you, to which I can object either as an expert on water supply or as a citizen and tax-payer of New York."

— In view of the comparative scarceness of water, on account of the rapid increase of the population, as well as the enormous waste that is continually going on, it will undoubtedly be necessary to increase the number of water metres throughout the city, until an additional supply of water can be obtained by the construction of a new aqueduct. In a recent communication to the board of aldermen upon this subject, Mr. Herbert Thompson, Commissioner of Public Works, says, "I deem it proper to say that in the present condition of our water supply the compulsory use of water meters in certain classes of buildings, while generally unpopular, is an absolute necessity. A superabundance of supply and pressure of water in past years has produced habits of waste with consumers which can no longer be indulged without depriving a large part of the population of the necessary supply, and which can be suppressed or limited only by the use of meters. For many years past we have been receiving in the city all the water which the Croton Aqueduct can carry, and until additional conduits are completed we cannot receive more. In the mean time the supply must be so husbanded as to maintain an equitable distribution to the rapidly increasing population."

— A new charity of a somewhat novel character, the New York Medical Mission, has just been started in the densely populated lower portion of the city, the rooms of the mission being at No. 5 East Broadway. The plan of the institution is to give free medical treatment to all patients who are unable to pay for it, and by holding out this inducement to go to the mission rooms to obtain an opportunity for preaching and instruction among a class of individuals who could not otherwise be brought to attend religious services. Between half past nine and ten A. M. each day the names of all persons who desire medical treatment, but who are too ill to leave their homes, will be received, and at two P. M. there will be a short religious service, with music, after which the patients will be treated in the dispensary. While there will be no charge for medical attendance, patients will be expected to contribute such amounts as they can afford for the support of the mission. The fact that those too ill to come out will be treated in their own homes will furnish an opportunity, it is thought, for discovering whether charity is really needed or not in the families thus visited. The opening service was held at the mission on the 27th of June, when Dr. C. R. Agnew presided, and among those who took part in the exercises were Prof. Alfred C. Post, Dr. D. B.

McCarter, for many years a medical missionary in China and Japan, and the Rev. Mr. Constantine, of Smyrna. The medical superintendent will be Dr. George D. Dowhott, formerly in the British admiralty service, who is said to have been very successful in establishing medical missions similar to this in Liverpool and in Philadelphia.

Miscellany.

CRIMINAL ABORTION.

MR. EDITOR.—The report of the proceedings of the Suffolk District Medical Society, which appears in your issue of the 14th ult., contains an abstract of a paper by Dr. F. A. Harris entitled *A Case of Criminal Abortion, with Acquittal*. I suppose that Dr. Harris refers to a case in which I was called by the defense to testify as an expert, and that his remarks in regard to a certain medical witness are intended to apply to me. Upon the presumption, then, that this is the case, with your permission I wish to say a word in reply to some of the statements made by Dr. Harris. I should have done this sooner, but since I became aware of the publication of the paper in question I have not, until now, been able to command even the brief time required in taking this notice of it.

In regard to the question of the advisability of resorting to artificial delivery in cases of puerperal convulsions I shall have no argument with Dr. Harris. Fortunately, it is not left for either of us to decide, except in cases that come under our immediate observation. I said that "in dangerous cases which do not yield to other measures artificial delivery is demanded, and is the practice of the best obstetricians," and this I have no hesitation in repeating. If Dr. Harris desires to criticise this opinion, or any opinion that I have ever expressed, I have no objection to his so doing, and I shall have no controversy with him; but when he makes a statement of what he alleges to be facts having reference to me I shall insist upon a fair and truthful presentation of such facts.

Apparently, Dr. Harris would have it understood that I diagnosed a case of "eclampsia," upon the last statement,—"she was lying on her side, her knees drawn up, and hands clenched, and groaning." Such was not the case. The accused, upon whose statement Dr. Harris says I testified, gave a classical description of a typical case of puerperal convulsions, stating, among other things, in addition to the above, that the woman was unconscious; and that he so testified is indicated in the brief of his testimony taken by the prosecuting attorney. The defendant further stated that the woman had general convulsions. I submit, then, that his statement was not "a description of an ordinary labor pain."

The assertion of Dr. Harris that I said "that one could not perform venesection at first," grows out of my remark that "venesection is inadmissible in some cases." The statement which he puts in this form, "He should do leeching and cupping, not venesection," was preceded by the qualification, "In many cases."

Perhaps the quickest way to substantiate what I have said upon these points is to give a copy of the notes of my testimony upon them, taken by the assistant district attorney, who acted as the prosecuting officer,

together with his explanation of their meaning when their meaning is not perfectly obvious; the explanations being in brackets: "Treatment of eclampsia. Do something as soon as you can; let blood; best thing; can't perform venesection; leeches or cupping. [If you cannot perform venesection, employ leeching or cupping.] Almost always counter-irritation; quick application; hot iron; mustard; let blood; let no more. [Let no more than is necessary.] Relieve by ether; empty the uterus; kidney disease; albumen in urine; some of best authors say deliver at once. [That is, if relief is not obtained from blood-letting, anaesthetics, etc.] Empty the bladder; ether or chloroform should at once be given." Now, in view of this, which, so far as it goes, correctly represents my testimony upon the points mentioned, I submit that the statements of Dr. Harris are neither fair, nor just, nor truthful.

I did not state that "the disease"—puerperal convulsions—"was almost always fatal;" but I did say, "it is a very dangerous and fatal disease."

Dr. Harris says that I was "pressed" for the names of authors that advised artificial delivery. Such was not the case. I held in my hand a list of such authors, with Barnes at the head. I named him first, and before I had time to name another Dr. Harris spoke to the prosecuting officer, who immediately asked me if I was sure that Barnes advised this measure. I replied, embodying in my reply an extract from Barnes, which evidently did not suit the government, and the cross-examination was immediately turned upon another line. I could easily have read the other names contained in my list had I been asked or even allowed to do so. My testimony in regard to the wounds was that those that were wholly vaginal were probably made by some sharp instrument, and that the destruction of tissues in and about the *cervix uteri* might have resulted from lacerations caused by the expulsion of the fetus or by forcible manual attempts to remove it.

Dr. Harris says, "this expert testified that the fetus could not be got out by forcible means in an hour and a half." The only testimony to which this can refer was given in answer to a hypothetical question: "Suppose a woman to be five or six months pregnant and not in labor, could artificial delivery be begun and completed in an hour and a half?" I replied that I did not think it could; that I had made two attempts at about this period of pregnancy, one at five and the other at six months, and with the aid of an accomplished obstetrician in each case I had not been able to effect delivery in either, in that length of time.

Now in regard to Barnes, Dr. Harris says that this author "not only does not advise but protests against it (that is, artificial delivery) in the period before the eighth month in eclampsia," and he also made a statement substantially the same as this under oath.

In his lectures on *Obstetric Operations*, 1876, page 455, Barnes says: "Gestation may be divided arbitrarily into two parts. During the first part, terminating at six and one half or seven months, or at the end of one hundred and eighty or two hundred days, it is scarcely probable that a viable fetus will be expelled. To induce labor within this period is really to bring about abortion. It is, therefore, only done under the pressure of conditions that preclude waiting until the child is viable, and out of regard solely for the safety of the mother."

Page 456. "It will be convenient to enumerate first

those conditions which, in the interest of the mother, and disregarding the child, demand the interruption of gestation during the first part."

As one of these conditions he specifies "some cases of albuminuria, convulsions being present or apprehended."

Page 457. "My experience leads me to conclude that in cases of urgent disease there is more frequent occasion to regret having delayed the operation too long, than having had recourse to it too soon."

Page 462. "Take first the case of *convulsions*. It has been seen over and over again that the convulsions have ceased soon after the uterus has been emptied. Everything conspires to prove that the convulsions are due to conditions arising out of the pregnancy. What, then, more logical than to terminate the pregnancy as soon as possible? Yet experience suggests caution as to the mode of acting. In not a few cases the completion of labor has failed to put an end to the convulsions. In other cases death has followed labor, whether this have occurred spontaneously or have been induced. Is the unfortunate issue the consequence of procrastination in inducing labor, or of over haste of (or?) want of precaution in the mode of proceeding? I believe it is due sometimes to one cause and sometimes to the other."

Now in view of these distinct statements of Dr. Barnes it seems to me that Dr. Harris must acknowledge that Barnes does advise what Dr. Harris says he does not, and that Dr. Harris must stand convicted of ignorance or willful misrepresentation. I leave it for him to decide which.

One or two reflections and I shall be done. If the opinions I gave in this case were erroneous, they could have been successfully controverted by testimony in rebuttal. The government had all of one evening and night in which to procure witnesses to contradict my statements. I have good reason, I think, for believing that an instructor in obstetrics in Harvard University medical school was consulted about the matter. Why was not he called? Why was not the professor of obstetrics in the same school summoned? It would have given me great pleasure to have heard him testify upon the point in question. Why was not the other medical examiner of Suffolk County, who was placed upon the stand during the government's rebuttal to testify upon other matters, asked in regard to this one? Why, if my testimony was so "extraordinary," so wide of the truth, so prejudicial to the interests of justice and yet so easily dissipated by the slightest "puff of empty air," as Dr. Harris would seem to wish his hearers to believe, why was not a single witness produced to controvert, contradict, expose, and show it up in all of its villainous perjury?

J. B. TREADWELL.

Boston, May 19, 1881.

THE BOYLSTON PRIZE.

THE *British Medical Journal* contains the following:—

We learn with pleasure that the Boylston prize of three hundred dollars, offered for the best dissertation on Injuries of the Back without apparent Mechanical Lesion in their surgical and medico-legal aspects, has been awarded to Mr. Herbert Page of St. Mary's Hospital. As surgeon to the London and North-

Western Railway, Mr. Page has had considerable experience in the subject-matter of the essay, and has collected materials which were available for the subject announced. The subject of the second prize was the effects of drugs during their application on either nurses or nursing. From a communication we have received from Mr. Dolan of Halifax, it appears that he had forwarded a dissertation, of course under motto in the proper manner, for this prize, and has received in reply a communication from the secretary, informing him that the prize would have been awarded to his essay, as being the best dissertation on the subject of which it treats; it was, however, debarred from competition by its having been published, prior to their decision, in the *Practitioner* of February, 1881, and subsequent numbers, otherwise it would have received the prize. Mr. Dolan made this public in ignorance of the rule, which is, however, a very customary and usual one in the case of all prize essays.

DARWIN'S VIEWS ON VIVISECTION.

The following letter from Mr. Darwin in reply to a letter from Professor Hohngren, of Upsala, requesting his views on the right to make experiments on living animals in the interest of science, we copy from the *Popular Science Monthly*:—

Down, Beckenham, April 14, 1881.

DEAR SIR.—In answer to your courteous letter of April 7th, I have no objection to express my opinion with respect to the right of experimenting on living animals. I use this latter expression as more correct and comprehensive than that of vivisection. You are at liberty to make any use of this letter which you may think fit, but if published I should wish the whole to appear. I have all my life been a strong advocate for humanity to animals, and have done what I could in my writings to enforce this duty. Several years ago, when the agitation against physiologists commenced in England, it was asserted that inhumanity was here practiced, and useless suffering caused to animals; and I was led to think that it might be advisable to have an act of Parliament on the subject. I then took an active part in trying to get a bill passed, such as would have removed all just cause of complaint, and at the same time have left physiologists free to pursue their researches—a bill very different from the act which has since been passed. It is right to add that the investigation of the matter by a Royal Commission proved that the accusations made against our English physiologists were false. From all that I have heard, however, I fear that in some parts of Europe little regard is paid to the sufferings of animals, and if this be the case I should be glad to hear of legislation against inhumanity in any such country. On the other hand, I know that physiology cannot possibly progress except by means of experiments on living animals, and I feel the deepest conviction that he who retards the progress of physiology commits a crime against mankind. Any one who remembers, as I can, the state of this science half a century ago, must admit that it has made immense progress, and it is now progressing at an ever-increasing rate.

What improvements in medical practice may be directly attributed to physiological research is a question which can be properly discussed only by those

physiologists and medical practitioners who have studied the history of their subjects; but, as far as I can learn, the benefits are already great. However this may be, no one, unless he is grossly ignorant of what science has done for mankind, can entertain any doubt of the incalculable benefits which will hereafter be derived from physiology, not only by man, but by the lower animals. Look, for instance, at Pasteur's results in modifying the germs of the most malignant diseases, from which, as it so happens, animals will in the first place receive more relief than man. Let it be remembered how many lives and what a fearful amount of suffering have been saved by the knowledge gained of parasitic worms through the experiments of Virchow and others on living animals. In the future every one will be astonished at the ingratitude shown, at least in England, to these benefactors of mankind. As for myself, permit me to assure you that I honor, and shall always honor, every one who advances the noble science of physiology.

Dear sir, yours faithfully,

CHARLES DARWIN.

TO PROFESSOR HOLMGREN.

THE AMERICAN MEDICAL ASSOCIATION.

THE following extract from the *Medical Times and Gazette* shows all the space that periodical considers it necessary to devote to the American Medical Association:—

The thirty-second annual meeting of this body, held in May, 1881, at Richmond, Virginia, has, according to the *New York Medical Record* (May 14th), been attended only with a moderate amount of success, either as regards the numbers present or the importance of the subjects discussed. Singularly enough, the numbers of delegates from the South and Southwest were scanty, those from Pennsylvania being largely in excess of any other State. As was to be expected, from the well-known hospitality of the South, the meeting was socially a complete success. A committee has been appointed, with directions to report next year, with the view of converting the annual volume of Transactions (which no one ever reads) into a weekly journal. In his address on Obstetrics and Gynecology, Dr. Chadwick, of Boston, claims preëminence in this field at the present time for the United States; for although he believes that the beneficial results of surgical interference are by some exaggerated, yet, "taken all in all, close observation and study in most of the countries of Europe have confirmed me in the opinion that in obstetrics and gynecology America leads the world." England, he says, is fast losing its preëminence in this branch of medicine, for while America is publishing such important journals as the *American Journal of Obstetrics* and the *Transactions of the American Gynecological Society*, she has discontinued her solitary *Obstetrical Journal* for want of support. A heated discussion took place upon a motion that it should be "considered derogatory to the interests of the public and the honor of the profession for any physician or teacher to aid in any way the medical teaching or graduation of persons, knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine." This was warmly debated, and in the end an amendment by Dr. Gillings was carried, namely:

"It is not in accord with the interest of the public or the honor of the profession that any physician or teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons who they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

SEA-AIR AND INFANTILE DIARRHŒA.

THE Sea-Shore Home has just issued its Annual Report for 1880. Dr. Edward T. Williams, the physician in charge of the Home for several years, thus sums up his experience.

(1.) Sea-air is *not* an infallible cure for infantile diarrhœa. Some cases will die under the best management.

(2.) The vast majority of cases get well if removed early and properly fed and cared for.

(3.) After decided collapse and head symptoms come on, death is the rule, recovery the fortunate exception.

(4.) Bronchial and pulmonary complications are usually aggravated by the cold air.

(5.) Not a few cases are made worse by exposure in stormy weather and the cold nights of the last of August and September; at these times, both fires and extra clothing are needed, and some take cold in spite of them. Indeed, it has seemed to me that the autumnal diarrhœas are chiefly caused by cold, and are unsuited to the seaside.

FEEDING-BOTTLES.

IT is impossible to enforce too strongly the paramount importance of keeping the feeding-bottles of infants perfectly clean and sweet; so we give the following from a paper lately presented to the French Academy of Sciences. Several infants' feeding-bottles in use at a crèche in Paris, and having a fetid odor, were taken by Dr. M. Mesnil to the Municipal Laboratory for examination. M. Fauvel found that the milk remaining in all had a sickening smell, was acid, and half-coagulated; and on microscopic examination, the globules were deformed, and numerous very lively bacteria, along with some vibrios, were present. On cutting open the caoutchouc tube throughout its length coagulated milk with small organisms was met with; but a still more important fact was the presence in the nipple of a mass of vegetation of cryptogamic nature. Sown in whey, this developed considerably in a few days. A visitation of all the crèches was then arranged by the police and medical authorities, with the following result: Of thirty-one feeding-bottles examined in ten crèches, twenty-eight contained in the nipple, the caoutchouc tube, and in some cases in the glass bottle, vegetations of the kind indicated, as well as bacteria, etc. Several that had been washed carefully, and were considered ready for use, still contained these cryptogams. Two feeding-bottles in a very bad state were found to contain pus and blood-corpuscles; the children who had used them had injuries in the cavity of the mouth. It is thus probable that saliva enters the feeding-bottle, and its ferments are added to those of milk. The acidity of the milk is attributed by M.

Fauvel to the bacteria present. We do not suppose that there is anything new in all this, but the graphic description of the freely growing moulds, the very vivacious bacteria, and the more scarce vibrios that may be found in babies' feeding-bottles may impress

the minds of mothers and nurses more than any common-phrased injunctions. It might, however, really be useful to publish pictures of the world found in a drop of sour milk from a dirty feeding-bottle, to be hung up in every nursery. — *Medical Times and Gazette*.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 25, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrheal Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	699	354	38.05	14.02	8.44	9.87	4.58
Philadelphia.....	846,984	318	120	23.27	6.30	5.35	2.83	5.03
Brooklyn.....	566,689	225	120	25.33	8.89	13.78	7.11	4.00
Chicago.....	503,304	216	130	27.04	12.96	9.72	3.24	.93
Boston.....	362,535	128	37	13.28	.78	7.81	7.81	—
St. Louis.....	350,522	179	119	38.00	29.05	—	1.68	.56
Baltimore.....	332,190	172	88	29.65	20.93	3.49	3.49	.58
Cincinnati.....	255,708	156	92	40.38	32.69	4.49	.64	1.28
New Orleans.....	216,140	186	77	23.12	15.60	.54	1.08	1.61
District of Columbia.....	177,638	71	45	46.48	36.62	1.41	2.82	—
Pittsburgh.....	156,381	—	—	—	—	—	—	—
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	46	18	26.09	—	6.52	6.52	4.35
Providence.....	104,857	37	10	27.02	—	5.40	5.40	2.70
New Haven.....	62,882	20	8	10.00	—	5.00	5.00	—
Charleston.....	49,999	52	17	32.69	15.38	1.92	—	5.77
Nashville.....	43,461	25	17	28.00	28.00	—	—	—
Lowell.....	59,485	20	6	15.00	5.00	10.00	—	—
Worcester.....	58,295	11	4	18.18	—	18.18	—	—
Cambridge.....	52,740	6	1	16.67	—	—	16.67	—
Fall River.....	49,006	16	4	18.75	—	12.50	—	—
Lawrence.....	39,178	8	3	25.00	25.00	12.50	—	—
Lynn.....	38,284	9	1	—	—	22.22	—	—
Springfield.....	33,340	13	2	7.70	—	15.40	7.70	—
Salem.....	27,598	3	0	—	—	33.33	—	—
New Bedford.....	26,875	6	2	16.67	—	33.33	—	16.67
Somerville.....	24,985	7	—	—	—	—	—	—
Holyoke.....	21,851	12	6	50.00	8.33	—	—	—
Chelsea.....	21,785	7	1	14.29	—	14.29	14.29	—
Taunton.....	21,213	5	—	—	—	—	—	—
Gloucester.....	19,329	7	2	14.29	—	—	14.29	—
Haverhill.....	18,475	2	—	50.00	—	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	6	2	—	—	16.67	—	—
Fitchburg.....	12,405	2	1	—	—	—	—	—
Twenty-three Massachusetts towns.....	182,627	57	12	19.30	—	10.53	12.30	3.51

Deaths reported 2707 (no reports from Pittsburgh or Buffalo); 1299 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 834; diarrheal diseases 380, consumption 324, lung diseases 182, diphtheria and croup 152, scarlet fever 75, small-pox 41, measles 40, cerebro-spinal meningitis 38, typhoid fever 37, malarial fevers 33, whooping-cough 23, puerperal fever 14, erysipelas eight, typhus fever three. From *small-pox*, Philadelphia and Chicago 15, New York 10, Brooklyn one. From *measles*, New York 23, Baltimore and Cincinnati four, Philadelphia, Brooklyn, Chicago, Boston, New Orleans, District of Columbia, Milwaukee, Providence, and Worcester one. From *cerebro-spinal meningitis*, Chicago 12, New York 10, Philadelphia and Holyoke four, Milwaukee two, St. Louis, Cincinnati, District of Columbia, Haverhill, Waltham, and Woburn one. From *typhoid fever*, Chicago six, Philadelphia four, New York, Baltimore, Cincinnati, and Milwaukee three, St. Louis, District of Columbia, Charleston, Lowell, and Fall River two, Brooklyn, Boston, Providence, Worcester, and Holyoke one. From *malarial fevers*, New York eight, St. Louis and New Orleans, seven, Brooklyn four, Charleston three, Chicago, Boston, Baltimore, and New Haven one. From *whooping-cough*, New York eight, Chicago six, Brooklyn three, Philadelphia and Providence two, St. Louis and Fall River one. From *puerperal fever*, Boston three, Chicago two, New York, Philadelphia, Brooklyn, St. Louis, Cincinnati, New Orleans, District of Columbia, Milwaukee, and Providence one. From *erysipelas*,

Philadelphia and Providence two, New York, Brooklyn, Chicago, and Charleston one. From *typhus fever*, New York three.

Twenty two cases of small-pox were reported in Brooklyn, 29 in Chicago; diphtheria 28, scarlet fever five, in Boston; scarlet fever 15, diphtheria eight, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,083,543 (population of the State 1,783,086), the total death-rate for the week was 15.64, against 18.24 and 17.75 for the previous two weeks.

For the week ending June 4th in 149 German cities and towns, with an estimated population of 7,878,615, the death-rate was 25.6. Deaths reported 3883; 1833 under five; pulmonary consumption 565, acute diseases of the respiratory organs 362, diarrheal diseases 180, diphtheria and croup 113, scarlet fever 90, whooping-cough 50, typhoid fever 53, measles and röteln 43, typhus fever (Königsberg six, Stettin, Tilsit, three, Erfurt two, Frankfurt 13, small-pox (Königsberg, Munich two, Berlin three, Guben, Hamburg, Aachen five) 13, puerperal fever 10. The death-rates ranged from 15.7 in Hanover to 38.8 in Chemnitz; Königsberg 20.3; Breslau 28.8; Munich 37.8; Dresden 24.3; Berlin 26.8; Leipzig 26.8; Hamburg 25.5; Bremen 27.8; Cologne 28.7; Frankfurt 16.7; Strasburg 33.3.

For the week ending June 11th, in the 20 English cities, with an estimated population of 7,616,417, the death-rate was 18.8. Deaths reported 2737: acute diseases of the respiratory organs (London) 216, measles 106, whooping-cough 91, small-pox (London 59) 63, scarlet fever 55, diarrhoea 45 fever 27 diph-

theria 14. The death-rates ranged from 14 in Brighton to 23 in Sheffield; Bristol 17.4; London 18.3; Leeds 18.5; Birmingham 18.8; Manchester; 21.7; Liverpool 22.7; Sheffield 23. In Edinburgh 20.5; Glasgow 18.

In the 21 chief towns of Switzerland, for the week ending June 11th, population 479,934, there were 29 deaths from acute dis-

eases of the respiratory organs, diarrhoeal diseases 26, measles 14, diphtheria five, typhoid fever five, small-pox four, whooping-cough two, puerperal fever one. The death-rates were: Geneva 18.2; Zurich 25; Basle 26.8; Berne 26.8; St. Imier 14.5.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 19	29.712	72	86	62	63	41	44	50	SW	W	W	1	10	10	O ^b	F	C	—	—
Mon., 20	29.766	70	82	60	60	50	58	56	W	SW	SW	3	4	6	F	O	O	—	—
Tues., 21	29.705	60	71	52	85	62	47	64	NW	E	NW	3	8	15	O	F	C	—	—
Wed., 22	29.890	60	69	48	60	41	59	53	W	W	C	10	10	0	C	F	C	—	—
Thurs., 23	30.003	60	75	51	63	33	85	60	NW	W	C	5	6	0	F	F	F	—	—
Fri., 24	30.066	62	73	51	66	50	67	61	NW	E	S	8	7	4	C	F	F	—	—
Sat., 25	30.097	68	82	57	74	30	55	53	W	W	SW	2	10	8	R	F	C	—	—
Week.	29.891	65	86	48				57										5.09	.14

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 25, 1881, TO JULY 1, 1881.

TAYLOR, A. W., first lieutenant and assistant surgeon. To proceed from Fort Supply, Indian Territory, to Fort Lyon, Colorado, and report to the commanding officer for temporary duty. S. O. 122, C. S., Department of the Missouri.

TORNEY, G. H., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month, to take effect when relieved by assistant surgeon A. W. Taylor. S. O. 122, Department of the Missouri, June 21, 1881.

KOENIGER, E. A., captain and assistant surgeon. Granted leave of absence for two months and fifteen days. S. O. 143, A. G. O., June 24, 1881.

BOOKS AND PAMPHLETS RECEIVED. — Color Blindness. Remarks by Dr. B. Joy Jeffries, of Boston, at the twenty-ninth annual meeting of the Board of Supervising Inspectors of Steam Vessels.

The Wharton School of Finance and Economy. (Reprint.) University of Pennsylvania. Announcement of The Wharton School of Finance and Economy. June, 1881.

Medical Department of the University of Georgetown, District of Columbia, Thirty-Third Medical Session, 1881-82.

Die Nerven-schwäche (Neurasthenia): Ihre Symptom, Nature, Folgezustände und Behandlung.

Practisch Bearbeitet von George M. Beard, M. D. Nach der Zweiten auflage ins Deutsche übertragen und mit einem vorwort versehen von San. Rath. Dr. M. Neisser in Breslau. Leipzig. Verlag von F. C. W. Vogel. 1881.

Contribution to the Correction of Strabismus by the Advancement of the Rectus. By A. E. Prince, M. D. (Reprint.) St. Louis Medical Journal Publishing Company. 1881.

The Management of Wounds. By David Prince, M. D. Philadelphia. Lindsay and Blakiston. 1881.

A Text-Book of Practical Medicine, with particular reference to Physiology and Pathological Anatomy. By Dr. Felix von

Niemeyer. Translated from the Eighth German Edition, by special permission of the Author, by George H. Humphreys, M. D., and Charles E. Hackley, M. D. Revised Edition. New York: D. Appleton & Co. 1881.

American Nervousness, its Causes and Consequences. A Supplement to Nervous Exhaustion (Neurasthenia). By George M. Beard, M. D. New York: G. P. Putnam's Sons. 1881.

Tenotomy in the Treatment of Congenital Club-Foot, with a Tabular Report of Fifty-Two Cases. By Ap Morgan Vance, M. D. (Reprint.)

Hygiene and Treatment of Catarrh. Therapeutic and Operative Measures for Chronic Catarrhal Inflammation of the Nose, Throat, and Ears. Forty Illustrations. Part II. By Thomas F. Rumbold, M. D. St. Louis: George O. Rumbold & Co. 1881.

The Hunterian Oration, delivered at the Royal College of Surgeons of England on the 14th February, 1881. By Luther Holden, Ex-President of the Royal College of Surgeons of England. London: J. & A. Churchill. 1881.

Report of Cases of Extensive Fracture of Nasal Bones treated by a New Method. By Lewis D. Mason, M. D.

Nasal Stenosis: Its Influence on Olfaction, Audition, Vocalization, and Respiration, and its Treatment. By J. O. Roe, M. D. (Reprint.)

A Complicated Case: Remittent Fever, with Jaundice and probable Hepatitis, Convulsions, Hemiplegia, Typhoid Fever, occurring in a Rachitic Child. By P. Brynberg Porter, M. D. (Reprint.)

Department of the Interior, Bureau of Education. Fifty Years of Freedom in Belgium, Education in Malta, Third International Geographical Congress at Venice in 1881, Illiteracy and Crime in France, School Savings Bank, and Education in Sheffield.

Annual Report of the Board of Managers of the State Reformatory at Elmira, for the Year ending September 30, 1880.

The American Medical Association, Fifth Annual Meeting, held at Richmond, Va., May 3d and 4th, 1881. Detroit: Post and Tribune Printing Company. 1881.

The Quality of Mental Operations debased by the Use of Alcohol. Certain Depraved Mental States Analyzed. By T. L. Wright, M. D. (Reprint.)

Original Articles.

PRIVATE PRECEPTORSHIP IN THE STUDY OF MEDICINE.

AN ADDRESS DELIVERED BEFORE THE MAINE MEDICAL ASSOCIATION, JUNE 21, 1881.

BY WILLIAM WARREN GREEN, M. D., PRESIDENT.

GENTLEMEN OF THE ASSOCIATION,—The first section of our constitution defines the objects of this Association to be: "Mutual professional improvement; cultivation of friendly intercourse among its members; faithful support of regular and honorable practice; and the promotion of medical science." It was the evident intent and desire of the founders of this organization, as I believe it to be of its present members, that it should represent and encourage all that is best in the character and interests of our profession.

By a rule of the Association it becomes the duty of your president, in his annual address, to suggest such subjects for discussion and action as seem to him for the moment of paramount importance. This applies more directly to matters of local interest in our own State, but it is obviously susceptible of a broader interpretation of which I shall claim the privilege to-day. From the number and character of its members this Association is an influential body. It represents the best thought and the most advanced views of the profession in this commonwealth, and its expressed convictions should constitute a factor of no mean value in molding and directing medical opinion and practice without regard to geographical limits. For this reason I improve an opportunity of inviting your earnest attention to a subject that lies uppermost in my mind, and which, in my opinion, overshadows all others in magnitude and importance. The question of questions, as it seems to me, before the profession at the present time is *how to attain to a higher standard and a better system of medical education?* I do not use the phrase, nor do I intend to treat the topic, in any hackneyed sense or manner. I mean to speak of what is vital and practical. Can we not promptly and in a most important degree improve upon our present plan?

It is unnecessary in this presence to enter upon a comparison of the present status of medical science—I use the term in its comprehensive sense—with that of a hundred, or fifty, or even twenty years ago. But not a little reflection and a careful survey of the field are essential to anything like a full realization of the wondrous strides the different departments have taken within a few years past, and of the present rate of progress.

The same is true of the entire circle of natural sciences with which medicine holds such close derivative and reactive relations that one cannot acquire a sound medical education without an elementary knowledge, at least, of these allied branches. Men are becoming more and more interested in the study of themselves and their environments. They are shaping their methods of inquiry more nearly in accordance with the scientific plan. The what, the how, the why, these are the questions of the hour that have taken hold of the human mind with an incremental force of which only thoughtful men are aware.

Every department of medical science has been, for the last few decades, and still is, rapidly enlarging its domain. Each is constantly demanding higher capa-

ilities and harder toil while promising richer rewards to earnest, appreciative labor. New continents and islands, seas and channels, shoals and quicksands, are being daily discovered, and he who aspires to the position of navigator must read aright not the old chart only, but the new as well. But whoever carefully considers this great progress, and fully appreciates the demand that medical science rightfully makes in our day, cannot fail to be surprised, amazed even, to find that so little comparative change has taken place in the scope and methods of medical education, and that a system born of a primitive and imperfect civilization still holds sway; true, much has been accomplished within a few years in the way of improvement. The medical colleges throughout the country have generally lengthened their lecture terms and enlarged the curriculum of study, and in most cases are doing more thorough work. In many the standard for graduation has been raised, and a few require a certain amount of preliminary education as a prerequisite for matriculation. Most of the colleges have established supplementary courses of instruction under various names which fill out the year, so that the student can if he chooses pursue his studies for the entire three years in the same institution. The Portland School for Medical Instruction holds such relation to the medical department of Bowdoin College.

In all these improvements the Medical School of Maine stands squarely in the front line, and to the honor of the Maine Medical Association be it said that by suggestion and advice, by hearty coöperation and staunch moral support, it has always strengthened the hands and encouraged the hearts of the faculty in every progressive step.

It is cause for congratulation and honest pride that, as compared with ten or fifteen years ago, better classes of men are annually graduated from the schools, and that the general tone and character of the profession has much improved, and is still improving. Nor in point of attainment, honorable character, and professional *esprit du corps*, will the medical men of the Dirigo State suffer in comparison with those of any other.

I have the gratifying assurance from several most eminent members of the legal profession in our State that the act "To regulate admission to the bar in this State," passed by our last legislature, owes its origin to the interest and spirit of emulation awakened among lawyers by the greater strictness of requirements and thoroughness of work in our medical schools as encouraged and sustained by this Association. But it will be noticed that all change and progress has been on the part of the medical schools. It is toward these that all criticism is directed, and in them all hope for the future seems centred. The conviction is gaining ground that the term of study required should be extended, and the profession are generally in sympathy with whatever will render the lecture courses proper more effective.

The regular course of lectures is invaluable, and will probably always stand as a part of any plan of instruction. The concise, systematic grouping of truths, the pointing out of landmarks and boundary lines, the sifting the true from the false, and the authoritative presentation of general principles and of the best approved practice in a concrete form, is the province of a living teacher. No mere study of books and recitation can ever be complete without this. Certain kinds of knowledge take deeper root when received warm and

fresh from the lips of the teacher. Old truths take new shape and brighter color as they flash from the living brain. It is fit that students should be brought into direct contact with those fitted by fullness of knowledge, experience, and practical skill for the high vocation of teachers. Ambition is stimulated and enthusiasm aroused in the lecture-room and amphitheatre as nowhere else.

It is true that the term of three years is altogether too short if ever so faithfully and wisely improved. It is true, also, that much remains to be done in improving and perfecting the lecture courses. But a student is only required to take two of these before presenting himself for graduation, and this is probably enough in proportion, and these occupy only from a fourth to a third of the whole time. *What of the other two thirds?* To be sure, as I have already said, opportunities are offered in the various schools for continuous study, and in several instances a regularly graded course may be pursued for the whole time under accomplished teachers and professors. But it is entirely optional with the student whether or not he will avail himself of such privileges. With his certificate of time from his preceptor, and two courses of lectures in a reputable medical college, he stands just as well before the law as if he had spent his whole time in the best school; and as a fact but a very small fraction of the whole number of medical students is in the schools.

Gentlemen, I believe that the great defect in our present system is *private preceptorship*. It is the great hindrance to thoroughness and the grand obstacle to a most pronounced and rapid elevation of the standard of medical education and of the character of the profession.

At present any physician in regular standing may take students, and his certificate of three years' study by such student under his tutorship is evidence which the faculty of any medical college is obliged to accept. No conditions are imposed as to learning, skill, morality, aptness to teach, or facilities for teaching.

Just think of it! no matter whether he has a library, dissecting-rooms, chemical laboratory, microscope or not, or if he has, whether he is competent to direct to their proper use or not, if he has a diploma, and occupies a nominal position in the profession, he is competent, under the law, to take charge and direction of the highest and noblest form of education; to fit men for the heaviest responsibilities that pertain to human life.

However well educated and equipped with the means of study, there are comparatively few men who are born teachers, that is, who possess that natural fitness which enables one to impart his knowledge to another in a clear, methodical, and impressive manner.

The first unfortunate tendency of this system is to bring to the study of medicine a large class of men who are utterly unfit for the work as regards preliminary knowledge. Physicians generally are anxious for students. Various motives are operative. A certain popular *clat* attaches to preceptorship, and personal advantage and convenience are often served. Men are often tempted, especially among their patrons, to flatter aspiring youths, or at least they lack the moral courage to give advice that produces mortification and disappointment. The feeling of responsibility to the profession and community is comparatively slight, and is too frequently counterbalanced by a mistaken sympathy for those who, having failed in other pursuits, look to the practice of medicine as a *dernier resort* for retrieving broken fortunes.

There is room for honest difference of opinion as to the best kind of educational fitness for the study of medicine. But I do not fear successful contradiction when I affirm that, with the present aspect of medical science, no man is prepared for its successful study who does not at least possess, in acquired knowledge and mental discipline, the equivalent of a good college education. This is not an exact expression, but will serve for illustration. As to the details of the preliminary course wise men hold different views. For one, inasmuch as the technicalities of all science are of classic origin, and as these terms are essential to precision and accuracy of statement, I believe such knowledge of Latin and Greek as gives a ready understanding of these terms to be of immense value. Without it one must always work at disadvantage. It is no argument against the need of classical knowledge that the technical expressions are often unfortunate of application. They always have their meaning *per se*, and a prompt appreciation of the very misapplication is of great use. Equally important do I hold at the present day such knowledge of French and German as will open to the student the rich stores of material that fill the journals and untranslated monographs from the pens of the best men in these nationalities, and which are sealed to him who only understands English. But in the absence of such attainments so much the more time should be spent in the study of English literature, mathematics, and the various branches of natural science. Especially should a thorough knowledge of natural philosophy, chemistry, and physics generally be insisted on.

In short, the student should come to his chosen work with a mind stored with general knowledge, and trained to habits of sound reasoning and to the quick apprehension of new truths.

Moreover, he should be a true gentleman.

How far the majority of medical matriculants fall below this standard needs no demonstration at my hands. We have only to look and see.

It is a painful evidence of the low estimate which the public place upon the necessary fitness for medical study that we are constantly receiving applications from men so illiterate that they cannot write a decent letter, as to spelling or punctuation, use of capitals, or arrangement of sentences, and who are entirely deficient in the elements of a good common school education. It is a sad commentary upon the character of private preceptorship that a large number of students repeat the advice of their preceptors that they had better not pay much attention to chemistry or physiology or the microscope. "They will not use it much in practice," and they act upon such advice. These students avoid dissection, or try to, altogether. Instead of seeking every opportunity for the study of practical anatomy they do only so much as they must to receive the demonstrator's ticket.

I hold that as the profession is constituted it is utterly impossible to secure any uniformity of preparatory fitness so long as any doctor may play the part of preceptor. So long as this may be we shall have our classes heavily shaded with men not only incompetent to study properly, but who incline to do only so much work as will enable them legally to obtain a diploma. In the second place the system of private preceptorship can at best only afford an imperfect and superficial medical education. As has been already remarked, few are apt to teach, and these few cannot furnish the

facilities for instruction that are found in a properly organized school. Those best able and prepared to teach are generally too busy as practitioners to find it possible to bestow any considerable time upon students.

Very rarely a physician is found with a combination of all the requisites for a teacher who can command sufficient leisure for the training of students, but such instances are remarkable and so infrequent as to be of little value in the general scheme.

It is impossible for a busy practitioner to do justice to his patients and himself and give students proper training, be he ever so rich in ability and facilities. Will not every one of us who has tried it say amen to this statement? It may be well for a student to have some wise medical friend who is in full sympathy with what is best as an adviser, and in the later years of undergraduate life valuable additional clinical opportunities would sometimes be gained by such a relation. Undoubtedly, a good plan would be for young graduates to associate themselves for a time with practitioners to see the practical side of professional life. Reciprocal benefits would accrue from such contact.

The general way that a young man studies medicine is something like this: He "enters his name" with some practitioner, who is thus constituted his preceptor. Certain books are given him from time to time which he "reads" after his own fashion. If he has means he may stay about the office, and in some cases occasional recitations are heard, and now and then he rides with the doctor to see patients. Sometimes the student "works his way," as it is called, with the doctor, acting in various capacities as hostler, office boy, gardener, etc. But the majority spend very little time with their preceptors. They take certain books, and in place of studying them to any important degree, they work on farms or in mills, take agencies, teach school, or follow some other lucrative employment; oftentimes for the purpose of earning money to defray the expenses of lecture courses; others, instead of work, pursue their pleasures as they list. An occasional call upon the physician and a few remarks or general questions constitute the tutorship.

I speak of what I know from extensive personal observation, and every man who has much familiarity with the lives of medical students throughout the country will bear witness to the truth of my statement.

I do not forget the honorable exceptions, where good men, both preceptors and pupils, do faithful work, and accomplish the best possible under the circumstances, unfavorable as they may be; but in the large majority of cases, I know whereof I speak when I say that there is nothing approaching a systematic, thorough course of instruction. On the contrary, the student goes his own way, doing what little work he may in medicine in a helter-skelter, slipshod manner, and making it entirely secondary and subordinate to other pursuits of pleasure or profit as the case may be.

And yet these students bring to the medical colleges certificates of time signed by their preceptors, reading after this fashion: "I hereby certify that Mr. — has been a faithful student of medicine and surgery in my office for three full years, and he is a gentleman of unblemished moral character." These certificates are the evidence of *time*, and the faculty cannot "go behind the returns." These men enter for graduation on the same basis, so far as the record goes, with those who have been the most faithful students under the best advantages.

Nor is it a cause for wonder to those who are familiar with teaching that such men graduate. It is not simply because so little is required, although it is very little compared with what ought to be.

With the comprehensive and yet concise character of most lectures many beginners, especially those possessed of what is termed an arbitrary memory, can by a species of cramming, and the note system, fit themselves to pass a fair examination at the end of the term *as examinations go*. What are they? An occasional quiz during the term, in each of which the individual student is asked one or two questions. At the close a written examination of six to ten questions, which are to be answered within two or three hours, and an oral examination occupying from five to fifteen minutes.

It is impossible for the professor in any department to form any thorough acquaintance with a student during a single term in this manner. For as I have said, any bright man can, if he works to that end, fit himself to pass such examinations quite creditably. To be sure such knowledge takes no root, and leaves the man with only a valueless or rather a dangerous smattering of ideas; but it serves his only purpose, the acquisition of a diploma. These are the students who always think the examinations too severe, and find fault if questioned upon any topics not specially dwelt on in the last course of lectures. They are only willing to dissect one part, and do that in the speediest and worst way. They dislike chemistry and cannot see any practical value in its formula or principles, or in the use of the microscope. As one young man said three years ago, "I don't care a damn for all this high-flown theory and these stuck-up Greek and Latin words. What I want is to find out what cures sick folks." So long as this state of things exists, all progress in medical education must be in the future, as it has been in the past, painfully slow and unsatisfactory. I believe the time has come for a complete change. The time has come when it is the duty of every physician to refuse to "take students" in the common acceptance of the term, and to advise them frankly and honestly that the only way to a proper medical education is through well organized medical schools. I believe that all members of the profession, individually and through their various organizations and the medical press, should take pronounced and unflinching position on this question. I am aware of the objection that will probably be first raised to such a plan. It will be said that by it a large number of poor men would be prevented from studying medicine for lack of means to attend the school continuously; which, by the way, is merely saying that they cannot afford to study medicine thoroughly. That such a plan would much diminish the size of medical classes I am well aware, but that it would do so to an undesirable degree I do not believe. Nor do I for one moment admit that by it the *right* sort of men would be prevented from entering the profession. Altogether too many men are studying medicine, and graduating every year. The world has no need of them as doctors, for the profession is already fearfully overcrowded. This may be an unwelcome truth to young aspirants for professional honors, but truth it is; and the evil consequences of this repulsion are manifold.

Witness the large number of doctors in every city, struggling for a mere existence, and see how few out of the whole number really do the work. See how in almost every country village a full practice for one or

two good men is piece-mealed by sharp and often acrimonious competition to the detriment of all.

It would seem that in a calling so high, so noble, so sacred, men fit for such ministry should be sought for; but the great question of the young graduate is not "Who wants me?" but, "Who will employ me?" not "Who needs me?" but "Where can I get a living?" In the case of four physicians dying, each in a country village, during the last year, I am credibly informed that in one instance two, in another three, in the third five, and in the fourth case seven new men came to look the field over within ten days after the doctors' death, sometimes before the burial. In one case two attended the funeral, and in another the widow had three letters from aspirants for the vacant place while the dead body of her husband still lay in the house.

It is a hackneyed saying, with which too many ears are tickled, that "there is always room for good men." Applied to the present condition of our profession it is false. Were only good men and the best men admitted it would undoubtedly be true. But all over the land, in city and country, are well educated, cultured gentlemen, honest and loyal, striving in vain to secure a competence, — yes, a bare living even — and too often is disappointment mingled with shame and mortification at the success of ignorant and unprincipled rivals. I have said that the evil results of this excess in numbers are manifold. It leads to over practice and to bad practice. The man who is hard pushed, who has few patients and needs more, is tempted to make much of little; to magnify the importance of his cases, both in his own mind and to his patrons; to make un-called for visits, and to give too much medicine; and unnecessary medication soon ceases to be rational. Patients are injured in mind and body. The community is injured by teaching the people to attach undue importance to trivial diseases, and to over-estimate the value of treatment therein. Legitimate, honest practice suffers in reputation; money is obtained under false pretences.

Again, it leads to dishonor and crime. There are many men not very firmly grounded in morals or ethics who nevertheless behave commendably until strongly tempted. There are men who are to-day outcasts from the profession on account of dishonorable or criminal practices who struggled long with poverty before they fell, and others who, eking out an income by questionable methods under cover of professional title and association, would much prefer remunerative practice within strictly honorable limits.

It is one great cause that fills the ranks of the more fashionable forms of quackery. Men who have once had a thorough education in scientific medicine never honestly enter upon any exclusive or fanciful system of practice; but, finding no room for sound scientific work, many turn traitor to the truth, and seek bread and butter through an appeal to popular prejudice and ignorance. Most make a square issue with honesty, and practice whatever they please under the colors most fashionable. Others enter upon a system of willing self-deception, until, like the tale-bearer of old, they tell the lie so often that they finally come to believe it themselves.

It leads to a false and pernicious specialism.

Without any special fitness for anything, men, failing to secure general practice, announce themselves as specialists. This suits the public. Specialists and specialists find ready audience among the masses. Ignorant

and superficial general practitioners, too, are ready to countenance these men, being glad for a plausible excuse to shirk responsibilities which they are unfitted to assume.

The result is popular deception as to the merits of special diseases. The specialist deceives himself. A cumbrous and oft-times ridiculous nomenclature develops. General principles and special forms of practice are indulged in that are worse than absurd. The so-called specialist enjoys a false reputation to the detriment of a better class of men. Here, too, is money obtained under false pretences.

The remedy for this professional plethora lies in reducing the supply. This can only be done by placing the standard of preliminary requirements so high, and insisting on a course of medical study so thorough and extensive that the class of incompetents who now enter by cross-cuts and surreptitious methods shall be cut off from all hope of admission.

The matter is not easy of mathematical demonstration, but there is not the least doubt in my own mind, or in the minds of the many experienced teachers with whom I have conversed on this subject, that with our present civilization, the amount of wealth and its degree of distribution, and with a business activity which renders facilities for earning money so numerous and important, any man who has the character for energy and perseverance and the unwavering devotion of special love for his work that are essential to true success in medicine, can enter the profession under the *régime* herein advised. This, too, is the decided opinion of eminent jurists with regard to students of law, and I am glad to find a rapidly advancing sentiment in the legal profession (which is much more susceptible of private preceptorship than medicine) in favor of compelling all students to spend three full years in the law schools. Poverty is no hindrance to the right sort of men. "What," says one, "would you establish an aristocracy of learning?" Yes, indeed, say I. Not for one moment would I advise a system which forbids a man's entrance into the profession because he is poor; I would only compel him to become thoroughly educated for his work. I would say to him: The duties you propose to discharge are so arduous, the responsibilities you seek to assume are so weighty and solemn, the trusts you invite so sacred, and the privileges and rewards that await you, though not in money, are so rich, you have no right to aspire to this unless you are willing to consecrate all you have and are to fitting yourself for a place in this glorious profession. Only brains, love for the work, time and hearty endeavor are necessary to procure means for securing and improving the best advantages. If you are not so endowed and capacitated, stand aside for better men, for there are enough of them. If this is aristocracy, I say *vice Aristocrat!*

I have already said that the remedy, in my view, for these evils lies in putting all medical education in the charge of well-organized schools.

Upon these throw all the responsibility. To these give all the opportunity. Toward the improvement of these in every way let all professional influence and criticism be directed.

The moment in which the profession as a body takes this stand marks the dawn of a new epoch in medical education.

The schools can then fix and maintain a proper standard for matriculation, and can modify and im-

prove it in the light of experience and advancing professional sentiment. With increased patronage our institutions will be encouraged and enabled to increase their facilities, and stimulated to greater excellence in teaching. There will at once arise a desirable increase in the sympathy and interest of the profession, and of the public generally in the schools. Responsibilities will be focused definitely, and the whole scheme susceptible of steady improvement. I love to contemplate in an imagination quickened by a strong faith in early realization, the working of the better plan, and to picture its results even with the old term of study, three years, although a lengthening of the time will inevitably follow in the near future.

Think of medical classes composed entirely of educated men spending all their time under opportunities for the best work, and compelled to do it! Recitations, lectures, clinical lessons, reviews, laboratory work, microscopic, physiological, chemical, anatomical, each and all in proper time and place. Picture to yourselves the change that a few years will bring in the tone and character of the profession under this system. Then we shall have some approximation to a proper balance between demand and supply as regards numbers. Then it is to be hoped that knowledge and skill will find such remunerative employment and honorable recognition that necessity cannot be urged as an excuse for illegitimate or questionable methods of practice. Then shall we begin to see such general excellence in the regular profession and such average uniformity in results among different practitioners in ordinary diseases as shall strengthen the confidence of the people in scientific medicine.

Then shall medical experts display such knowledge and judgment on the witness stand, and testify with such unity of opinion on all ordinary matters as to remove the stigma of disgrace now resting upon this class of witnesses, and medico-legal inquiries shall attain to the dignity and importance they deserve.

Then the false and disgusting specialism so prevalent now shall pass away, and beside the main and earliest natural division of medicine and surgery he who selects a smaller division of labor will do so because of some special fitness or opportunity super-added to a thorough general knowledge and a broad and ripe experience.

Then both profession and people will learn that with properly educated physicians and surgeons specialties are not a necessity, but a matter of taste or convenience.

In short, then will the scope and scheme of medical education begin to be in some degree commensurate with the needs of suffering humanity; and to give something nearer a fitness for the noblest and most sacred work that falls to the lot of man. Fear not, my brethren, that any insidious comparisons will be drawn between then and now. Professor Morse of telegraphic fame still wears his historic laurels unchallenged though the telephone has made the message vocal. The reputation of the fathers in medicine rests on the same sure foundation, and the examples of untiring zeal, sublime devotion, and heroic self-sacrifice that they left for us shine with undimmed lustre, although the truths which they with prophetic eye saw dimly shadowed on their horizon are revealed to us in all their fullness.

The question between the new and the old, so far as merit goes, will always be, not what was the opportunity as compared with now, but how was that opportunity improved; and the same honor and praise await

the man who does his best, no matter in what day he lived, or under what system he worked.

So we who were educated in a time of fewer privileges and more imperfect methods, shall ever claim credit for whatever of earnest, honest endeavor was made and for all attained and accomplished under less propitious circumstances. Nor shall the spirit of jealousy or envy even for one moment find place here. But in the true scientific spirit every member of our profession shall hail with glad acclaim the dawning of a better day; and shall lend willing influence and hearty aid to every movement which tends to enlarge the sphere, and ennoble and strengthen the character of scientific medicine.

Gentlemen, all that is necessary to accomplish this great change is conviction. No money, no legislation, no organization of forces is needed, simply let every member of the profession realize the need and act and advise accordingly, and the work is done, or rather, well begun. I believe that if every member of this association would from this time forth take this position, in three years from now there would not exist such a thing as private preceptorship in this state. Still more, if this Association as a body should put itself plainly on record as indorsing the new way, the effect would be incalculable. The profession, the world over, is ready to give hearty assent. It only needs that some one speak and move, other State societies would immediately take up the theme and the schools could afford to, and would, promptly settle the matter by refusing all private certificates of time. The movement once started, so ripe are the times for it, would, I believe, very soon become universal. It lies in the power of the Maine Medical Association to-day to give such emphatic condemnation to the old plan, and such cordial indorsement of the new as shall awaken the professional mind generally to the great importance of the change. I believe that such awakening would surely and quickly be followed by a profound conviction of the needs of the present time, and that within a few years *private preceptorship* would be a thing of the past.

To organizations, as to men, great occasions for good seldom arise. Opportunities to make history that shall redound to the honor and highest welfare of the race rarely come. Fortunate are they who are equal to the occasion; who improve the opportunity.

COAL-GAS POISONING.

BY HERBERT TERRY, M. D., PROVIDENCE.

ON the subject of coal-gas poisoning there seems to be but little written, though the accident is by no means uncommon, two sets of cases having come under my notice during this winter.

January 1, about four A. M., I was called to a family consisting of father, mother, daughter, niece, and nephew. Their sleeping rooms were on the third floor, and were heated from a furnace in the cellar. Shortly after three the daughter awoke with a sense of suffocation, a distressing headache, and nausea which was soon followed by vomiting. She attempted to arouse the mother, and was in part successful. The noise awakened the father. Not realizing the trouble he questioned the mother, but could get from her only: "They're all just so! They're all just so!"

This she repeated over and over again. She has since told me that she knew what she was saying, but "felt too silly to say anything else."

After the father had been awakened, the daughter fell at once into an unconscious condition, but she was, with some difficulty, made to get up and dress, while the father came for me. Under the influence of fresh air and the excitement she recovered in a short time. She was left in a dazed condition, with deafness and headache. The effect on the father seemed similar to intoxication by alcohol. There was confusion of ideas, thickness of speech, and staggering. A severe headache kept him at home during the day.

The nephew (twelve years old), seemed at the time to be least affected. He was crying with a headache, and there were vomiting and purging, but the nervous symptoms seen in the other cases were wanting. For several days, after the others had recovered, he complained of loss of appetite, nausea, vomiting, and headache.

The niece, when found, had attempted to get up, but had fallen on the floor, where vomiting and extensive purging had taken place. When seen she had a quick, weak pulse; rapid, stertorous breathing; hot, moist skin; widely dilated pupils. She complained of being cold, and there were very severe rigors. She needed little attention, and was able to get up by eight A. M. Headache, giddiness, and dullness of perception, lasted through the day.

The mother seemed to be the most profoundly affected. Purging had occurred before I arrived, but she did not vomit until some time after. She was unconscious and breathing very rapidly, with considerable stertor. The pulse was quick, and almost imperceptible, the skin abnormally warm; the pupils widely dilated. She could be roused by slapping the face or shouting in the ear, but would sink into a comatose state immediately. This condition of things lasted, perhaps, half an hour, when convulsions suddenly appeared. They would begin by a loud complaint, such as, "Oh! my head!" followed by a short tonic spasm, and ending in a series of clonic spasms lasting several minutes. There would then be an interval of quiet, lasting perhaps three minutes, followed by another convulsion. About 6.30 A. M., she became perfectly conscious, and on account of a headache, which seemed to be excruciating, I determined to feel my way with small doses of morphia. Accordingly gr. $\frac{1}{2}$ of the sulphate was given, and in a few minutes she was totally unconscious, and so remained for half an hour. The breathing was very slow, the pulse rapid and weak. Twice the breathing seemed to stop, and artificial respiration was resorted to. For a short time the pulse was imperceptible at the wrist. No more morphia was given, though I cannot believe that this small amount can be blamed for the alarming symptoms following its administration here. At ten A. M. all the symptoms that remained were headache, deafness, sluggishness of thought, and prostration. She did not leave the bed for several days.

Dr. A. D. Weeks kindly saw these cases with me, but when he arrived they were so far recovered that he did not think it necessary to suggest any additional treatment.

February 18, a man and his wife were found under the influence of coal-gas in a house of which they were the only occupants. The man's sister called about eleven A. M. Not gaining admission, and remembering

that the wife was ailing the night before, she went to the window of their bedroom, which is on the ground floor. The man was lying diagonally on the bed, the wife lying across his chest. The sister, instead of fainting, got a chair and crawled in at the window.

I arrived at 11.30 A. M. Both were insensible and frothing at the mouth. Respirations 36 a minute, both stertorous and blowing; pulse in the man 124, in the woman 132; skin of the face and arms reddened (not purplish). Surface of the body warmer than natural, and somewhat moist; pupils not sensitive to light, and slightly larger than normal, but not so widely dilated as in the other cases; eyes partly open; conjunctivæ not sensitive to the touch. Both were motionless after even a very severe slap on the face, unless it was several times repeated, when a slight and slow wrinkling up of the features would occur. Vomiting and extensive purging had taken place in both, apparently some hours before. The stench was horrible, but I think characteristic. It was the odor of coal-gas partly disguised and made infinitely more disagreeable by that of the dejections. The muscles were rigid, and the mouth firmly closed.

12.30 P. M. The wife now began to notice those around her, and when approached seemed to try to shrink away as if in fear. The man was still unconscious, but as the last few drops of brandy left the hypodermic syringe, his arm would be drawn up a little and very slowly. Touching the conjunctiva would cause a slow and incomplete closure of the eyelids.

1 P. M. The wife answered a question shouted in her ear by a slow nod of the head. The man's condition was unchanged. It was noticed that no movement of the eyelids took place when the hand suddenly approached the eye.

1.30 P. M. The woman could speak, but only with great difficulty, and in monosyllables. She would say over and over again, "Cold! Cold!" though the surface of the body was very warm. She was fully satisfied with a hot bottle to hug. She could hear only very loud talking. The man seemed to breathe easier, but there was still considerable stertor. The breathing would seem to stop every few moments, but would start up again when the air was pressed out of the thorax. The pulse had grown worse rather than better. It was now 128, and very weak. Tincture of digitalis was added to the brandy in the proportion of twenty minims to the drachm, and half a drachm of the mixture repeatedly injected beneath the skin.

2.30 P. M. The wife was washed and removed to another room. She seemed quite rational, and began to understand that we were not thieves. Her hearing gradually came back, and she continued to improve without further treatment. The man's pulse showed a marked improvement from the digitalis, but he was still unconscious.

4.30 P. M. The woman could sit up, but her pulse remained at 130. The man's pulse had come down to 108, and was proportionately stronger. The breathing, which for some time had been irregular, was now noticed to be regularly so. He would breathe ten times during twenty to twenty-two seconds, at first very shallow, the depth and strength increasing up to a certain point, when it would gradually diminish until it stopped. There would then be an interval of eight or nine seconds, when he would again breathe ten times. Rarely it was nine, and still more rarely eleven times. He could be made to breathe during the inter-

val by any irritation, for example, by slapping the face or forcible pressure on the thorax. A loud shout, with a slap on the face, would now elicit a grunt of vexation, the first sign of consciousness five hours after being discovered.

5.30 P. M. The man was more easily roused, and could be made to swallow by pouring the liquid into mouth and holding the nose. When the nose was not held spasm of the glottis followed.

6 P. M. The wife was sitting up, feeling only a little dizzy and confused. Pulse 120; temperature 100.6° F. The man was still in a comatose condition. Pulse 104, and quite good.

8.30 P. M. The woman's pulse was still 120, and by no means full. The man had just been washed and moved, and as a result his pulse was 120, and weak. Brandy, two drachms, and tincture of digitalis, twenty minims, were given. Percussion over the puses showed a full bladder, and on being roused and made to understand what was wanted he emptied it by his own efforts.

9 P. M. The man's pulse was 100, and of fair strength. Orders were left for brandy to be given through the night p. r. n.

February 19th, 9 A. M. Night report: "The man became conscious of surroundings about 3 A. M. (that is, sixteen hours after being discovered), since which time he has been very nervous. About one ounce of brandy has been taken during the night, and early in the morning a cup of strong coffee." The man was found still in bed. Pulse 96; temperature 99.8° F.; respirations 26. He could hear and understand with but little difficulty. In answer to a question, "How do you feel?" he whined, "I don't know." When undisturbed he lay with the eyes closed, apparently asleep. A very troublesome cough was present, and the chest was filled with mucous râles. The woman's pulse was 100; temperature 98.4° F.

5 P. M. The man was sitting up. Pulse 100; temperature 101.8° F.; respirations 28, and of good character. The cough was still troublesome. There was no dullness on percussion over the lungs. Large moist râles abounded. Both patients complained of ringing in the ears.

The treatment, in all the cases, was fresh air and alcoholic stimulants. In one case the pulse would not respond to the brandy, and tincture of digitalis was added. This seemed indicated by the hot, moist skin (dilated arterioles?), as well as the quick, weak pulse. Its action was marked and most happy. Artificial respiration was resorted to in one instance, but I think unnecessarily.

Comparing the two sets of cases: there were in both unconsciousness and loss of sensation and voluntary motion, violent vomiting and purging, a quick and weak pulse, rapid and stertorous breathing, an abnormally warm skin (not at all like the hot, dry skin of fever), pupils at least slightly dilated. In one case the breathing was blowing as well as stertorous. A characteristic of the first set of cases was violent headache. It was entirely absent in the last. Convulsions may have occurred in the man and wife. I should think it very likely from their position when found, and the pretty good evidences of their having moved about after purging took place. I cannot but think that hysteria was an important factor in the production of the rigors in the niece, as well as the convulsions and the coma that followed the administration of

one twelfth of a grain of morphia in the mother. They are both nervous people.

I regret that the temperature in the last two was not taken while they were unconscious. It was slightly above the normal after consciousness returned.

The cause of the first set of cases was the worn-out condition of the partition separating the fire from the air-box containing the air passing to the rooms above. Whether the coal-gas went up the chimney or through the registers depended on which way the draft was the stronger. On the night when the poisoning occurred the door in the furnace flue was accidentally left open, reducing the draft up the chimney to little or nothing. The result has been detailed.

The cause of the other cases of poisoning was an insufficient draft to the chimney when the wind was in a certain direction. A "parlor stove" was left with both the back-dampers closed.

In both cases the smell of coal-gas was noticed when the families retired.

For some of the post-mortem appearances I am indebted to two cats. These were placed in a wooden box, in the cover of which was a pane of glass, that they might be observed. By means of a Davidson's syringe coal-gas was pumped into the box from the reservoir of a self-feeding coal-stove.

The first cat was sick before the experiment began. During the afternoon she vomited two quite long worms. At 9.50 P. M., when she was placed in the box, the pulse was 144, the respirations 60. About 10 P. M. the bladder was evacuated; the pupils were noticed as very widely dilated; the pulse and respirations became very frequent. Ten minutes after, she apparently died, with hardly a struggle.

Fifteen minutes after death. No cyanosis; pupils widely dilated; mouth slightly open and tongue protruding. The blood was bright red and fluid. The left ventricle was firmly contracted, the right soft and flaccid, but not dilated. After opening the thorax the right auricle beat rapidly and sharply for a full minute, after which it beat slower and slower until it stopped. No part of the head presented anything abnormal, not even enlarged blood-vessels. The stomach and small intestines contained only a little mucus; the large intestine was packed, from valve to anus, with hardened feces. This abnormal degree of constipation may explain the absence of purging. Rigor mortis came on in less than half an hour after death.

In the second cat, at the beginning of the experiment, the pulse was 130, respirations 24, and purring. The gas was introduced at 9.15 P. M. The cat soon fell quietly asleep, and at 9.35 P. M. she could not be roused by pounding or shaking the box, though when loudly called would start up for an instant.

9.50 P. M. Pulse 180; respirations 144. There was a copious movement of the bowels.

9.55 P. M. Pulse 220; respirations 156.

10.10 P. M. The cat was perfectly insensible; mouth open; tongue lolling; respirations very shallow and irregular; pupils widely dilated; eyes partly open; conjunctivæ still sensitive. The cover of the box was taken off, so that the chest might be examined. Sibilant and large mucous râles were found. The pulse became very irregular, jumping about between 160 and where it could not be counted. (This must have been beyond 240, for that could be counted by moving the finger every fourth beat, and having another count the finger-beats.)

At this stage of the experiment a high wind sprung up, and all my coal-gas went up chimney. The cat soon became conscious, and, barring a little weakness, was apparently as well as ever in less than an hour.

The experiment was concluded the next day. 3.03 p. m. The gas was again introduced. 3.05 p. m. There were a few squalls, probably from fear rather than distress. 3.08 p. m. A movement of the bowels occurred. This might have been due to fear. 3.10 p. m. The cat became too weak to stand, and lay down on the side voluntarily. 3.12 p. m. There was a sudden contraction of the muscles. I could not determine whether it was an attempt to get up or really a convulsion. It was momentary, and not repeated. 3.14 p. m. The conjunctiva no longer sensitive; pupils enormous; iris a mere ring; pulse 156. Each inspiration was a jerk resulting from a sudden spasmodic contraction of the diaphragm, and recurring regularly every three seconds. The cover was taken off the box and fresh air admitted. 3.18 p. m. Respirations 40, and quiet, with an occasional sigh. I find no note of the pulse. 3.20 p. m. The conjunctiva became sensitive, as well as the small hairs on the end of the ear. The gas was again admitted. 3.27 p. m. Breathing 104. 3.30 p. m. The cat suddenly got upon her feet, struggled blindly for a time, and at 3.32 died. Autopsy at ten p. m. Mucous membrane of lips and tongue a light red. Ramifications of the small vessels on the under side of the tongue plainly visible. Care was necessary in cutting through even the skin, for the smallest blood-vessels would bleed. Both arteries and veins contained fluid blood, which was lighter in color than arterial blood usually is. The right heart was flaccid and very much distended. The left heart contained blood and was quite soft. Lungs collapsed and very much congested. Froth, but no blood, came from the smaller tubes on section. The stomach was very much distended with gas, which had the characteristic odor of coal-gas. In cutting through the skull the vessels of the diploë bled profusely. The vessels of the arachnoid were more prominent than usual, and looked as though formed in red sealing-wax. There was no capillary congestion. The brain was, if anything, lighter in color than usual.

Some of the blood kept in an open dish was found fluid at the end of two days. The blood globules at the end of the first day (they were not examined before) were so broken up as not to be recognizable.

These cases and experiments are by no means conclusive, and I offer the following as only possibly true:—

The fatal effects of coal gas are probably from the carbonic oxide contained. Carbonic anhydride is irrespirable only, carbonic oxide, poisonous. The color of the blood after death showed the presence of carbonic oxide. To destroy life carbonic anhydride and sulphurous anhydride would have to be in larger quantity compared with the amount of oxygen present than generally found in poisoning by coal gas.

The primary action of coal gas is (if we except the fact that carbonic oxide changes the properties of the blood globule) on the nervous system. This is suggested by the occurrence of vomiting and purging in addition to the rapid pulse and breathing, coma, dilated pupils, etc.

The presence of the same relative amount of coal gas in the air inhaled, affects different persons differently. This is shown by the cases.

The length of the period of unconsciousness depends more on the time occupied in breathing the coal gas than on the degree of unconsciousness produced. This is suggested by a comparison of the cases with the cat in the second experiment.

Or it might have been due to the difference in cerebral development.

NOTE.—March 13th, I was called to the man spoken of in the second set of cases. Two years ago he had had a slight attack of hemiplegia (right) from which he recovered in a few weeks. He has not felt quite as well since that time. I had not seen him since his recovery from the effects of the coal gas, but his wife told me that he had been very rapidly losing his memory. I found him with most of the early symptoms of general paralysis, and March 14th he was admitted to the Butler Asylum.

The following is an incomplete list of articles bearing on the subject:—

Cases: Parker, *American Journal Medical Sciences*, October, 1850. Cotting, *JOURNAL*, March 20, 1856. Williams, *American Journal Medical Sciences*, July, 1862; Williams, *British Medical and Surgical Journal*, January 11, 1862. Bloxam, *American Journal Medical Sciences*, April, 1862. Meldon, *New York Medical Journal*, November, 1866. MacLagan, *Edinburgh Medical Journal*, January, 1868. Turner, the same, March, 1871; Turner, *Medical and Surgical Reporter*, xv. 4. Klebs, *Virchow's Archiv*, xxxii., p. 450. Marten, *Casper's Vjhrschrift.*, xxv., p. 97.

Cases of poisoning by illuminating gas:—

Cameron, *Dublin Medical Journal*, 3 s., ci., p. 425. Art., *Report on Public Health*. Morris, *Maryland Medical Journal*, vii., p. 341.

Poisoning by vapors of lime kiln:—

Draper, *The JOURNAL*, March 21, 1878.

Experiments: Demarquay, *Medical Times and Gazette*, August 19, 1863. Coathupe, *American Journal Medical Sciences*, August, 1859. Leven, *Journal Anatomy and Physiology*, May, 1870. Addis, *Medico-Chirurgical Transactions*, xlv., pp. 99 and 137. Huxley, *Medical and Surgical Reporter*, January 28, 1871. Gamgee, *New Sydenham Society's Biennial Retrospect*, 1868. Eulenbergh, the same. Pakrowsky, *Virchow's Archiv*, xxx., p. 525. Klebs, the same, xxxii., p. 450. Hoppe-Seyler, *Med. Centralblatt*, iv., p. 4. Zuntz, *Pflüger's Archiv für Phys.*, v., p. 584. Podolinski, the same, vi., p. 553; Podolinski, *Archiv Gén. de Med.*, August, 1870. Faure, the same, p. 557. Grehant, *Compte Rendus Académie des Sciences*, xci., p. 858. DeBoyer, *La France Méd.*, xxvii., p. 747.

Apparatus for detecting the presence of carbon monoxide, that is, coal gas:—

Boettcher, *Medical Record*, September 1, 1877; Boettcher, *Medical and Surgical Reporter*, January 30, 1869.

RECENT PROGRESS IN GYNÆCOLOGY.

BY W. H. BAKER, M. D.

EXTIRPATION OF THE CARCINOMATOUS UTERUS THROUGH THE VAGINA.

THE operative procedure as adopted by Schröder and described by him in a paper presented to the German Gynaecological Society at the fifty-third annual meeting of German Naturalists and Physicians, held in Dantzic,¹ consists in inserting a Muzeux forceps into each lip of the os and drawing the uterus downward. The vagina is then cut through round about the portio vaginalis, which is often much thicker than is generally supposed. The separation of the bladder from the cervix may be accomplished without difficulty, the connective tissue between the two organs being loose and easily separable. The bladder escapes upward, which greatly protects the ureters from injury. The posterior surface of the uterus must next be freed.

¹ *American Journal of Obstetrics*, January, 1881.

Douglas's pouch is opened, the two folds of which during the forcible traction downward, are often close together. The scissors may be used to widen the posterior opening. The uterus is then inverted from behind. This is easy at times, but very difficult when the organ is large and stiff. After inversion, the uterus lying in the vagina, the peritoneum of the vesico-uterine excavation is cut into, and the uterus is then attached only to the broad ligaments. These are not easily disposed of; the hæmorrhage is not large, the downward traction preventing it at first, but secondary hæmorrhage is to be feared. In ligating, Schroeder preferably leaves the tubes and ovaries in the pelvis, because the pedicle thus obtained is longer. Dividing above the ovaries prevents the place of ligation from being drawn into the vagina or fastened there. The spermatic arteries, together with the infundibulo-pelvic ligament, draw upwards. For this reason, in one case cited by Schroeder, a very difficult and tedious circumligation was required. Ligation may be performed *en masse*, or in portions, or both. Division then being made close to the uterus on one side, the uterus may be drawn down with great facility, and the ligation of the other side is much easier. Both stumps are sewed into the vagina, and a drainage tube inserted into the central opening. Schroeder sews with silk and ordinary curved needles, first laterally outward, and the stump almost between the two margins of the vaginal wound, so that possibly bleeding vessels or discharging wounds project into the vagina. Be the uterus ever so friable, the operation is still possible. Should it be adherent, he would separate benign adhesions from the malignant fixations. Benign adhesions are easily separated, but those caused by the formation of tumors tear.

That the prognosis is good is asserted not from statistics merely, but from the impression made on those who have recovered, an easy convalescence being the rule. An important fact in favor of the operation over laparotomy is the absence of collapse or shock, even after much loss of blood. Schroeder's cases reacted like puerperæ after considerable hæmorrhages, the recoveries being rapid and perfect, and impressing him greatly with the important difference between the superior and inferior methods of operation.

Many cases do not occur in which the entire uterus must be extirpated. It must, however, be done in affections of the cervix. The vagina may be likewise affected, but the section must extend to one, possibly to two, centimetres from the new formation. Thus the operation finds its limits.

Counter-indications: (1.) When carcinomatous nodules can be demonstrated in the pelvic connective tissue. (2.) When not only extensive infiltrations exist, but also quite small nodules, as often demonstrated by careful palpation in Douglas's folds. (3.) In carcinoma corporis, laparotomy, in which operation the body of the uterus alone is removed, being often much easier and less dangerous. In carcinoma corporis, laparotomy, with amputation at the internal os, might become the typical operation. (4.) When the size of the uterus is too great, the operation being most easy in a roomy pelvis and ample vagina.

CANCER OF THE BODY OF THE UTERUS.

Veit¹ has himself observed twenty-one cases in three years. He concludes that carcinoma of the

body is always beyond any doubt a glandular carcinoma. Different forms occur, depending on the early disintegration of the new formation; so that as the degeneration increases layer by layer the cavity becomes larger, while the neoplasm itself is not thick. But a circumscribed spot may become affected, and a node form from that starting-point. In other cases the uterus is tense, and large nodes spring from it. No case has been observed in which the mucosa was not implicated. The musculature has but a slight tendency to carcinomatous degeneration; the peritoneum rarely participates. Veit favors the view as to its origin from adenoma. Microscopical examination determines the diagnosis. The most important characteristic symptom is the intermittent, labor-like pain.

TREATMENT OF EXTRA-UTERINE PREGNANCY.

Dr. Lusk² cites several cases of extra-uterine pregnancy in which faradization and galvanism have been effectually used.³

In the larger number the faradic current was employed, and of these his own case was one. Faradization in extra-uterine pregnancy was first successfully used by Dr. J. G. Allen, who reported in 1872 two cases of recovery through its instrumentality. So far, since then, his method, faithfully carried out, has proved uniformly successful, has presented no drawbacks, and all the women are known, from private inquiry, to be enjoying good health at the present time; while of one hundred and fifty cases of tubal pregnancy collected by Hennig only seventeen survived.

The transmission of the current through the ovum has thus been proved a safe and efficient means for destroying the life of the fetus, during the first three months of its existence. The application consists in passing one pole into the rectum to the site of the ovum, and pressing the other upon a point in the abdominal walls situated from two to three inches above Poupart's ligament. The full force of the current of an ordinary one-cell battery should be employed for a period varying from five to ten minutes. The treatment should be continued for one or two weeks, until the shrinkage of the tumor leaves no doubt as to the efficacy of the treatment.

ENUCLEATION OF SUB-PERITONEAL FIBROIDS THROUGH THE VAGINA.

Professor Czerny, of Heidelberg, reports⁴ several cases where he enucleated sub-peritoneal fibroids through the vaginal cellular tissue without opening the peritoneal cavity, and others where the peritoneum, being slightly injured, was immediately closed. Some of the fibroids were in the broad ligament and some in Douglas's fossa, while one was between the bladder and uterus. His plan is, by dissecting with blunt instruments, to tear his way to the tumor, and then drag it out, cutting as little as possible. The results were good. The operation has been done a few times only, but he thinks it deserves attention.

Although the cases have not yet been reported, Dr. Marcy, of Cambridge, has twice within eighteen months done this operation, once with great facility and success. In the other instance, the peritoneal cavity was opened through Douglas's fossa, and an ovary re-

² American Journal of Obstetrics, April, 1881.

³ One of these cases, that of Dr. J. C. Reeve, was made the subject of a paper at the last meeting of the American Gynecological Society.

⁴ Wiener med. Wochenschrift, May 7, 1881.

¹ American Journal of Obstetrics, January, 1881.

moved at the same time with the fibroid, the patient making a less perfect recovery.

As early as December, 1876, Dr. Van Derveer, of Albany,¹ most successfully removed through an incision in the posterior vaginal wall, without wounding the folds of the peritoneum, a fibroid, which he was inclined to consider interstitial.

Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

SERVICE OF DR. BEACH.

ANTISEPTIC SURGERY.

REPORTED BY MR. WILLIAM D. HODGES, HOUSE PUPIL.

COMPOUND FRACTURES.²

UNLESS otherwise specified the Lister carbolic-acid dressing was applied in the following cases:—

CASE I. A boy, sixteen years old, entered with a compound fracture of the radius, at its middle, caused by a circular saw, which also made a wound of the soft parts through one third of the diameter of the arm. The opening was enlarged, and the ends of the bone were wired together. Union on the twenty-eighth day. Splints and dressing removed. Three weeks afterward had an attack of erysipelas about the wound, during which the latter opened spontaneously. Dressing reapplied. Wire removed on the fifty-fifth day. Discharged well, with a good union. Temperature on the day after admittance 101° F.; from that time until the seventh day it gradually fell to normal, and remained normal, or very nearly so, during the rest of the time.

CASE II. A man, aged fifty-six. Three hours before entrance sustained the following injuries: a dislocation of the head of the humerus backwards; fracture of the shaft of the humerus just above the condyles, and a compound fracture of both bones of the fore-arm at the junction of the middle and lower thirds. The dislocation had been reduced before entering the hospital. A "phenyle" dressing was applied to the compound fracture, and splints as usual. The compound was reduced to a simple fracture on the fourteenth day. Discharged, well, on the fifty-second day. Temperature highest on the second day, — 100.5° F., — normal during the rest of the time.

CASE III. A man, aged thirty-two. Compound comminuted fracture of the humerus extending into the shoulder-joint, caused by being thrown violently on to a rock during a blasting accident. Excision of the head of the humerus. Twenty dressings applied; omitted on the fortieth day. Temperature highest on the tenth day, 102° F.; during the rest of the time within normal limits. Carbolic-acid poisoning occurred after the seventh dressing. "Phenyle" dressings were substituted, after which the poisonous symptoms from carbolic-acid absorption disappeared, and did not reappear.

CASE IV. A man, twenty-eight years old, was thrown under a car-wheel four hours before entering the hospital, and received a compound comminuted fracture at the middle of the humerus, complicating the elbow joint, and extensive lacerations of the arm, fore-arm, and hand. Amputation at the shoulder-joint. Fifteen dressings. On the thirty-second day the dress-

ing was removed, only a small granulating spot remaining. Temperature during the first three days ranged between 100° and 102.5° F. On the sixth day it was normal, and remained so until he was discharged well on the sixty-fourth day.

CASE V. A man, twenty-one years old. Compound comminuted fracture into the elbow-joint from a railroad injury. His general condition forbade any operative interference for three weeks after the injury, when the whole joint was excised. Sixteen dressings applied. Discontinued on the thirty-ninth day. Discharged on the fifty-fifth day after the operation. Temperature highest on the third day, 103° F., and, with slight variations, was normal during the rest of the time. Reports eight months after the operation that he can do as much and more with the injured arm than with the other.

CASE VI. A man, thirty-two years old. One hour before entrance, his arm was crushed between the bumpers of two cars, causing a compound, comminuted fracture of the humerus into the elbow-joint. Complete excision of the joint by the sub-periosteal method. Instead of using carbolic acid as an antiseptic, "phenyle" was substituted, both in the gauze and the solution for the atomizer and instruments. Seven dressings. Patient walking about the ward on the tenth day. On the twenty-sixth day all dressing was omitted. Only once after the operation did his temperature reach 100° F. During the remainder of the time it ranged between 98.5° F. and 99° F. He was discharged well on the thirtieth day, able to flex and extend the fore-arm. Pronation, supination, and the movements of the fingers and wrist-joints were nearly perfect.

CASE VII. A man, aged thirty-two. Railroad injury of one hour's duration. Colles's fracture of the right radius; dislocation of the ulna backwards and fracture of the internal condyle of the left humerus; also a compound comminuted fracture of the left radius and carpal bones, opening the wrist-joint. Excision of the wrist-joint, splints, and twenty-six dressings. Temperature highest during the first ten days, when it ranged between 99° and 104.5° F.; during the rest of the time between 98° and 100° F. Discharged on the seventy-first day, when he could raise the hand of the excised wrist to his mouth.

CASE VIII. A boy, aged thirteen. Railroad injury causing a compound comminuted fracture of the radius and ulna, and tearing the hand off at the wrist. Amputation of the fore-arm just below the elbow-joint. Only one artery (the brachial) required a ligature. The Lister dressing was applied as usual; on the third day after, a sudden hæmorrhage took place. A tourniquet was applied, the dressing removed, the wound reopened, and, after carefully detaching the clot, the catgut ligature which had closed the brachial artery was found dissolved at a point opposite the knot, which was intact. There was no evidence of that part of the ligature being weaker than the rest when the vessel was first tied. A fresh ligature was applied, the wound closed, and afterwards four Lister dressings were successively used until the forty-second day, when he was discharged well. Temperature varied between 98° and 100.5° F.

CASE IX. Two years ago, a man, aged twenty-one, received a compound and extensively comminuted fracture of the humerus in the lower third, during a railroad accident. The wound was cleared of loose

¹ Boston Medical and Surgical Journal, October 2, 1879.

² Including all entering during the service.

fragments, including a section of the whole shaft of the humerus nearly one inch long. Dressings were applied until the fiftieth day, when the soft parts had entirely healed; the temperature having varied between normal limits. Splints were applied, and he was discharged, with directions to report occasionally for inspection. Fragments of necrosed bone were removed from time to time. Some months after, all inflammatory action having ceased, and there being no union, he entered the hospital again for an operation. The old wound was opened; the ends of the bone were denuded of periosteum, sawed off, and united by a wire suture; no ligatures required. The dressings were applied as usual, and splints to maintain coaptation and prevent tension upon the wire suture. On the tenth day after the operation he had a hæmorrhage from the wound, and lost between five and six ounces of blood. A tourniquet was applied, the patient etherized, and the dressings removed, when the wound was found to be nearly healed. The source of the hæmorrhage was behind the bone, and on the opposite side of the arm from the wound. There was no alternative but to reopen the wound, remove the wire, turn out the ends of the bone, and secure the bleeding vessel, which had become perforated by a spicula of new bone. The fragments were afterward readjusted and the arm laid in splints. Progress was from this time uninterrupted, and he was discharged well, with a firm union, seventy days after. Temperature during the first five days varied between 99.5° and 102° F. On the fortieth day, when he had a chill, it was 103° F., but after a dressing it lowered, and remained within normal limits afterwards.

CASE X. A man, aged thirty-four, received the following railroad injuries: an incised wound of the forehead, Colles's fracture of the left radius, simple fracture of the tibia and fibula at the middle of the right leg, and a compound fracture of the left femur at the junction of the middle and upper thirds. The usual treatment of the fractures by splints. A drainage tube was fastened in the wound communicating with the fractured femur, and six Lister dressings applied afterwards. The compound fracture was reduced to a simple fracture by the thirty-fifth day. Temperature was invariably normal. Discharged well on the one hundred and sixtieth day. Reported two months later. Has been acting as night watchman, and without any inconvenience from his injuries. Has no lameness, and walks without support of any kind.

CASE XI. A man, aged twenty, while standing near a rapidly revolving wheel, the edge of which was covered with sand-paper held in place by tacks, suddenly turned his knee toward the wheel, and before he could withdraw it had received a lacerated wound of two and a half inches on the outer border of the patella and opening into the knee-joint. Six hours afterwards he was admitted. The joint was washed out with a one-to-forty solution of carbolic acid and the wound sewed up; no drainage tube inserted; a dressing was applied, and the limb placed upon an excision splint. Dressings changed seven times. Discharged on the seventy-ninth day with excellent motion in the knee-joint. Temperature highest on the third day, 101° F.; during the rest of the time it varied within normal limits.

CASE XII. Incised wound of knee-joint, of three hours' duration, in a man, twenty-four years old. The wound was syringed out with a one-to-forty solution of carbolic acid, the dressing applied, and the leg

bandaged to an excision splint. No pain, tenderness, or swelling. Discharged well on the twenty-fourth day. Temperature normal throughout. No impairment of the motions of the joint.

CASE XIII. A man sixty-five years old. Compound fracture of tibia and fibula at the middle. Fragments wired together. Side splints. Thirty-eight dressings applied. Wire removed on the thirty-ninth day. Reduced to a simple fracture on the one hundred and twentieth day; a firm union. Temperature throughout was within normal limits.

CASE XIV. A man, aged fifty-eight. Compound fracture of the tibia and fibula at the middle. Side splints. Two dressings applied. Reduced to a simple fracture on the fourteenth day. Discharged with a good union on the fiftieth day. Temperature varied between normal limits throughout.

CASE XV. A man, forty-five years old, entered with a comminuted fracture of the tibia and fibula at the middle of both legs from a railroad accident. The fracture of the right leg was compound. The fragments were wired. Two dressings applied. On the seventh day trismus. Chloral, twenty grains, bromide of potassium, thirty grains, given every four hours; after forty-eight hours, doses increased to forty grains of bromide and thirty grains of chloral. Milk punch given freely, it being the only nourishment he would take. On the tenth day opisthotonos and death. Temperature previous to the development of trismus varied between 98.7° and 100° F. Afterwards it was between 103° and 106° F.

CASE XVI. A man, thirty-three years old, entered with a crushed foot from railroad injury. The soft parts were lacerated, and the tarsal, metatarsal, and phalangeal bones comminuted. Amputation at the ankle-joint by Syme's method. Six "phenyle" dressings. On fifteenth day dressing omitted, and a small granulating surface dressed with charpie. Discharged well on the thirtieth day. Union by first intention except at one end of the wound. Temperature for five days after the operation between 99.5° and 101.5° F.; afterwards normal.

CASE XVII. A boy, eleven years old. Two hours before admission his foot had been crushed by a car-wheel. The soft parts were lacerated and bruised, and there was a wound made by the flange of the wheel, laying the foot open from the commissure between the second and third toes nearly to the cuneiform bones, and exposing the sides of the metatarsal bones. The phalanges of the second, third, and fourth toes were fractured. The whole wounded surface was carefully washed with a solution of "phenyle," and dressed with an abundance of gauze. On the following day his temperature was 102° F.; afterwards it varied between normal limits. He was discharged well on the fifty-fourth day, with a useful foot, and without the loss of a toe.

CASE XVIII. A woman, forty-eight years old, with a lipoma of twelve years' growth on her back. It was nodulated, of about the size of a child's head, and located between the scapulae. Incision five inches in length, and the tumor dissected out. Three dressings. Union by first intention. Discharged well on the eighteenth day. Temperature on the first day after the operation 101° F.; following that it ranged between 98° and 100° F.

CASE XIX. Lipoma of the arm in a woman, forty-four years old. It had been growing fifteen years,

was about the size of a man's head, and adherent to the outer side of the arm, between the shoulder and elbow. Excision. Weight thirteen pounds. Three dressings. Last one removed on the fourteenth day, and a small granulating surface left dressed with carbolic cerate. Discharged well on the thirty-fourth day. Temperature on the third day after the operation 102° F.; normal during the rest of the time.

REMARKS BY DR. BEACH.

Admitting all the advantages which the employment of carbolic acid as an antiseptic affords, it must be conceded that enough cases of poisoning have occurred, through its absorption from surgical dressings, to establish beyond question its toxic influence. Mr. Lister recognizes its injurious effects upon some people, and has recently directed attention to the antiseptic qualities of the oil of eucalyptus globulus. The disadvantages of the latter (insolubility in water and rapid evaporation from mixtures containing it) may be corrected in part by a combination with dammar gum, which Mr. Lister has suggested.

As the absorption of carbolic acid from surgical dressings cannot be anticipated in any given case, it becomes a serious question, as to how far surgeons are justified in protecting wounds from septic processes by subjecting patients to the possibility of a fatal result from poisoning.

It will be noticed that in some of the cases reported carbolic acid was replaced in the spray, gauze, and solutions by a new preparation named "phenyle." My attention was called to it more than a year ago, and since then I have used it freely in the hospital wards, supposing that its efficiency as an antiseptic was dependent upon a certain amount of carbolic acid in a crude state, and masked by some other and less active agent. To settle that point, I asked Mr. C. Harrington, 2d, of the Harvard Medical School, to make an analysis, which he has kindly done, with the following result: "*Phenyle* contains 0.79 phenol (carbolic acid) and between eighty and ninety per cent. of a high-boiling tar oil, — probably 'dead oil,' whose most prominent component is naphthaline, and which of itself contains little or no phenol (carbolic acid). The emulsifier is probably a potash soap or something closely allied." So far as I have been able to judge from a limited number of observations, the minute quantity of carbolic acid in "phenyle" is not sufficient to explain its antiseptic properties, which appear equal to those of carbolic acid, more powerful than boracic acid, and are protective for a longer time than thymol. The manufacturers of "phenyle" claim that it is not poisonous, nor is it so costly as carbolic acid. I have not observed any poisonous effects from its use, and in one well marked case of carbolic-acid poisoning, where that dressing had been applied to an extensive granulating surface, the poisonous symptoms disappeared within twelve hours after changing the dressing from carbolic acid to "phenyle," and did not reappear. (See, also, Case III.) The solution for the spray is made sufficiently strong by mixing one part of the "phenyle" with two hundred and fifty of water, but for instruments, hands, and irrigation one part to fifty, or from that to one hundred. It does not irritate the skin of those who use it in operating or dressing. In excisions of the breast and operations of like character I have repeatedly omitted the spray

during the operation, using the "phenyle" solution (one to fifty) for washing out the wound thoroughly, after tying the vessels and before using the sutures, then employing a dressing which for its simplicity commends itself to those of the profession who do not find it convenient to procure the gauze or have it made: Apply the protective as in the regular Lister dressing simply to prevent the cotton from sticking to the edges of the wound; then soak a handful of ordinary cotton waste, cut into bits about an inch long, in the one-to-fifty solution: squeeze dry, and apply it closely to the end of the drainage tube; afterwards, place four layers of cotton batting, previously well soaked in the one-to-fifty solution and squeezed dry, over the wound in the same way as the gauze is usually employed; over all, a layer of dry cotton wadding, in order that the bandage which holds the dressing in place need not compress the chest or other part to such a degree as to make the patient uncomfortable. The cotton wadding should overlap the bunch of cotton waste at least five or six inches in every direction, for thorough protection. The time for changing a dressing may be known by the stain on the bandages from the discharge finding its way to the lowest point. The cotton waste is an important part of the dressing, as it takes the place of the gauze in permitting the discharges to flow from a wound instead of accumulating and burrowing beneath the flaps. The strength of the spray used in making the after-dressings has been one part of the "phenyle" with two hundred and fifty of water.

PUERPERAL CONVULSIONS; MANUAL DILATATION; VERSION.

BY J. FOSTER BUSH, M. D. HARV.

Mrs. D., aged twenty-eight, was first seen by me on January 2, 1881, and had always been well up to that time. She considered herself eight months pregnant, and did not expect to be confined till February. Her health during gestation had been excellent, the only trouble having been constipation of an aggravated character. For dinner, the day before, she had eaten heartily of roast pork, following it up, three hours later, with a liberal supply of pea-soup.

Upon going to bed she seemed in the best of spirits, remarking to her husband, "To-morrow I must see the doctor, and engage him for my confinement."

He states that after the remark concerning her accouchement he fell asleep, and was soon awakened by a noise, which proved to have been caused by his wife, who was on the floor in a convulsion. This was soon repeated, and she had several more before I saw her. They were short in duration, and were regularly repeated at intervals of half an hour.

When first seen there was oedema of both feet and legs, which was accompanied by the same condition of the face and hands, showing that the swelling was constitutional, and not due to pressure. A vaginal examination was made just after the first convulsion I saw her in. The finger could not be introduced through the os. There was resistance, though the parts were softened. Large rectal injections were employed, sinapisms applied to neck and feet, bromide of potassium and chloral hydrate given, but the convulsions still coming on at regular intervals, inhalation of ether was resorted to, but not pushed to complete insensibility.

The convulsions still coming on, Dr. W. L. Richardson was called in consultation. It was now six

hours since the first convulsion. She had had eighteen in all, with gradually lessening intervals. The vagina was hot and dry; the os yielding and admitting the end of the index finger. It was decided to do manual dilatation. In twenty minutes after the commencement of this method the os easily admitted my thumb and fingers, held in the form of a cone, to the second joint, representing a circle with a diameter of two inches. The uterine contractions were forcibly felt, though the patient was under the influence of ether. At this stage, my hands being tired, Dr. Richardson relieved me, and in twenty minutes more he had fully dilated the os.

As the amniotic fluid was escaping with every pain, Dr. Richardson passed his hand well up into the uterus, seized a foot, and turned the child. The body and shoulders were brought down, and the after-coming head delivered with forceps. The secundines, being expelled from the uterus by its contraction, were removed from the vagina by traction.

The whole time occupied in the dilatation of the os, turning the child, applying the forceps, tying the cord, and delivering the placenta was *exactly fifty minutes*, and of this time we considered that fully ten minutes were occupied in turning, applying the forceps, and tying the cord, leaving as the time in which full dilatation took place forty minutes. When we consider that our patient was a primipara it will be seen that the time is one of the quickest on record.

The child, a female, gasped feebly at first, but after flagellation and friction cried lustily; and its being alive after so many convulsions on the part of the mother was both a surprise and a pleasure. Upon subsequent examination the child seemed to be of full term. Upon coming out of the ether the patient had another convulsion, and during the next thirty-six hours she had thirty-nine. At first they came on regularly each half hour, as before delivery. At the end of the seventh hour they came on with greater rapidity, she having seven in the space of an hour. Later, they came on at longer intervals, till they ceased, as before stated, thirty-six hours after labor. The treatment during this time was ether during each convulsion, sinapisms to the neck and feet, snow poultice to the head, bromide of potassium and chloral hydrate, large rectal injections, and croton oil. Two injections, of quarter of a grain each, of pilocarpine were given, free sweating following.

Three hours after delivery the catheter was passed, and two ounces of dark urine were drawn. Upon chemical examination it was found to be loaded with albumen, and under the microscope casts and epithelium cells were seen. The urine was drawn twice more, at intervals of three hours, and the quantity obtained each time was about the same, but twelve hours after labor she voided urine voluntarily.

The quantity gradually increased till the seventh day, when it was found that she passed two quarts.

Shortly after delivery there was considerable flowing; in the course of twenty-four hours it had ceased. Hot applications were made over the lower part of the abdomen, and the flow came on again the latter part of the third day.

This I find has been the usual experience in the same class of cases in the Boston Lying-In Hospital.

The day after the convulsions ceased, there was found to be paralysis of the left arm and leg, and the tongue, when protruded, deviated towards the left.

The third day after the convulsions, when I made my morning visit, she said, "This is the first time I have seen you, doctor. Although you have taken away the power from my left side, I am glad I have my right hand to shake with yours." From this time her recovery was rapid.

The urine continues to contain albumen, but now only a small amount.

The paralysis began to improve on the sixth day, at which time she could move the fingers. Now, a month after the commencement of her convulsions, she has complete use of her limbs, the only trouble being that the left leg gets tired easily, and "feels like giving out."

In the third volume of the Transactions of the American Gynecological Society, Dr. Richardson contributed a paper upon Acute Parenchymatous Nephritis, in which he stated that the *quantity* of urine voided rather than the *quality* is to be taken as a guide, and that when the amount falls below the normal standard we must act accordingly.

The same rule holds good post partum as well as ante partum, and acting upon this principle in the present case, after the first day, treatment was pushed in the direction of making the kidneys more active, and spirits aether nitrosi and cream-of-tartar water were given freely.

During the whole time the pulse never rose above 100, or the temperature above 99.06° F. The ease and rapidity with which dilatation of the os took place is remarkable, and, in order that there may be no question that the parts were *dilated*, not *torn*, I will state that the edges were perfectly smooth, and not abraded in the slightest degree.

TWO CASES OF MALIGNANT DISEASE.

BY URANUS O. B. WINGATE, M. D. DART, WELLESLEY, MASS.

CASE I. SPINDLE-CELLED SARCOMA OF BOTH OVARIES, WITH DEPOSITS OF THE SAME GROWTH IN THE STOMACH.

MRS. L. H., English, was first seen by me on the 9th of November, 1879. I obtained the following brief history: She is thirty-nine years of age; has two children, youngest three years old. She was well till August last, when she had some sickness, with symptoms of pneumonia, followed by much debility. Catamenia, previously regular, appeared twice in August; this never occurred before. Since August no menstruation, but a tumor, apparently connected with the uterus, was discovered. There has been vomiting much of the time, which could be relieved for short periods only by treatment. She has suffered much from "canker" of the lips, tongue, cheeks, and pharynx. This symptom has constituted her chief complaint, and she has thought if this trouble could be remedied she would feel quite well. There has been much prostration. A few weeks ago she had jaundice, which lasted nearly two weeks. There has been very little pain at times in the back. She has been under the care of several physicians, some of whom diagnosed a tumor only, others pregnancy, and some made no statement in regard to her disease. Her last two physicians were irregulars, who informed her that she had been poisoned by her previous attendants, but that they could cure her. They were in company, and saw her together. They commenced treatment by

withdrawing all stimulants on which she had been living, ordered sitz baths, and gave her a mixture largely composed of aloes, which produced from five to eight dejections per day; this of course added greatly to her prostration and discomfort.

Present condition: There is a marked sallow, chlorotic complexion; great prostration; no pain. Complains much of "canker." Pulse 140; temperature 103° F. Tongue clean. Mind clear. She is very anxious to get well. There is a large, hard, and nearly smooth tumor, apparently uterine, occupying the lower pelvis and extending to the umbilicus. The cervix and os uteri appear healthy to the touch. No tumor in the epigastrium or in either hypochondria. There is no edema. No albumen nor casts in urine. Emaciation moderate.

November 12th, patient was seen by Dr. Francis Minot in consultation. Patient had rallied somewhat by use of stimulants; otherwise the same. The tumor was thought to be a uterine fibroid. It was also thought possible, but not probable, that pregnancy existed. Owing to the doubt concerning pregnancy, and the very severe prostration of the patient, it was not thought expedient to attempt a passage of the sound or probe into the uterus at that time.

November 14th. Severe vomiting set in, vomitus consisting of a thin yellowish fluid, not abundant. Nothing could be made to remain on the stomach.

November 15th. Sixth day of my attendance. Still vomiting. Complains of much distress in the stomach; relieved by small doses of morphia. She gradually sank, and died at 7.30 p. m.

Autopsy, forty-six hours after death. Present, Drs. Cowles, Cook, and Kingsbury.

Brain not examined. No diseased condition was found in any organ or part except in the ovaries, pyloric end of stomach, and lungs. These parts, together with the uterus, were removed and forwarded to Dr. E. G. Cutler, who very kindly examined them and sent me the following report: "The left ovary was about the size of the fist; on section it was found to be solid, and to contain one cyst about as large as a cherry. The surface of the section presented a homogeneous grayish appearance, with few blood-vessels. The right ovary was about as large as the head of an adult; on section it was also solid, with three or four small cysts in different parts of the organ. This ovary contained far more blood-vessels than the other, and there was mucoid degeneration of its substance to a limited extent.

"On microscopic examination both ovaries were found to be made up of relatively large spindle and round cells, with enormous oval nuclei, each containing one or more distinct nucleoli lying close together, with a slight amount of intercellular substance, and arranged in bundles or groups. There were many blood-vessels, with rather thin and indistinctly-marked walls. Mucoid degeneration of the right ovary was marked.

"The pyloric end of the stomach was found to be thickened in two distinct places, and on section this thickening was found to be both of the muscular and mucous coats of the stomach, amounting to about three-fourths of an inch or more.

"A microscopic examination showed that this thickening was due to an infiltration of the same sort of tissue as in the ovaries. There was no ulceration of the mucous coat.

"The tumors were sarcoma of the ovaries, and the same of the stomach. Virchow, in his classical work on tumors, figures and describes almost precisely what we saw in our specimens.

"There was limited thickening of the pleura at the apex of each lung, with, at the same time, an increase of interstitial connective tissue. . . . It represented recovery from an old inflammatory process at the apices, probably what is known as catarrh of the apices."

CASE II. MALIGNANT DISEASE OF THE UTERUS, WITH PROBABLY SECONDARY DEPOSITS IN THE STOMACH.¹

Mrs. H. H., American, was first seen by me late in the night of the 13th of September, 1879. She is forty-eight years of age; mother of three children; youngest eighteen years old.

I found the patient suffering from quite a severe pain in the pelvic region extending through to the back. There was also a smart uterine hemorrhage. Patient attributes her trouble to the menopause, stating that her periods have been somewhat irregular for several months past, but the flooding at this time is much more severe than ever before, and she has never had any pain before. She presents a fine, healthy appearance, is quite large and fleshy, and states that she never consulted a physician in her life except at the birth of her children. Her labors were all normal.

A vaginal examination was positively declined.

I prescribed as well as I could under the circumstances, and left the case.

September 27th the husband called at my office, stating that the medicine I prescribed at my visit on the 15th inst. had stopped the hemorrhage, and that the patient seemed quite well, but still complained of some pain at times.

December 16th I was summoned again. Pain and hemorrhage have both increased since my last visit. Patient is very nervous, has a chlorotic complexion; her mind is much disturbed about the death of her youngest son, which occurred some nine months ago. She has never become reconciled to his death.

A vaginal examination was again declined, and I prescribed as before, and on leaving the house stated that I should not call again unless I could examine the patient to my satisfaction, and they must not call me again without that understanding.

January 20, 1880, I was called in great haste, and found the patient in great mental and physical distress. There was alarming hemorrhage; large clots were freely expelled from the vagina, and the bed was saturated with blood. The patient was anxious for an examination, and it was with some difficulty that I prevented her from exposing her person in an unnecessary manner. After turning out the clots I found the cervix much enlarged, and of almost stony hardness, and fixed in the pelvis. The whole uterus was much enlarged. There was an old bilateral laceration of the cervix extending to the vaginal junction. There was no deep ulceration nor crumbling of tissue. The hemorrhage apparently came from the cavity of the uterus. Bimanual palpation showed several nodules at the posterior part of fundus uteri. Strong astringents on cotton packed about the cervix, together with ergot and gallic acid internally, checked the hemorrhage.

¹ This case may in some respects serve as a companion to the one reported in the JOURNAL April 15, 1880.

The pain required one half grain of morphia in suppository per rectum. Patient requests not to be informed if serious trouble exists. From this date to the 6th of February the hæmorrhage was a very troublesome feature in the case. A piece of alum, in size and shape nearly resembling a large glans penis, with a string attached to one end, passed up against the cervix and left for a few hours never failed to arrest the hæmorrhage. On the 6th of February the string became detached from a piece which had been inserted that day, and the nurse being unable to remove it let it remain until the morning of the 7th. I then removed it after some difficulty. The vagina and vulva were very sore and tender for several days, but there was never a return of the hæmorrhage afterwards. Dr. G. J. Townsend saw the case on this day in consultation. Suppositories per rectum containing a half grain of morphia and one third of a grain of extract belladonna relieved the pain.

February 17th. There is obstinate constipation, and also a slight, dark, watery discharge from the vagina, but the odor is not particularly offensive. The discharge lasted only a day or two.

February 20th. Vomiting came on which lasted until the end. It was only relieved by morphia, three fourths of a grain being required per rectum at this time.

March 7th. She is taking a grain of morphia every four hours. Vomits much of the time. Vomitus consists of a dark-greenish fluid without odor. She retains extract beef and champagne only. No tumor can be discovered in epigastrium. The uterus is much enlarged, and presses hard against the bladder and rectum. There is a constant desire to urinate and defecate, and her sufferings from this source, and from severe pain in the left ovarian region extending through to the back, are very great unless constantly under the influence of morphia.

March 10th. Suppositories per rectum in two-grain doses failed to give relief, and the hypodermic method was resorted to, one half grain of sulphate of morphia with one ninetyeth of a grain of sulphate of atropia, giving perfect relief.

April 1st. Five grains of sulphate of morphia required in the twenty-four hours to give relief. Urine has to be drawn with catheter. No motion of bowels could be had without manual assistance. After receiving a dose of morphia she was able to take extract of beef, wine, and champagne quite freely; these seemed to be retained. In about four hours' time, however, vomiting and retching in a most severe form would come on, together with severe pelvic pain, and persist until the morphia was again administered. Occasionally there is a slight, dark, thin, watery discharge from the vagina, which is quite offensive, but does not last more than a day at a time. From April 12th to the time of her death, which occurred April 20th, fourteen grains of sulphate of morphia were required each twenty-four hours to give her relief from pain; this amount was given subcutaneously in four doses. Four days before death she became very maniacal when awaking from the effects of the morphine, her principal maniacal exclamation being, "O God, you have killed him, you have killed him!" her attendants supposing that she referred to the death of her son. On the morning of April 20th I found her quite free from delirium. No morphine had been given for nearly six hours. She expressed herself free from suffering, but

she was pulseless. She soon passed into a quiet sleep, in which condition she died in the evening. No morphine was given, or seemed to be required, for eighteen hours before death. No autopsy could be obtained.

Would not the history of this case, together with the absence of broken-down tissue, etc., lead us to expect spindle-celled sarcoma? It is to be regretted very much that an autopsy could not be obtained in this last case.

If these two cases possessed the same pathological conditions, as in many respects they seem to possess, it seems very interesting to note the very severe suffering in one case, the most severe that I have ever witnessed, requiring my almost constant attendance day and night for several weeks, and demanding the largest doses of morphine I have ever administered, while the other experienced comparatively almost no suffering.

CASE OF ABSCESS OF THE BRAIN FOLLOWING PNEUMONIA.

BY LOUIS BRECHEMIN, M. D.,
Assistant Surgeon United States Army.

PRIVATE John R. Penn, aged twenty-six, was admitted to hospital July 3, 1880, suffering from pneumonia of the lower lobe of the left lung. The case was marked throughout the course of the lung trouble by profuse expectoration. The highest temperature observed, 102.4° F., occurred on the morning of July 7th. From this time the fever gradually subsided, and the physical signs of the lung trouble diminished until a normal temperature was reached on July 13th.

From the 14th to the 17th the patient appeared to be in fair health, and was allowed to walk around the wards. The cough had disappeared entirely, and the only complaint was a want of power in the left arm, and a slight pain in the left shoulder. On the morning of the 18th I was surprised, at my visit, to find that an attack of hemiplegia of the left side had supervened. The paralysis was not marked in the face, but affected the arm and leg. Nausea and vomiting also occurred, but were relieved by appropriate remedies.

The next day the patient complained of a very severe headache, not localized. About ten A. M. an attack of convulsions, lasting ten minutes, occurred.

The case progressed until death took place in the afternoon of July 25th. The symptoms presented up to this time were as follows: paralysis of left arm and leg; no marked changes in the pupils except sluggish reaction to light; left eyeball is turned outward, showing paralysis of internal rectus muscle; no paresis of sensibility in the left side; no aphasia; patient responds fairly to questions asked; pulse slow and full, averaging 48; temperature was 102.4° F. on July 20th, but after that never above 98.6° F. until just before death, when 103.8° F. was recorded.

The post-mortem examination, made nineteen hours after death, gave the following results:—

Brain, marked congestion of membranes and upper surface of right hemisphere; abscess discovered in medullary substance of middle lobe of right hemisphere over right lateral ventricle, containing thick greenish pus, of disagreeable odor, about two and one half ounces in quantity; brain substance in vicinity of abscess softened; slight effusion in right lateral ventricle.

Lungs, hypostatic congestion in both; right lung shows points of caseous degeneration at the apex, also one large calcareous nodule; slight œdema in both.

Heart, soft clot in right side; valves normal.

The post-mortem results in this case, taken in connection with its history, show, I think, that the abscess was of embolic origin, the embolus being conveyed probably from the diseased lung to the brain. An interesting fact is the want of chronicity in the lung symptoms. In most of the previously reported cases of cerebral abscess following pneumonia, the lung trouble had advanced at least to the stage of gray hepatization. Purulent infiltration, in these instances, is quite common. In the present case the post-mortem results found in the lungs were somewhat negative. The amount of congestion in the right lung would not justify a diagnosis of red hepatization. The abscess appeared to be recent, as it did not possess an enveloping capsule; its size was about that of an ordinary hen's egg. It was situated about half-way between the external surface of the right hemisphere and the right lateral ventricle. As will be seen from the previous history, the acute symptoms of the brain trouble set in one week before death.

FORT MEADE, D. T., April 11, 1881.

Recent Literature.

On Anchylosis. By BERNARD E. BRODHURST. London: J. & A. Churchill. 1881. 4th Ed.

A monograph from Mr. Brodhurst upon a subject to which he has devoted so much attention will repay careful reading. Coming, as it now does, with the stamp of a fourth edition, it must be regarded as having already gained the position of an accepted authority.

The writer shows that the procedure of forcible rupture judiciously carried out is almost entirely free from danger of exciting inflammation, or of injury to the limb. He has operated a thousand times, without fracturing the bones or rupture of a blood-vessel. Comparing these figures with those of Nussbaum (32 fractures of the condyles, 7 of the tibia, in 119 cases of forcible straightening of the knee), the conclusion is unavoidable that Mr. Brodhurst's method is the safer, unless the latter is more successful in the selection of his cases. Mr. Brodhurst in rupturing fibrous ankylosis relies entirely on the motion of *flexion*, rejecting extension as dangerous and unnecessary. In some cases he divides subcutaneously the ham-string tendons (in affections of the knee), and the adductor tendons in ankylosis of the hip, and applies extension by a weight for a few days, until the wounds have healed; the patient is then chloroformed and forcible flexion used. In certain cases the hands alone are insufficient, and simple mechanical means are resorted to. Immediately after the operation a gutta percha moulded splint is bandaged to the limb and worn for a few days, after which passive motion is required for a short time. Sometimes two or three sittings are necessary before a complete cure is won. Twenty-five cases are reported to illustrate the success of the method and are sufficient to encourage future attempts, but there is a lack of fullness in the notes, and the reader is left with the suspicion that some may have been the results of periarthritic, rather than arthritic, inflammation.

The chapter on Pathology needs revision, in the light of modern researches. Evidently Mr. Brodhurst is not a pathologist, and has not taken the trouble to follow the teachings of German observers in their study

of joint diseases. "Effusion" of "inflammatory product" and "bands of lymph" are terms not sufficiently precise for the younger generation of students and practitioners. The chapter on Bony Anchylosis is also not so full as would be desirable in a monograph attempting to treat the subject thoroughly. No reference is made to the increased safety of open osteotomy gained by antiseptic operation. And the method of fracture, near the joint, advocated by Billroth, Nussbaum, Stanley, Taylor, Tillaux, and Morton is not mentioned.

The book is not so complete as was Dr. Little's on the same subject, for its day and generation, but it has the merit of being much more recent, and is in every respect a thoroughly useful and sensible treatise.

The Diagnosis of Diseases of the Spinal Cord. An address delivered to the Medical Society of Wolverhampton, October 9, 1879. By W. R. GOWERS, M. D. Second Edition. Philadelphia: Presley Blakiston, 1881. Pp. viii., 86.

This address is well worth reading. The author says in his preface that this second edition "has been carefully revised throughout." A brief review of the medical anatomy of the spinal cord is followed by a section devoted to the physiology of the cord in relation to the symptoms of its diseases. Then follow sections devoted to the diagnosis of the locality of the disease and of the nature of the disease.

Considerable space is devoted to a consideration of the phenomena of "tendon-reflex." He concludes that they are dependent upon a "muscle-reflex" irritability which has nothing to do with the tendons, and the one condition which all have in common is that passive tension is essential for their occurrence. He proposes the name "myotatic contractions."

The foot-clonus is regarded as of great importance for diagnosis, always indicating organic lesion of the cord. He says, "I have seen many such cases, thought to be hysterical, in which it needed but a touch on the sole of the foot to excite such a clonus as is absolute proof of the existence of organic disease."

The description and explanation of the changes in electrical reaction of nerves and muscles is short, intelligible, and satisfactory. When speaking of pain he says: "In organic disease of the bones of the vertebral column it is an almost constant symptom, and is combined with local tenderness." This is rather too sweeping a statement. Discomfort or pain is not unfrequently present, but local tenderness is very often absent.

"A large number of authorities here and abroad are skeptical as to the existence of such a condition as 'reflex paralysis,' that is, a paralysis due to the effect on the centre of some peripheral irritation, disappearing when this was removed. I have never seen a case which seemed to me distinctly such; and although our modern knowledge of the various phenomena of inhibition and reflex action renders such a paralysis *a priori* even probable, it is certain that the theory has been extensively misapplied."

Dr. Gowers is an earnest advocate for a nomenclature which shall express the nature of the lesion and its locality, even if such names may seem rather long; he also advocates the use of plain English names, as "anterior cornual myelitis" instead of "anterior polio myelitis" or "tephro-myelitis."

S. G. W.

Medical and Surgical Journal.

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THE CRIME AT WASHINGTON AND ITS LESSON.

IN the absence of exact evidence as to the facts in the case, perhaps it is too early to attempt to measure the responsibility of the poor wretch who has so recently horrified the country by his efforts to assassinate the President. If, however, the reports are substantially correct, that Guiteau's uncle and two cousins were insane, that he was as a boy ill-balanced, and not to be depended upon, as a youth irritable, full of vagaries, and without power of concentration in steady work, as a man possessed with constantly varying extravagant delusions for which there was no sort of reasonable foundation, with a mind always vacillating between several impracticable projects; that he made a homicidal attack upon his sister with an axe several years ago without any real provocation; that he has pursued several women with wild plans of marriage; that he has threatened various persons upon trivial grounds; and finally that he supposed he should do the country a great service, and obey God's direct command if he could succeed in murdering the head of our government,—or even if disappointment, revenge, political illusions, and extreme Conklingism furnished the chief motives for his act, there can be no kind of doubt that he is a lunatic with delusional insanity of so long standing as to have produced very considerable dementia in a mind of originally bad quality. Indeed, we shall be surprised if in twenty or thirty years, if he is alive, he is not quite demented. That the pernicious "spoils system" was even the occasion of Guiteau's insanity is, of course, a theory that cannot be maintained. That it was the unsuccessful scramble for office, as one of the due rewards to the victors in the late political contest, that crazed his unsteady brain to the point of crime, seems not only possible but in the highest degree probable, while few persons will pretend to deny that the fact of the President's being the actual distributor of the spoils to the hungry for office was the immediate cause of his being selected as the victim of the would-be assassin's bullets. These facts carry with them their own moral as regards our civil service, which we hope will be heeded. It is with another view of the question that we are interested as medical men.

Except in the high position of the victim, the widespread disaster likely to arise in case of his death, and the deep significance of the causes of the crime, the attempt to kill President Garfield differs only in un-

important details from events with which we are made almost daily familiar through the newspapers, and which are sure to occur from time to time so long as irresponsible insane persons are allowed to be at liberty. We do not mean to assert that every person having morbid ideas and impulses is from that fact insane, nor that every individual technically insane is thereby necessarily to be considered irresponsible in every respect. Unfortunately for the good of society that doctrine has been already pushed too far when medical experts, not satisfied with their proper duty of stating facts, have, in their endeavors to make out a case, assumed the function of the courts in trying to dictate the course of the law. Those of the insane, too, who commit crimes have for the most part been thought up to that time sane or at least harmless, and the vast majority of them have appeared to the community at large so like other people that physicians are loudly denounced, or not heeded, when they advise their committal to asylums early enough to prevent serious crimes, while, at the same time, the same community is no less loud in its demand for their summary hanging, if they destroy life, whether fully irresponsible or only partly so.

The fact is overlooked that in becoming insane, people do not cease to be men and women, and that they act, within narrower limits of self-guidance and self-control, chiefly like other human beings; that the actions of very many of them are commonly from plan, with motive, premeditated, with more or less clear knowledge of abstract right and wrong, with an understanding of the nature in general of deeds like theirs but incapacity to see the wickedness of their particular act, and that they are guided within certain bounds by considerations of self-interest. Those easily recognized as insane, the very demented and maniacal, are commonly under some sort of control and rarely have opportunities for crime; the others differ from sane people in the extent to which they are controlled by their morbid ideas and impulses, and in the degree of the mastery of their delusions over their reason or will. Such being the case, although there can never be any satisfactory definition of insanity, any absolute criterion of responsibility, or any human means of determining in doubtful cases how far the possible self-control had been exercised, it is difficult to avoid the conclusion that all criminals, sane or insane, should be treated from the standpoint of the safety and good of society. It does no good to hang insane criminals, some of them do not dislike that notoriety, others are not deterred by any penalty, at the same time that many are in their daily conduct more or less amenable to punishment and discipline. The ordinary prison is not wholly the place for the insane of the criminal class and is absolutely unfit for those of previously good character, who commit crimes by virtue of their insanity. The insane asylum is not a safe enough place of custody for the former class, or thoroughly adapted in organization and management for all of the latter, English experience having shown that ten times as many escape without recapture by the end of the year from the asylums as from the criminal asylum at

Broadmoor. We really need separate criminal lunatic asylums, special accommodations in prisons and suitable provision in insane asylums, according to the needs of each particular case.

It rests with us to estimate the mental condition of the criminal insane from as nearly a judicial point of view as is possible; it remains for the legislatures and courts, and not for us, to decide what the protection of society demands. We can, and should, insist upon the prompt committal to proper supervision and control of the insane of manifestly dangerous tendencies who come before us, whether in so doing we are unreasonably blamed or not; we should forbid an insane man's being held to be responsible because he can add, subtract, and multiply, and does not look wild, and we should demand that the state provide proper receptacles for the safe keeping of all lunatics dangerous to society.

Not the least useful lesson to be learned from this miserable affair has been pointed out by our esteemed contemporary, the *Boston Herald*, that there should be less of party and faction where the littleness of the objects contended for is so clearly illustrated; that the President himself, than whom no man knows better what the country needs in the way of reform, should be admonished to take higher grounds—to serve the country with singleness of purpose and to care less for party. If this were done, what would be more natural and right than that public attention should be drawn to the whole unfortunate diseased class to which Guiteau seems to belong, and that we should do them the tardy justice of seeing that not only society shall receive reasonable security from their pitiful acts, but also that they are protected from themselves, in the least rigorous and most humane way possible? When it is fully realized that there is so much room for improving the condition of the insane in our best states, and that in many parts of the land they are wretchedly treated, when the vastness of the problem of the duty of the state to the insane is adequately recognized, when the intimate relations of insanity with our whole social economy is fairly appreciated, the states will no longer delay in giving the matter that attention which its importance demands. There will be a competent expert lunacy commission or commissioner, in some form or other, in every one of our states, as there is in none now. It will be considered as important also, to appoint a United States Commissioner of Insanity, to consider the various questions relating to the treatment of our 100,000 insane, as to have a Commissioner of Agriculture.

THE PRESIDENT'S WOUNDS.

THE attempt upon the life of our Chief Magistrate has given to the subject of gunshot wounds of the abdomen an unusual interest and importance, not only to professional men but to the public at large. The proverbial gravity of this class of injuries is due in part to the ease with which that portion of the body is penetrated by a missile, owing to its comparatively unprotected situation but chiefly to the character of

the contained organs and their highly sensitive covering, the peritoneum. The vascular condition of the viscera and their close proximity to the great blood-vessels renders death from primary hæmorrhage imminent, and their delicate structure favors the production of an amount of laceration which retards the healing process, while the accompanying inflammation, with its attendant dangers, is unusually severe. But the most frequent source of anxiety to the surgeon is the peritoneum. Although modern science has shown us that this membrane is far more tolerant of the operator's knife than had formerly been supposed, it is nevertheless but too easily irritated and inflamed by the presence of foreign bodies, or by the secretions or excretions of the organs which it envelops, the very structures themselves becoming under these circumstances a source of injury to one another. The dangers of peritonitis are largely due to the intimate relation which this membrane maintains with the lymphatic and nervous systems, the pyrogenous material rapidly spreading itself through the economy, producing violent febrile disturbance, or that condition known by some authors as peritonism or collapse establishing itself. It is well to remember in this connection that the temperature varies accordingly as one or the other condition predominates, being at times abnormally low, at others raised above the normal standard. Later, we may have secondary hæmorrhage to contend with, or excessive supuration with all its possibilities.

Of all the viscera the organ which seems to have excited the greatest interest in the present case is the liver.

The prognosis of shot wounds of the liver is stated to be very unfavorable. A glance at the surgical history of the war suffices to show how severe the injury inflicted by a bullet invariably is. Owing to the peculiar consistency of the organ there is always considerable laceration, even though the projectile be a small one. Otis describes the wound as a sort of stellate fracture, not unlike, we should say, to that produced in a pane of glass by a bullet or stone. The great venous sinuses are laid open, and a copious hæmorrhage is the result, which not unfrequently proves fatal. Should the patient escape this danger, he is exposed to the risk of a discharge of bile from the injured gall ducts, which, if the wound communicate with the peritoneal cavity, cannot fail to produce grave complications. It must be said, however, that most shot wounds of the liver which have been reported are combined with other severe injuries to the abdominal organs which may account in part for the great mortality. Otis nevertheless reports fourteen recoveries out of thirty-seven cases, a much more favorable series than other writers have collected. The question is often asked, could the ball be removed from the liver? No such operation is reported during our war, although foreign writers urge an attempt in this direction.

Turning now to the President's case, we may venture, with the data afforded us by the official bulletins, to speculate upon the possibility of an injury to this organ: and firstly, supposing the ball to have penetrated so deeply, it is interesting to recall the anatomical re-

lation of the part near which the wound was inflicted. The bullet, which for a pistol ball is a very large one, — of No. 44 calibre, — is said to have entered between the tenth and eleventh ribs on the right side, three and one half inches from the spine, splintering the edges of the ribs as it passed between them. It so happens that on the posterior aspect of the right lobe of the liver there is an oval space of considerable size left uncovered by peritoneum, owing to the reflection of the upper and lower layers of the coronary ligament; now supposing the ball to have continued onward in its course, it might have entered the liver at this point without touching the peritoneum. That the latter has escaped injury is highly probable, owing to the absence of all symptoms of peritoneal inflammation up to the present time. The primary hæmorrhage does not appear to have been excessive or sufficiently great to have been in any way characteristic of an injury to the liver. The character of the discharge from the wound has at no time been so modified as to suggest an admixture of bile; a slight amount of jaundice has been reported, but this symptom is said to be present only in a small proportion of cases, and so far as we can learn there has been no more than might easily be accounted for in moderate digestive disturbances.

The intercostal space through which the bullet forced its way is far too narrow to permit so large a projectile to pass without meeting with resistance from the ribs, which, as has been stated, were splintered by the ball. When we take into account the ease with which a ball is deflected from its path, there being, in fact, nothing so insignificant that may not influence its course, it is evident that in the present case it might easily have been turned to the right or left. In the latter direction the least possible deviation from its course would have brought it in contact with a large bony prominence, in the spongy tissue of which it would find a comparatively safe and firm lodging-place, the body of one of the dorsal vertebrae. A cross section of the abdomen at this point will show this bone to be the anatomical centre of the body, and amply protected in the direction from which the shot was fired by dense masses of muscles, tendons, and bone. Although the range was extremely close, the charge of powder was a light one, and might easily have exhausted itself upon such obstacles. This would leave the offending body in close contact with the nerve centres, and it is precisely to injury of such structures that one of the most prominent symptoms points, namely, the pain in the feet. Dr. Bliss is stated to have explained this symptom as produced by an injury of one of the sympathetic ganglia which lies directly in the track we have suggested. Had the ball been deflected to the right it would hardly have spent its force until it had penetrated deeply into the abdominal cavity. The theory that it has passed downwards into the pelvis and is in contact with the ischiatic plexus, is of course among the possibilities, for there is no freak of which a bullet is not capable.

The data we have at our command up to the time of writing, we may safely say, give no symptoms of a penetrating wound of the abdominal cavity.

If this be the case, the dangers of the future arise chiefly from the character of the wound itself rather than from the presence of the bullet, which thus far has not shown that it is not securely imbedded in a place of comparative safety. The tortuous shape of gunshot wounds and their contused surfaces are often to blame for difficulties which it is common to ascribe to the missile. By good drainage and antiseptic treatment these may be happily surmounted.

We have nothing but praise for the judicious manner in which the illustrious patient has been treated, and commend strongly the good judgment which refrained from making a meddlesome hunt after the ball. It would be difficult indeed to find anywhere better advisers for such an emergency than those in our national capital, whom the rich experiences of our late war have peculiarly well fitted for such a grave and important task.

MEDICAL NOTES.

— Dr. Charles P. Lyman's report to the Department of Agriculture on Contagious Pleuro-Pneumonia, illustrated with some very handsome colored lithocautic plates of diseased portions of lung of American cattle brought back from Liverpool by Dr. Lyman and examined microscopically by Dr. W. F. Whitney, of Boston, is an interesting document. It shows that the frequency of the disease in question among American cattle landed in Liverpool has been greatly exaggerated.

— The *Philadelphia Medical Times* thinks that few of those who furnish the "printer's devil" with medical copy get paid for their labor, but the great bulk of this, in the aggregate, gigantic mass of toil is either paid for not at all, or with such a pittance as not to be worth naming. Nevertheless the avalanche grows constantly. In this country alone the yearly output is by tons. Using the *Index Medicus* as a guide, we find that in the world last year eleven thousand seven hundred doctors thought they had something new to say, or some new way of saying something old. Mostly were they moved by vanity, and surely the outcome is vexation of spirit.

What the end of all this is to be is not easy to perceive. In fifty years more, if things go on, our unfortunate descendants may witness twenty thousand doctors, with vehement haste, yearly urging their pens in eager rivalry for fortune.

— The following is copied by the *Philadelphia Medical Times* from the *Réveil Médical*, which contains a picture of the monstrosity it describes:—

The *Wiener Med. Presse* contains an account of the brothers Tocci, born near Turin in 1877. These creatures have two heads, two pairs of arms, and a double thorax with independent thoracic organs. From the sixth rib down, however, they have one body in common, a single abdomen, a single umbilicus, one anus, one right leg, and one left leg. The genital organs comprise a penis and scrotum, but the rudiments of a second masculine genital organ can be discovered posteriorly, which occasionally permits a

small portion of urine to escape. Viewed from behind, there are two separate vertebral columns, two sacrums, and three buttocks, of which the middle one is merely the result of union of the other two, and contains a rudimentary anus. One anus serves both infants. The right leg is under the control of one twin, and the left, which is clubbed, of the other. Though well and strong, they cannot walk on this account. The personality of each infant is distinct; one cries or sleeps while the other may laugh or be awake. They are gay and lively with each other and with strangers. The heads usually lean one to the left the other to the right, but one at a time may place the head in a perpendicular position, provided the other leans over a little more horizontally.

—There has been much discussion recently concerning the stated objection of certain sisterhood nursing associations to send nurses to small-pox cases. Mr. Lewis Wingfield has written strongly to the papers on the subject, and the *Gentleman's Magazine*, in commenting on his published letters, observes that "not the least serious question opened out by Mr. Wingfield's letter is that of the value of our nursing sisterhoods. One and all of these to whom Mr. Wingfield applied declined to send a nurse to serve in a house in which there was small-pox. I do not deny that a woman may well hesitate to face the risk of so serious and loathsome a disease. For those, however, who, in the profession of religion, have formed a sisterhood, to decline such a call is like a soldier refusing to join a forlorn hope. They may be volunteers. That, however, does nothing to free them from responsibility. Fancy our volunteer soldiers refusing, on account of the danger, to front an enemy when he had once landed! I hope this refusal to face danger will open men's eyes to the real value of not a few of the institutions in which women play at being nurses. In our hospitals the presence of lady nurses is not an unmixed blessing. I have spoken to patients who have felt the weariness and suffering of life in hospital augmented by the fact that they dared not ask ladies of gentle birth for the menial service they required. Though less brutal in language, moreover, than the nurse of former times, the lady nurse knows how to make the patient wince when he has the misfortune to get into her black books. We are in a curious transition stage in many matters. When we have settled down to the new order of things we shall find that in nursing, as in other matters, professional service is better than amateur, and shall learn that the sufferer is as often pained as cheered by ministrations that not seldom owe their origin to forms of mysticism, fanaticism, or hysteria. — *British Medical Journal*.

—According to the *Boston Herald* a girl died in Springfield recently from brain disease, and the attending physician has returned, as the first cause of her death, "the graded school system;" second, meningitis.

—About a year ago the *JOURNAL* contained an editorial upon the Production of Sex at Will, based upon the theory and experiments with cattle of Capt. D. D. Fiquet, of Houston, Texas. A recent copy of the *Houston Daily Post* contains letters from other

stock raisers giving the favorable results of their experiments in breeding according to Mr. Fiquet's rules.

—The Canada Medical Association will hold its next meeting at Halifax, Nova Scotia, on Wednesday, August 3d.

—Dr. Gérard Marchant, director of the Lunatic Asylum at Toulouse, died on June 21st, in consequence of being shot with a pistol by an insane patient under his charge.

—According to the *British Medical Journal* the Shetland Islands are not oversupplied with doctors. Excluding the burgh of Lerwick there are six medical men to minister to the wants of a population of twenty-seven thousand.

—A new organ of the anti-vivisectionists has appeared in London called the *Zoophilist*. The first number contains a good deal of trash, among which is a complimentary notice of a very scurvy article on the Medical Profession and its Morality in England. This article appeared in the *Modern Review*, and was criticised as it deserved to be by the *Lancet*.

NEW YORK.

—Dr. F. R. S. Drake has been appointed clinical professor of practical medicine in the University Medical School. He had previously been lecturer on semeiology, and will now conduct a portion of the clinics hitherto held by Professor Loomis.

Miscellany.

PREVENTION OF HEAT-STROKE.

THE *British Medical Journal* gives an analysis, from the Army Sanitary Regulations of Germany (Kriegs-Sanitäts-Ordnung), of the directions concerning the prevention of heat-stroke among troops on the march. These directions have evidently been framed from experience and a careful consideration of the whole subject and its bearings, and though intended specially for military men are equally instructive to civilian physicians. The instructions are given under the five following sectional headings: General Remarks, Causes, Symptoms, Prevention, and Treatment.

General Remarks. The attention and activity of surgeons ought to increase in proportion to the efforts demanded from soldiers during a march, especially if the march is taking place in a heated atmosphere, for it is then that cases of heat-stroke are imminent. As a matter of diagnosis heat-stroke is to be distinguished from sun-stroke. The effects of sun-stroke, which, in tropical climates, may induce meningitis and encephalitis, in European climates are limited to inflammatory conditions and blistering of the skin of the parts of the body exposed to the solar rays. Heat-stroke is a far more serious and dangerous condition. It is a malady which, in certain circumstances, under the influence of great heat, with a clouded sky as well as in clear weather, is developed very rapidly, and one which, unless opportune assistance is afforded, may lead to death, sometimes within a few hours, sometimes after days have elapsed. Every officer directing the movements of troops ought to understand the causes of heat-stroke, as the disease is a preventable one.

Causes. Among the conditions which favor the production of heat-stroke are the following: (a.) An elevated external temperature, especially when the air is muggy; that is, when it is charged with a large quantity of watery vapor, and there is no wind, so that perspiration does not evaporate, and, consequently, the natural process for cooling the body is interrupted; (b.) Physical efforts, which induce an elevation of the internal temperature of the body; (c.) Deficiency of water, that is, the absence of one of the most natural of the internal means of bodily refrigeration, on which depends the preservation of a due proportion of water in the blood and the supply of the materials necessary for transpiration; and (d.) Insufficient ventilation of the column of men on the march.

Besides the above causes, there are a number of influences, the concurrence of which favor the invasion of heat-stroke. Such are: a want of the habit of marching; a constitution too weak for much exertion; anterior fatigue or illness; insufficient sleep; excesses; and, above all, indulgence in alcoholic drink.

It may be readily understood that at a time of great heat and under other external circumstances the appointed means of regulating the temperature of the body, and maintaining it at a constantly even degree, become insufficient for troops marching on foot in close ranks, particularly when the marches are made, as they often are, during the warmest hours of the day. The sweat, in close weather, cannot evaporate sufficiently; it collects on the face, on the chest, and flows over the body. This is the first refrigerant which fails. If, further, the soldier has not the means of drinking frequently to cool the body and restore to the blood the water abstracted from it by transpiration, if the production of heat continues as a result of the muscular efforts of the march, it may happen, on the one hand, that the blood becomes thickened, and the tissues dry and impaired; on the other hand, that the bodily temperature attains a degree dangerous to life. The man is then struck by heat-stroke. The two other regulators of the temperature, respiration and circulation, are not then sufficient for cooling the body; they become disordered under the influence of the extreme heat of the bodily economy, and in the end paralysis of the heart ensues.

To these causes must be added, when soldiers march in close order in calm weather, the vitiation of the air in which the column moves. Every one who has marched with troops knows what a fetid condition the air attains in warm weather, when there is not a strong wind to remove it fast enough and renew it sufficiently.

Among cavalry soldiers heat-stroke happens more rarely than with infantry, because the muscular efforts, and, therefore, the elevation of temperature, are less with them, and because they move at wider distances apart than men marching on foot.

Symptoms. — The premonitory symptoms of heat-stroke are the following: The perspiration is abundant on the surface of the body, yet the pulse is rapid, the respiration hurried, and the heart beats violently. The soldier feels his head hot, as well as his skin; he has a sense of constriction at the chest; a feeling of faintness; his tongue is dry, his hands swollen, and his face turgid or scarlet; his limbs totter. If at this time a man falls out of the ranks, he will generally soon be restored on being relieved from the pressure of his uniform and accoutrements, by exposure to fresh air, by having some water given to him to drink, and by

applying a wet handkerchief to his head and chest. But if this help be not afforded, and he drags himself painfully onwards, the transpiration becomes exhausted, the skin becomes dry, the lips glued together, the heart beats more feebly and more quickly, the respiration becomes more superficial, and at last the man loses sense and falls, sometimes as if in a fit, sometimes even with the signs of having become suddenly insane. When the condition has reached this degree, death is certain, unless help be afforded. Occasionally, the group of symptoms of heat-stroke are different, and depend on congestive determinations towards the brain, the lungs, or other organs, according to circumstances.

Prevention. — Soldiers the most habituated to marching cannot prevent their bodies from becoming overheated under certain circumstances. The natural remedy for this condition is drinking water. The belief that swallowing water is hurtful when the body is heated arises from prejudice. Of course, some precautions must be used if the liquid is very cold. It is important not to swallow a large quantity at a draught; it is better to drink more often and less at a time, and to mix with the water a little vinegar, tea, or coffee. To wait long that the body may become cool is useless; a few minutes suffice. The wooden water-bottles with narrow throats which soldiers usually carry answer all the purpose required. If circumstances permit, it is important at periods when, after the morning, the temperature reaches 77° F. in the shade, to arrange the march so that part of it may be accomplished by eight or nine o'clock A. M., the men reaching a halting-place at that time; the rest of the march can be taken late in the afternoon or evening. Before quitting a cantonment or halting-place, it should be seen that the water-bottles are filled. Spirits should be avoided. When the soil is sandy, or the roads dusty, it is well to march in as open ranks as possible. Halts should be multiplied and prolonged in airy places as far as practicable. Other points have to be attended to in time of war, but need not be described now.

Treatment. — When a man is attacked by heat-stroke, he should, pending the arrival of a surgeon, be carried to as cool and shady a place as possible; his clothes and accoutrements should be unfastened; his head raised; and care should be taken that he is surrounded as little as possible by people, who would prevent the access of pure air. Cold should be applied, by means of wet towels, to the face and chest, and if this be not sufficient, cold affusions, especially over the trunk, should be had recourse to. The man should be made to swallow water freely, only a small quantity being given at a time. When respiration appears to be nearly arrested, artificial respiration should be proceeded with in the usual way. This should be continued, if natural respiration fails to be quickly re-established, until the arrival of the medical officer. Air should be constantly conducted to the sick man while these means of restoration are in progress. Friction of the palms of the hands, and of the soles of the feet, and other means of stimulating the circulation, are advantageous. Drowsiness should excite mistrust; sleep should be watched with much care. In case of hæmorrhage occurring, the man's comrades should abstain from all stimulating or exciting applications, and merely attend to the general measures above mentioned until the arrival of the medical officer, who will then give whatever directions the particular circumstances of the case may call for.

CRIMINAL LUNATICS.

THE following, which travels back from England, like the Americo-English Stilton cheese, in the columns of the *Medical Times and Gazette*, is not inappropriate at the present moment or to this issue of the JOURNAL:—

"A strong feeling seems to be growing up in the United States against the practice almost universally prevalent there, and which, indeed, still prevails to a considerable extent in this country, of mingling the criminal with the non-criminal insane in the wards of lunatic asylums. This feeling finds vigorous expression in the Report of the Managers of the New Jersey State Asylum, which has just been transmitted to England. With a force and freedom of language unusual in formal official documents in Europe, they inveigh against the objectionable arrangement. 'To place insane convicts,' they say, 'in the same institution and the same apartments with insane patients from the families of our best citizens is inconsistent with every dictate of propriety. The very proposition excites a feeling of revulsion in every bosom. Think of the children of our late governor (honored as he was while living) thrown together in the same section of the asylum with convicts from the state prison! A voice from the tomb of the distinguished dead cries out in condemnation of such an arrangement. And the voice of the living echoes the sentiment, and cries out against the law that requires it. Who is responsible for this? The superintendent does the best he can under the law. The board of managers have again and again directed attention to it and urged a remedy. Governor Parker called the attention of the legislature to it in his message in 1875. Governor Bell, in equally strong terms, presented the matter in his message of 1877. The Senate passed a bill providing a remedy, but it slumbered in the lap of the committee of the House. The evil continues and increases. Let it be removed. Cannot a wing for insane convicts be provided in connection with the state prison? If this cannot be done, a separate building sufficiently secure and suitable for the purpose should be erected for their accommodation. The problem is one that must be solved sooner or later. Let it be done without delay. In our judgment the purity of the institution demands it. Public policy demands it. The ends of justice require it. The good name of the State calls for it. The legislature that meets the case and provides a proper remedy will receive the grateful acknowledgments of the entire constituency of the State of New Jersey.' The medical superintendent of the asylum follows in the wake of the board of managers, and in somewhat calmer accents and more argumentative strain enforces the same theme. He points out that an ordinary lunatic hospital is not constructed in such a manner as to render it suitable for the detention of persons who add determined criminal propensities to insanity, and that it would destroy its hospital character to adapt it to that class, and he pleads for the erection of a separate asylum, meeting the requirements of security, and so organized as to supply humane treatment to the really insane without creating any incentive to convicts to feign insanity. We commend his observations, as well as the more oratorical and uncompromising remarks of the board of managers, to the consideration of that mixed departmental and parliamentary committee which has

been deliberating for at least twelve months on all questions bearing on criminal lunacy in this country. If we might adopt the figure of the New Jersey board of managers, we should say that they have allowed the subject to slumber in their lap, and that their report is awaited, if not with impatience, yet with a conviction that it is slightly overdue. The questions involved in the reference to the committee are doubtless somewhat complex and difficult, but the information which is to serve as the basis of the answers returned to them ought to be readily accessible.

THE INFLUENCE OF LIGHT ON ANTS.

SOME recent researches of Sir John Lubbock upon the influence of light on ants are referred to in the following from the *Medical Press and Circular*:—

The indefatigable researches of Sir John Lubbock have made the features of ant economy all but thoroughly familiar to the great number of working naturalists at home and abroad, and so well is his claim identified with discoveries in connection with these little animals that the scientific zoölogist unconsciously associates all the knowledge of them he possesses with Sir John's name. In a long series of papers read at intervals before the Linnean Society of London, and dealing with the subject of ants, Sir John Lubbock has done very much to clear up doubtful points in comparative physiology and psychology; in many ways, too, the suggestions associated with his conclusions have assisted towards awakening the spirit of research in other and younger minds, a result to be very much desired. The latest contribution from Sir John Lubbock, read on Thursday last, deals with the influence of light on ants. He satisfied himself that the different rays of the spectrum act on them in a different manner from that in which they affect us; for instance, that ants are specially sensitive to the violet ray. If an ant's nest be disturbed the ants soon carry their grubs and chrysalises under ground again to a place of safety. Sir John, availing himself of this habit, placed some ants with larvæ and pupæ between two plates of glass about an eighth of an inch apart, a distance which leaves just room enough for the ants to move about freely. He found that if he covered over part of the glass with any opaque substance the young were always carried into the part thus darkened, and that if he placed side by side a pale-yellow glass and one of deep violet the young were always carried under the former, showing that though the light yellow was much more transparent to our eyes, it was, on the contrary, much less so to the ants. From this point he further proceeded to test the effect on them of ultra-violet rays, which to human eyes are invisible. For this purpose he covered certain nests in two parts, one with violet glass, the other with a flat bottle containing sulphate of quinine and bisulphide of carbon, both highly diathermic bodies. In every case larvæ were carried to beneath the clear coverings, the dark violet portion being carefully shunned. Again, he threw a spectrum into a similar nest, and found that if the ants had to choose between placing their young in the ultra-violet rays or in the red, they preferred the latter. He infers, therefore, that the ants perceive the ultra-violet rays, which to our eyes are quite invisible. But every one will not quite follow the implied conclusion that these rays are necessarily experienced as

rays of light, an assumption urged by Sir John Lubbock, who speculates on the probability of the mixed colors presenting other than the white familiar to human eyes. The experiments are not yet by any means completely described, but so far they have a

high degree of interest for the physiologist, and there can be little doubt that, difficult though it may be to exactly define its direction, the influence of such inquiry is beneficial not to science simply, but also to progress in its practical application in medicine.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 2, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	906	544	50.66	29.03	9.60	8.28	4.86
Philadelphia.....	846,984	320	129	26.56	13.13	4.38	2.19	5.00
Brooklyn.....	566,689	327	189	38.53	23.55	8.87	7.03	4.28
Chicago.....	503,304	507	198	39.09	22.15	6.84	3.58	.65
Boston.....	362,535	128	53	20.31	3.13	8.60	12.50	1.56
St. Louis.....	350,522	238	157	42.02	33.19	1.26	2.52	1.26
Baltimore.....	332,190	215	131	39.07	28.84	2.33	5.12	.93
Cincinnati.....	255,708	151	80	41.06	30.46	4.64	—	1.32
New Orleans.....	216,140	127	51	25.98	13.39	2.36	.79	1.58
District of Columbia.....	177,638	107	59	42.99	39.25	—	—	1.87
Pittsburgh.....	156,381	98	61	45.91	22.45	3.06	4.08	6.12
Buffalo.....	155,137	62	27	25.81	8.06	6.45	1.61	9.68
Milwaukee.....	115,578	43	23	16.28	11.63	4.65	—	—
Providence.....	104,857	33	9	6.06	—	21.21	—	—
New Haven.....	62,882	28	—	14.29	3.57	3.51	3.51	—
Charleston.....	49,999	37	16	21.62	13.51	—	—	5.41
Nashville.....	43,461	27	13	33.33	25.93	—	—	—
Lowell.....	59,485	26	13	11.54	11.54	11.54	—	—
Worcester.....	58,295	16	6	12.50	—	18.75	—	—
Cambridge.....	52,740	18	5	5.56	—	5.56	5.56	—
Fall River.....	49,006	—	—	—	—	—	—	—
Lawrence.....	39,178	13	4	—	—	—	—	—
Lynn.....	38,284	9	2	22.22	—	15.38	—	—
Springfield.....	33,340	11	1	18.18	—	—	9.09	—
Salem.....	27,598	7	2	14.29	14.29	28.57	—	—
New Bedford.....	26,875	9	2	11.11	—	—	—	—
Somerville.....	24,985	10	2	—	—	10.00	—	—
Holyoke.....	21,851	8	3	25.00	25.00	—	—	—
Chelsea.....	21,785	9	1	22.22	11.11	—	—	—
Taunton.....	21,213	5	—	20.00	—	20.00	—	—
Gloucester.....	19,329	7	2	28.57	—	14.29	28.57	—
Haverhill.....	18,475	5	0	—	—	—	—	—
Newton.....	16,995	4	3	50.00	—	—	—	—
Newburyport.....	13,537	2	0	50.00	—	—	—	—
Fitchburg.....	12,405	4	0	—	—	25.00	—	—
Twenty-two Massachusetts towns..	164,813	46	16	17.40	—	4.35	4.35	6.52

Deaths reported 3363; 1802 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1262; diarrhoeal diseases 743, consumption 360, lung diseases 211, diphtheria and croup 162, scarlet fever 105, small-pox 46, measles 42, cerebro-spinal meningitis 20, malarial fevers 33, whooping-cough 29, typhoid fever 28, puerperal fever 18, erysipelas 12, typhus fever four. From *small-pox*, Philadelphia 18, New York 16, Chicago nine, Pittsburgh two, Brooklyn one. From *measles*, New York 17, Cincinnati six, Chicago four, Pittsburgh three, Boston, Baltimore, and Newton two, Philadelphia, Brooklyn, St. Louis, New Orleans, Providence, and Nashville one. From *cerebro-spinal meningitis*, Chicago 11, New York six, Pittsburgh four, St. Louis and Cincinnati three, Baltimore, New Orleans, and Worcester two, Philadelphia, Boston, District of Columbia, Buffalo, Milwaukee, Newburyport, and Woburn one. From *malarial fevers*, New York 11, New Orleans nine, St. Louis four, Brooklyn and Chicago two, Philadelphia, Baltimore, Cincinnati, Buffalo, and Chelsea one. From *whooping-cough*, New York and Brooklyn five, St. Louis four, Chicago three, Philadelphia, Baltimore, Cincinnati, Pittsburgh, and Buffalo two, Providence and New Bedford one. From *typhoid fever*, New York nine, Chicago five, Philadelphia four, Baltimore and Pittsburgh two, Brooklyn, Boston, Cincinnati, New Haven, Nashville, and Attleborough one. From *puerperal fever*, New York six, Chicago four, Lynn two, Philadelphia, St. Louis, District of Columbia, Milwaukee, Springfield, and Bridgewater one. From *erysipelas*, New York five, Brooklyn,

Chicago, Cincinnati, New Orleans, New Haven, Charleston, and Taunton one. From *typhus fever*, New York two, Philadelphia and Brooklyn one.

Eighteen cases of small-pox were reported in Brooklyn, one in Boston, 16 in Pittsburgh, one in Buffalo; diphtheria 49, scarlet fever nine, in Boston; scarlet fever 12, diphtheria five, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,033,718 (population of the State 1,783,086), the total death-rate for the week was 17.00, against 15.64 and 18.24 for the previous two weeks.

For the week ending June 11th in 149 German cities and towns, with an estimated population of 7,862,668, the death-rate was 26.4. Deaths reported 3994; 1983 under five: pulmonary consumption 571, diarrhoeal diseases 456, acute diseases of the respiratory organs, 420, diphtheria and croup 126, scarlet fever 81, measles and röteln 43, typhoid fever 42, whooping-cough 38, puerperal fever 22, typhus fever (Königsberg four, Posen three, Thorn two, Tilsit, Halle one) 11, small-pox (Zittau three, Berlin, Munich, Aix-la-Chapelle two, Königsberg one) 10. The death-rates ranged from 16.1 in Hanover to 39.3 in Strasburg; Königsberg 33.9; Breslau 36.1; Munich 31.9; Dresden 23.1; Berlin 31; Leipzig 18.9; Hamburg 22.6; Bremen 27.8; Cologne 27.7; Frankfurt 22.4.

For the week ending June 18th, in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 19.5. Deaths reported 2839: acute diseases of the respiratory organs (London) 225, measles 100, small-pox (London 82) 85, whoop-

ing-cough 81, scarlet fever 73, diarrhoea 67, fever 30, diphtheria 23. The death-rates ranged from 15.4 in Bristol to 27.7 in Plymouth; Brighton 18.8; London 19.1; Leeds 17.1; Birmingham 17.9; Manchester 21.6; Liverpool 24; Sheffield 19.5. In Edinburgh 26.6; Glasgow 22.6.

In the 21 chief towns of Switzerland, for the week ending June 18th, population 479,934, there were 23 deaths from diarrhoeal

diseases, acute diseases of the respiratory organs 14, measles 11, typhoid fever eight, whooping-cough five, diphtheria four, small-pox three, puerperal fever one. The death-rates were: Geneva 11.4; Zurich 25; Basle 28.5; Berne 21.1; St. Imier 36.3; Herisau 46.7.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration, Hrs. & Min.	Amount in inches.
June-July, 1881.																			
Sun., 26	30.142	60	73	57	80	79	90		SW	N	NE	1	5	4	O	Lt. R	C	—	—
Mon., 27	30.071	60	65	55	95	89	94		N	SE	SE	1	6	2	G	G	G	—	—
Tues., 28	29.631	73	86	60	94	52	83		SW	SW	S	2	10	7	O	F	Lt. R	—	—
Wed., 29	29.597	73	84	64	65	40	63		W	W	SW	15	12	2	F	F	F	—	—
Thurs., 30	29.725	70	83	63	67	42	84		W	W	W	3	7	3	C	F	O	—	—
Fri., 1	29.983	64	77	58	73	56	84		NW	NW	NW	3	26	4	C	Hd. R	C	—	—
Sat., 2	30.108	72	84	57	53	31	68		NE	C	SW	1	0	11	C	C	F	—	—
Week.	29.894	68	86	55														19.23	1.94

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, APRIL 1, 1881, TO JUNE 30, 1881.

BAILHACHE, P. H., surgeon. Detailed as chairman, board of examiners. April 5, 1881.

WYMAN, WALTER, surgeon. Detailed for temporary duty as medical officer, revenue bark Chase. May 31, 1881.

LONG, W. H., surgeon. Detailed as member, board of examiners. April 5, 1881.

MURRAY, R. D., surgeon. To proceed to Memphis, Tenn., assume charge of the service at that port, and inspect the service at Vicksburg, Miss. April 8, 1881.

FRYLANDER, GEORGE, surgeon. Detailed as recorder, board of examiners. April 5, 1881. To proceed to Richmond, Va., as inspector. April 30, 1881. Detailed as chairman, board of survey, to examine applicants for admission to the revenue marine service. May 10, 1881.

DOERING, E. J., surgeon. Granted leave of absence for thirty days from April 21, 1881. April 2, 1881.

AUSTIN, H. W., surgeon. Granted leave of absence for thirty days from May 5, 1881. April 2, 1881.

GASSAWAY, J. M., passed assistant surgeon. To proceed to Philadelphia, Pa., and assume charge of the service, relieving Passed Assistant Surgeon Stoner. April 7, 1881.

SMITH, HENRY, passed assistant surgeon. To report to chairman, board of examiners. April 25, 1881.

STONER, G. W., passed assistant surgeon. To proceed to Portland, Maine, and assume charge of the service, relieving Surgeon Doering. April 7, 1881.

FISHER, J. C., passed assistant surgeon. Detailed as recorder, board of survey, to examine applicants for admission to the revenue marine service. May 10, 1881.

WHEELER, W. A., assistant surgeon. Granted leave of absence for thirty days (he providing a substitute) from July 7, 1881. June 23, 1881.

CARMICHAEL, D. A., assistant surgeon. To proceed to New York, N. Y., and report to Surgeon Fessenden for duty. April 7, 1881.

RESIGNATION. — DOERING, E. J., surgeon. Resignation accepted by the secretary of the treasury, to take effect May 20, 1881. April 2, 1881.

PROMOTION. — GASSAWAY, J. M., surgeon. Promoted to be surgeon from May 21, 1881. May 16, 1881.

BOOKS AND PAMPHLETS RECEIVED. — A Text-Book of Practical Histology, with Outline Plates. By William Stirling, M. D., Regius Professor of the Institutes of Medicine in the University of Aberdeen. With thirty Outline Plates, one Colored Plate, and twenty-seven Wood Engravings. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1881. (A. Williams & Co.)

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, M. D. With sixteen Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881. (A. Williams & Co.)

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Tavole per una "Anatomia delle piante Aquatiche" opera rimasta incompiuta di Filippo Parlatore.

Il Primo Anno della Clinica Ostetrica diretta dal Prof. Cav. Vincenzo Balocchi nella Nuova Maternità di Firenze rendiconto del Dott. Ernesto Grassi.

Lectures.

CLINICAL LECTURE ON HEMIPLEGIC EPILEPSY.

BY EDWARD C. SEGUIN, M. D.

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GENTLEMEN, — The case to which I invite your attention particularly to-day is that of a private patient of mine, who has very kindly consented to come before you in order that you may have the opportunity of practically investigating the remarkable disease of which he is the subject.

He is twenty-four years of age, and a cigar-maker by occupation. He always enjoyed good health up to January, 1877, when he had what he describes as a slight fever, which lasted five or six days. When he recovered from this, he found that there was some loss of power in both the upper and lower extremity on the left side, which interfered with his dressing himself and performing various other ordinary actions. In a few weeks after this he was attacked with a spasm, confined, he says, exclusively to the left side of the body, in which he fell to the ground and bit his tongue; while he remained unconscious for fifteen minutes. One month later he had a second similar attack, and for nearly a year afterward he continued to have them at varying intervals and of greater or less severity. Then for a whole year, during which he was all the time under treatment, he remained entirely free from them. In March, 1879, however, the attacks returned, and during that month he had three; while in the following month he had two, the last one that he has had occurring on the 13th of April (more than a month ago, you will perceive).

On questioning him more particularly in regard to the seizures from which he has suffered, we find that some of them were not accompanied by loss of consciousness; and that while they all commenced in a spasm of the left hand and arm, the lightest of them proceeded no further than this. When he first came under observation there was no facial paralysis, no anæsthesia of the left hand, and no tendon-reflex at either knee. The left arm was decidedly paretic; so that, while the dynamometer reached forty and forty-five under the pressure of the right hand, it indicated only twenty and twenty-three under that of the left. As to the ætiology, no cause whatever could be assigned for the affection. It is true that eleven years before the commencement of his trouble he says that he had a chancre, but he is positive that it was never followed by any constitutional symptoms. Moreover, at the beginning of the attacks mentioned he was treated with mercury and iodide of potassium; but without any benefit whatever. When he came under my care, I ordered him thirty grains of the bromides of ammonium and potassium (each dose containing ten grains of the one and twenty of the other,) every night and morning. In addition, he was to wear a sort of bracelet on the left arm, which he could quickly tighten whenever he felt a spasm coming on, and was also to carry in his pocket a small bottle of nitrite of amyl for inhalation at the same time. These precautions, I am glad to say, have already proved of service. On the third of May he had a slight attack, which was promptly checked by the employment of the above means as directed. Since this, however, he says that his left hand has felt somewhat

weaker than it did before; and on investigation I find that it is chiefly the long flexor muscles that are paretic.

In order to fix them more clearly in your minds, I will now set down the principal features of the case upon the blackboard.

In January, 1877, the patient had an illness lasting five or six days which he describes as a "slight fever," and this was followed immediately by partial left hemiplegia, accompanied with paresis on that side and general nervousness. He gradually recovered from this condition; but in a few weeks a peculiar form of epilepsy (which is known technically as hemiplegic epilepsy) appeared. This variety, I may mention, is supposed to be rare; but I believe it is only relatively so. His attacks always commenced in spasm of the thumb and fingers of the left hand, and several times they were accompanied with complete loss of consciousness and biting of the tongue. Others were of less severity; there being more or less marked spasm of the hand, arm, and face, but no unconsciousness, and there have been other attacks still, in which there was a momentary, flash-like sensation in the arm, such as is characterized under the term of simple aura.

Let us next examine a little into his present condition:—

He is a man of perfectly healthy general appearance, as you notice, and when he walks you see that he swings both shoulders evenly, while he has nothing whatever like a paraplegic gait. He would seem, therefore, to have full control of the left lower extremity. His eye-sight is good, and, I believe, has never been affected, except that he has at times had transient diplopia. His memory, he says, is weak. When he stretches out his hands before him, we find that he cannot practice hyper-extension of the fingers of the left one, and, indeed, cannot bring them quite to the horizontal position. When he lifts the left hand to the nose, it is seen that there is some hesitation about the action, but not the movement from side to side which, as a rule, characterizes ataxic movements.

To-day the dynamometer registers forty-seven and forty-seven for the right hand, and twenty-two and twenty-seven for the left. The naso-labial creases and all the other facial lines appear to be very much the same on the two sides; and the tongue does not deviate in the slightest degree when it is protruded. The pupils are observed to be normal, and the patient converges well. When the æsthesiometer is employed for testing the sensibility of the two hands, it is found to be remarkably fine in both, there certainly being no impairment of it in the left. The same is true in regard to the two sides of the head and face. Tendon-reflex, as was previously the case, is as completely absent at both knees, as in instances of tabes; and this is a singular fact, since it is in violation of the general law that in cerebral cases tendon-reflex is increased.

To sum up the prominent points of the examination on the black-board, we find that there is no facial paralysis or anæsthesia, that the left hand is paretic and numb, but characterized by no anæsthesia, that there is a slight ataxiform tendency in the movements of the left upper extremity, that there is a complete absence of tendon-reflex on both sides, that the heart is normal, and that the memory is feeble. Here you observe is a hemiplegic epilepsy, following a partial hemiplegia; its manifestations being true epileptiform attacks and constituting both a limited epilepsy and a motor epilepsy.

Before entering into a consideration of the nature and location of the lesion that is probably present in this patient, let me relate to you a short account of another somewhat similar case, which also occurred in my private practice. In 1868 a gentleman, then thirty years of age, began to lose strength and suffer from dyspepsia; in consequence of which he was sent to Europe for a change of air and scene. While staying in Paris he was troubled with localized tonic and clonic spasms, which lasted only a few seconds at a time, and during which there was no loss of consciousness. At first he made light of these attacks and laughed at them when they occurred; but after a time they became more severe, and he finally began to suffer from *grand mal*. Strange to say, however, he has never had a single true epileptic seizure since 1869, until the present year; although most of the intervening time he has been entirely without treatment. Nevertheless he has had, and still continues to have, one or more slight spasms, of brief duration, every day; and there is considerable numbness about the hand. Occasionally they are more serious, and sometimes the hand is jerked up against the sternum with some violence. The last fit of *grand mal* mentioned occurred in January, 1879; when an unusually severe attack of spasm ended in unconsciousness. Since then there has been no return of the same trouble. His former attacks were accompanied by more or less suffusion of the conjunctiva, and at present the only objective symptom is a slight amount of congestion about the eyes.

About six weeks ago I presented to you a patient suffering from hemiplegic epilepsy; and altogether I have seen a great many cases of this disease. In only one of them was I able to obtain an autopsy; but other observers have been more fortunate, and at present we believe that a satisfactory anatomical and physiological basis has been established for the localization of any lesion giving rise to the characteristic phenomena of the disease. Our knowledge in regard to the subject has been acquired principally since Ferrier's researches upon the cortex of the brain, made in 1872 and 1873; but long before this another Englishman, Hughlings Jackson, from his clinical studies propounded the hypothesis that hemiplegic epilepsy and localized epilepsy were due to lesions situated in the cortex. Ferrier, indeed, has frankly acknowledged that he was indebted to this observer for the suggestion of making the series of experiments whose results have proved so brilliant and so important. Other investigators besides him have also demonstrated conclusively that movements of the face, lips, tongue, and both the upper and lower extremities are intimately associated with the cortex.

By means of a rough diagram on the black-board I will now endeavor to indicate to you some of the more important points that have thus been established. Having represented one of the hemispheres on the board, I draw a line from the fissure of Sylvius to that of Rolando, it will pass through the centre of the motor tract of the cortex, which may be supposed to extend for some distance on either side of it. This motor tract has been subdivided into three zones, one above the other, and each is connected with different portions of the body, as follows: the lower zone has to do with the movements of the tongue and lips, being that which is also concerned with speech; the middle one with movements of the hand and forearm; and the upper zone with those of both the arm and leg. The

anterior portion of the latter is connected with the arm as well as the leg, while the posterior part is concerned with the leg alone.

If we expose the brain of a monkey, for instance, and apply a slight faradaic current to this portion of the cortex, a localized epilepsy will result, and by such irritation of these various zones we are able to produce certain definite and special movements of different parts at will. These are the reasons, therefore, why we can arrive at a physiological basis for the location of the lesion in a case of this kind.

Let us next inquire, What empirical basis have we? Undoubtedly this is also sufficiently strong. In many instances of hemiplegic epilepsy tumors and other lesions have been found after death in this general district, and in the particular horizontal zone or zones corresponding with the parts that were noticed to be affected during life. The lesion may be either in the meninges or the brain-substance, or in both. Some time since a boy was under my care on Blackwell's Island who often had as many as ten or twelve epileptiform seizures in an hour.

Finally death ensued, this event being preceded, however, by well marked hemiplegia. At the autopsy it was found that there had been originally a fracture of the skull. On the inside of the cranium, at the point where this occurred, the dura mater was very firmly adherent to the bone, and attached to this was an enormous tumor. This proved to be of a sarcomatous nature, and it was as large as the fist, occupying almost entirely one of the hemispheres, and crowding to some little extent upon the other. When the tumor began to grow localized epilepsy was, no doubt, caused by the irritation thus set up in the motor zone. Afterwards, as it continued to increase in size, convulsions resulted, and at length there was the evidence of extreme pressure exhibited in the hemiplegia.

In our present patient, also, I believe that there is some lesion in the motor tract of the cortex, either in the upper or middle zone, or perhaps in both. The fact that there is no aphasia, imperfect articulation, or difficulty with any of the movements of the lips indicates undoubtedly that the lowest of the three zones is not affected. As to the exact nature of the lesion here, it is easier to say what it is not than what it really is. Thus, we can exclude syphilitic disease of the brain, because the man presents no evidence of having had constitutional syphilis, because there is no history whatever of such trouble, and, finally and most conclusively, because the test of treatment has already been applied, and a course of anti-syphilitics was followed by no benefit whatever. Again, there is little or no evidence of cerebral or other hemorrhage, although it is possible that he may originally have had an effusion of blood. We do not know exactly what the illness was from which he dates his trouble, but it is at all events a fact that after it his left side was left weak. This is a somewhat suspicious circumstance, and the amount of fever of which he has spoken in connection with it is quite compatible with the occurrence of cerebral hemorrhage. As to softening of the brain, that is hardly likely in this case. He has not had the degeneration of the arteries and other signs which ordinarily precede this condition, and he does not now present any of the symptoms characteristic of it, while both his age and his general appearance are entirely opposed to such a supposition.

What seems the most probable lesion here is a small tumor of some kind, which is causing pressure upon some portion of the two upper zones of the motor tract of the cortex. There are three varieties of diagnosis which I find it convenient to bear in mind in my practice, namely, the diagnosis of reasonable certainty, the diagnosis of probability, and the diagnosis of possibility; and I am sorry to say that I feel obliged to classify the hypothesis of the presence of a tumor in this case as a diagnosis of the third kind. The absence of headache here may be due to the fact that the tumor (provided there is one present) is a parenchymatous one, and does not involve the dura mater. When the latter is thus implicated, the patient usually suffers intense pain. The absence of lesion of the optic nerves is not significant. Even in the little patient previously mentioned, in whose brain there was such an enormous tumor, there was no neuro-retinitis. This is, however, more common when the tumor is situated at the base of the brain.

The prognosis is not very hopeful here; but still by means of an appropriate course of treatment I think we shall at least be able to ward off the epileptiform attacks. I have ordered for him the following prescription: ¹—

Ry Ammonii bromid.	. . . . .	ss.
Potassii bromid.	. . . . .	ss.
Aque	. . . . .	f 3 vii. M.

I always prefer to give the bromides with simple water, and not in the form of an elixir or mixed with syrups. A teaspoonful of the above solution (estimating seven teaspoonfuls to the ounce) will contain ten grains of the bromide of potassium and five grains of the bromide of ammonium, and he is at present taking two and a half teaspoonfuls of it (representing about thirty-eight grains) in the morning, and two teaspoonfuls (thirty grains) at night. This is only a beginning, and I shall probably be obliged to gradually increase the amount of the bromides taken. I desire, however, to find the *minimum* dose of these which will control the epileptic seizures, and it is a fact that this is often reached at a point considerably short of the amount required to produce bromism.

I shall also advise that the patient continue to wear the bracelet of which I spoke to you. For more than a thousand years the idea has prevailed that epileptic attacks may be controlled to a considerable extent by sudden pressure upon the wrist, and this was formerly practiced under the theory that the attack commenced in the hand. This is, of course, absurd. It is in the brain that the fit originates, and thirty years ago Brown-Séquard claimed that the bracelets, ligatures, and circular blisters which had so long been used in epilepsy acted by causing an irritation to be conveyed to the brain, and thus stopping the sensory manifestation. This was the principle of inhibitory arrest, which has since been studied more fully, and is now well understood. The patient will also continue to use the nitrite of amyl whenever he may feel the premonitions of an attack coming on; and this, it is well to know, acts more efficiently than any ligature can.

—Dr. Workman, of Toronto, has been elected president of the Ontario Medical Association.

¹ Expressed in the metric notation this would be: fifteen grammes of bromide of ammonium, thirty grammes of bromide of potassium, and two hundred grammes of water.

Original Articles.

DESQUAMATIVE INFLAMMATION OF THE EAR.²

BY J. ORNE GREEN, M. D.

CASE I. Mrs. X., aged seventy-five, in good health, had been troubled for over a year with extreme deafness of the left ear, accompanied by a sensation of fullness; there had been some dull pain occasionally in the ear, but no discharge. Examination showed the meatus completely obstructed by a dark-brown mass, which was mistaken for inspissated cerumen, and she was ordered a solution of bicarbonate of soda in glycerine and water to soften it, and the next day I visited her to remove the offending body. The acoustical deafness was complete, that is, there was no hearing by means of the conducting mechanism; the bone conduction showed the labyrinth in good condition, and the tuning fork on the forehead was heard entirely in the affected ear. On syringing the ear a minute quantity of cerumen was removed, but the mass was not at all displaced. On examining with the probe I displaced a few fragments of epithelium from the mass and removed them with forceps. Recognizing now the nature of the obstruction, I gradually loosened masses and removed them, till finally, by inserting the probe along the walls of the meatus in different places, I was able to start the outer layers from the walls, and finally succeeded in getting a firm hold upon the outer edges with the forceps, and with some force withdrew the remainder of the mass. The operation required more than an hour before I finally succeeded in loosening and removing the outer layers.

After the removal the meatus was seen to be quite red throughout, and in spots were a few granulations. The membrana tympani was very much thickened in its dermoid layer, very much drawn in, and perfectly immovable. The acoustical hearing was improved to a fair degree by the removal, but was and remained imperfect, owing to the permanent changes in the membrana tympani and the rigidity of the ossicles. Examination of the removed mass showed it to be composed of laminae of large pavement epidermal cells, with some fat and an occasional crystal of cholesterine; its outer layer was of the same microscopic character, but was in one solid layer, like the finger of a glove, and showed an accurate cast of the meatus and drum-membrane, even to all the angles, prominences, and depressions of the latter. The small granulations of the meatus were canterized with solid nitrate of silver, once, shrivelled up, and caused no further trouble; the redness of the meatus disappeared rapidly. The age of the patient, and the great thickening of the drum-membrane, led me to advise no further treatment for the remaining deafness. I have never seen the patient since, and am unable to say whether there was any return of the mass in the meatus.

CASE II. John, aged eighteen, was sent me with a chronic otorrhœa of several years' standing, which examination showed was due to a purulent inflammation of the tympanum, and the drum-membrane was perforated in its upper posterior quadrant by an opening about three millimetres in diameter. A small projection of loose epithelium on the upper wall of the meatus, close to the membrana tympani, called my

² Read before the Society for Medical Observation, March 14, 1881.

attention to the spot, and with a bent probe I found that the upper and posterior wall of the meatus was largely destroyed; on removing the projecting epithelium another immediately came into view, and working with a bent probe mass after mass was removed, till finally, close to the bone, I succeeded in separating the innermost layers, and withdrew a mass of epithelial laminae, leaving a cavity into the mastoid antrum fully as large as the end of the little finger. The mucous membrane of the tympanum and antrum were red and swollen and secreting muco-purulent matter. Microscopic examination of the mass showed large pavement-epithelial cells, with and without nuclei, pus, fat, detritus, and some cholesterine. Instillations of sulphate of zinc were used, and several times the cavity required to be freed from epidermal flakes which had formed there. The otorrhœa finally ceased, the mucous membrane became pale and free from swelling, the formation of the epidermal flakes ceased, and the patient, as well as could be expected from the great destruction which had occurred, passed from observation, and has never been seen since.

CASE III. X., aged twenty-five, never had had any trouble with the ears till he began to be uncomfortable in the right ear (he could define it in no other way); there was no discharge, no pain, and no deafness. Examination at the City Hospital showed a dark-colored mass filling the lower half only of the meatus, and situated at about the junction of the osseous and cartilaginous passages. Examination with the probe showed it to be of the same character as the preceding deposits, and it was removed in the same way, by loosening the deeper layers from the walls of the meatus with a probe, and then removing it by forceps. The mass measured fully a centimetre in diameter, and was rather more than one centimetre long; it was torn apart, and consisted evidently of laminae of epithelium; was wholly destitute of any enveloping membrane; it was not examined microscopically. The seat of the mass was a large depression in the cartilaginous and osseous meatus, forming a cavity as large as the end of the little finger, and distinctly marked; the depression was probably due to an atrophy from pressure of the mass. The walls of the cavity were wholly free from congestion, and there was no solution of continuity in the epithelium lining it, which appeared perfectly normal. The membrana tympani was perfectly normal in appearance, and the hearing was normal. A few days after I saw the case again; there had been no further development of epithelium, and the ear was reported as free from its previous uncomfortable sensations.

CASE IV. Walter, aged eleven, after bathing in the salt water had a moderately severe earache in one ear for a few hours at night; no discharges followed, the hearing was not affected, and no more was thought of it till some weeks after, when his mother noticed an offensive odor, which was traced to this ear. On examining him I found a slight amount of pus on the upper wall of the osseous meatus, nearly one centimetre from the external drum-membrane. Wiping this away a small granulation was found to have developed from within the cancellated structure of the bone at this point, and there was a small curious cavity in the bone about one half a centimetre in diameter and the same in depth. It did not communicate with the tympanum, and that cavity was free from disease, and the hearing good. The granulation was removed,

the cavity was kept cleansed, was canterized occasionally, and it finally became covered with a cicatricial formation extending from the skin of the meatus over the walls of the cavity, and the cure was complete, although the cavity still remained open into the meatus. The ear remained well for a year, when a slight odor was again noticed, and examination showed a little discharge, and the cavity filled with epidermal flakes, which were removed as in the other cases. Cleansing and astringents were used, and the discharge soon ceased, but there was a marked tendency to reproduction of the flakes for some weeks, requiring their occasional removal with the bent probe. This tendency finally ceased, and the ear remained well more than a year afterwards, the cavity remaining, but lined with firm cicatricial tissue.

CASE V. Mrs. X., aged forty, had suffered from chronic purulent inflammation, with perforations of the drum-membrane, years ago, and under the care of the late Dr. E. H. Clarke had recovered at least so far that the discharge had ceased, and she was not aware of any trouble remaining. Five years after this there was a return of otorrhœa, which was again relieved, and the ear had remained free from discharge for ten years, when from debility while nursing, as she thought, the otorrhœa began again, and after several weeks' duration I was consulted. I found with the otorrhœa quite large granulations filling the meatus and occluding the view of the deeper parts. Under ether these were readily removed by a wire *érasaur*, and proved to be papillomata from the walls of the meatus. Behind these growths the whole osseous meatus was filled with epithelial masses, which were only loosened and removed with great patience and difficulty, the time occupied being nearly an hour. After cleaning the meatus the membrana tympani was found perforated, and through the perforation projected a small polypus originating from the tympanic mucous membrane, which was also removed with the *érasaur*. The case was treated by cauterization, cleansing, and inflation till all discharge ceased, some months afterwards. There was but a slight tendency to reproduction of the epithelial masses, which soon ceased. The case remained well several years afterwards.

These cases, with the exception of the third, the only one of the kind I have ever seen, might be multiplied, but they are sufficient to call attention to the different varieties of conditions under which large masses of epidermis are thrown off and form important collections in the ear requiring instrumental interference. It will be noticed that they are of three kinds,—collections in the meatus without any affection of the deeper parts, collections in the meatus associated with purulent inflammation of the tympanum, with perforation of the drum-membrane, and collections in the cavities of the middle ear associated with purulent inflammation of the tympanum. The character of the collections was the same apparently in all; microscopically, when they were examined, they consisted of layers of large pavement epithelium cells, with and without nuclei, fat globules, crystals of cholesterine in variable quantity, and detritus. In all of the cases which I have given, except the third, they were associated with inflammation of the surfaces to which they were attached,—meatus, mucous membrane of the tympanum. The third case is the only one of the kind I have ever seen where there was such a collection involving and only attached to a portion of the meatus;

in that case a very distinct depression existed in the bony wall, which I referred to an atrophy from the pressure of the mass.

From the constituents of these collections and their association with inflammation it would readily occur to any one that we were dealing with a retention of the products of inflammation; but the collections once formed, they become the prominent and difficult feature in the case, and the histories of similar collections afford some curious facts, which are well worthy of further study by the microscopist and pathologist. Such histories show apparently that the collections are not always associated with distinct and well-recognized inflammation; that collections of similar constituents have been classed as new growths; that similar collections sometimes occur within the tissues instead of upon their surfaces.

Cholesteatoma of the temporal bone was formerly considered to be always an independent and primary new growth, and Troeltsch was the first to assert that, at least, many of these so-called tumors were in reality merely collections of inflammatory products consisting of collections of concentric layers of epidermis cells and occasional cholesterol crystals around a nucleus of fat and caseous pus. Wendt, some years since, made a careful study of a number of these cases of so-called cholesteatoma and similarly constituted collections, which were published in the *Archiv für Heilkunde*, vol. xiv. His conclusions were, in brief, as follows:—

(1.) In the external meatus and in the osseous middle ear there are sometimes found collections of a peculiar, usually cerumen-like, mass.

(2.) These are due to a *desquamative inflammation*, by which scales of epidermis are formed and thrown off from the mucous membrane of the osseous middle ear, the epithelium of which, during or after an inflammatory process, may assume the character of the skin and a rete Malpighii be formed.

(3.) Such masses may produce deafness by obstruction, and pain by pressure.

(4.) They may produce important changes in parts of the ear, in the petrous bone, and even in the contents of the skull by their pressure, and other troubles, perhaps, by absorption of their constituents in a state of decomposition.

(5.) Their removal is all-important.

(6.) It is not improbable that similar masses formed in the meatus as the result of a chronic inflammation may get into the middle ear when the drum-membrane is perforated, and produce similar collections in that cavity.

(7.) The cholesteatomata described as composed of collections of epidermis cells are also to be regarded as the products of a desquamative inflammation in the middle or external ear unless a thorough examination, which must be more than a simple investigation of the collection itself, proves another origin.

This paper of Wendt's is the first application of the term desquamative inflammation to the formation of these masses, and it is so descriptive of the condition that is found in many cases, that it seems to me worthy of more general adoption than it has received, as not infrequently the collection is the prominent feature in the case. Buck, in his recent work on the ear, adopts the term, and describes desquamative inflammation both of the meatus and tympanum; he also calls attention to the obstinacy of the affection, and to the very great tendency to fresh collections.

It is, however, possible that Wendt's description is not applicable to all cases of cholesteatoma: as Troeltsch has said in a criticism of Wendt's paper, it is very probable that in the cholesteatoma of the petrous bone of authors various formations have been included. Schwartz asserts that in some of the least common cases cholesteatoma, called by Virchow pearl tumor, and by Toynbee molluscons or sebaceous tumor, "is a true new growth arising from the bone, from the skin of the meatus, from the membrane tympani, or the mucous membrane of the tympanum, analogous to the cholesteatoma of other bones of the skull, the brain, or the meninges. It consists in such cases of a thin fibrous capsule which contains a substance resembling stearine, and glistening like mother of pearl, the morphological elements of which are chiefly flat cells of polygonal shape (epidermal cells), and also often, but not constantly, crystals of cholesterol in small numbers." Lucae has also found in them nucleated giant cells. In the earlier stages of these true new growths all inflammatory irritation is said to be wanting, although later there may be suppuration and a destructive tendency. The fibrous enveloping capsule seems to be their distinguishing character with absence of fat and caseous pus. The presence of giant cells does not seem to be important, as similar flat polygonal cells three or more times larger than the normal pavement epithelium of the tympanic mucous membrane are found also in the false cholesteatoma, desquamative inflammation, and Troeltsch has sometimes found these gigantic flat cells in the covering of the antrum mastoideum, usually with collections of pus in this cavity. Schwartz agrees with Wendt and explains the presence of giant cells from the fact that under a chronic purulent inflammation with defect of the drum-membrane the tympanic epithelium often assumes the characteristics of the skin, showing a rete Malpighii and epidermis.

A collection of nearly similar composition with these which we have been considering is described by Wendt in the *Archiv für Heilkunde*, vol. xv., as occurring in the membrana tympani. From his microscopic studies of the substantia propria of the drum-membrane he found it to consist of coarse and fine bundles of fibrous tissue surrounded by delicate hyaline capsules, very resistant, and covered with cells of various forms, round, oval, or star-shaped, which he considered were endothelial. Between the bundles of fibres were communicating spaces, the whole arrangement forming lymph-canals lined with endothelium. In the right membrana tympani of a man who died from typhus he found a true endothelial cholesteatoma developed from the endothelium of these lymph-canals. The macroscopic examination of the drum-membrane showed upon its inner surface a projecting hemispherical mass one and a half millimeters in diameter of a translucent gold color. The tympanic mucous membrane was swollen and hyperæmic; the membrana tympani with several small perforations thickened, and its epidermis of a dirty gray color. The tumor itself was surrounded by a connective-tissue capsule which contained hamatoidin, and was lined by a cylindrical or cubic epithelium. The substantia propria showed several cavities filled with parallel and concentrically arranged membranes, which had pressed aside the fibrous bundles; these membranes contained numerous nuclei, and among them were crystals of cholesterol and fine drops of fat, showing a retrogressive metamorphosis.

Urbantschitsch in the *Archiv für Ohrenheilkunde*,

vol. x., and Politzer in his *Lehrbuch der Ohrenheilkunde* have described similar growths in the epidermal layer of the drum-membrane under the title of epithelial growths. They occur singly or in numbers upon the external surface of the membrane, and Politzer says: develop usually during the course of chronic inflammation of the middle ear, as small round knobs which disappear spontaneously. He figures a case in which eight of these growths are distributed over a semi-circle upon the outer surface of the membrane. Politzer found in one case which he was able to examine epithelial cells, cholesterine, and molecular detritus. In all of the cases of these growths which have been described, the ear was or had been recently in a state of inflammation; no account is given by Politzer of any investing capsule in the case examined by him. The case of Wendt's, which was subjected to a most rigid microscopic examination showing it to be a true new growth, was also associated with tympanic inflammation.

Lucæ in the *Archiv für Ohrenheilkunde*, vol. vii., is very decided in his opinion that pearl-tumor, as he prefers to call it, to avoid the name cholesteatoma which might be confounded with cysts containing cholesterine, is a true heterologous growth, and quotes a case where such a tumor was found in the mastoid antrum with an intact drum-membrane, and the mucous membrane, from which, or on which, it arose, was absolutely free from every trace of inflammation or granulation. In all the other cases which he gives however, amounting to ten, there was, or had been, a chronic inflammation of long standing in the middle ear.

From what has been said it is evident that we may have large collections, composed chiefly of epidermis, of three kinds: (1) desquamative inflammation of the meatus, membrana tympani or tympanic mucous membrane; (2) pearl-tumor of the tympanic mucous membrane; (3) endothelial tumor of the lymph-spaces in the drum-membrane.

The characteristics of the pearl-tumor seem to be the enveloping capsule and the presence of heterologous tissue cells differing from those of the parent soil in being three or more times larger. In regard to the first point, the enveloping capsule, it is by no means clearly made out in a large number of the cases which have been described as true new growths; in regard to the large cells, the so-called giant cells, they are accurately described by several authors in both the true and the false cholesteatomata so that it does not seem proper to lay too much stress upon them. Of late years the evidence seems to be accumulating in favor of the inflammatory and retention theory even of the pearl-tumors.

It is, however, certain that the cavities of the external and middle ear are particularly pre-disposed to large epidermal collections, which produce symptoms in themselves, and which also by their growth may cause atrophy, caries, and inflammation of contiguous parts, and as the process by which these collections are formed is a peculiar one a distinctive name for it is desirable, and such is found in the term desquamative inflammation given by Wendt.

— It is proposed to fill one of the vacant nights of the approaching International Congress by a *fête* at the Botanical Gardens. The corporation of London will entertain the Congress at a *soirée* in the Guildhall at a cost of two thousand pounds.

THE CHARACTERISTIC APPEARANCE OF WOUNDS OF THE INTESTINES MADE DURING LIFE.

BY W. F. WHITNEY, M. D.,

Curator of the Warren Anatomical Museum.

THE difficulty, at times, with which wounds of the intestines are found while the organs are *in situ*, and the frequency with which the intestines are wounded during their removal from the body even by the most skillful examiner, renders a knowledge of the appearances presented by wounds made before death of great value to the pathologist.

The relation which the mucous coat bears to the edges of the wound is characteristic, and when carefully considered will leave little doubt as to the time when the wound was inflicted. The older writers have well described the appearance of ante-mortem wounds of the intestines, but have not sufficiently dwelt upon the importance of this relation as a diagnostic mark, while the more modern text-books seem to have passed it over entirely.

The characteristic feature of ante-mortem wounds is that the edges are covered by a protrusion of the mucous coat. A consideration of the arrangement and action of the coats of the intestine will shew why this would be expected, and a simple experiment will demonstrate it. The mucous coat is loosely connected to the muscular coats, and movable upon them to a certain extent. If all the coats of the intestine are divided the edges of the wound will gape from the retraction of the cut muscles, and the lax mucous coat is forced through the opening by the peristaltic movement as far as its attachments will permit, and curls back over the edges of the wound through the action of its elastic fibres.

This extrusion of the mucous coat can be readily seen if the abdomen of an animal is opened before the peristaltic motion has ceased, and a small cut be made into the intestine. Once over the edges of the wound the membrane is not retracted again, and if the experiment has been performed upon a living animal it becomes adherent in its new position from the inflammatory action which is set up. A few hours are sufficient for this to take place. In the case of one rabbit operated upon, only twelve hours elapsed before its death, and the adhesion was found to be quite firm.

Besides this position of the mucous coat there is a slight thickening of all the coats immediately in the neighborhood of the wound from an infiltration with serum and new cells. This was well shown in sections prepared from the edges of the wound from a rabbit that was killed thirty-six hours after operation.

Two cases in which there was a possibility that the lesions found at the autopsy might have been produced in other ways than by violence before death first called my attention to the subject.

CASE I. A man forty-five years old was admitted to the Massachusetts General Hospital thirty-six hours after having fallen the distance of two feet from a plank on which he was sitting, striking upon his buttocks, with the symptoms of great abdominal pain and constant vomiting, which he stated commenced soon after the accident. He had a double inguinal hernia which always reduced itself upon lying down, but now the one on the left side could not be entirely replaced. The day after entrance the possibility of an internal strangulation was regarded, as the symptoms had not abated,

and it was decided to operate. The patient was etherized, and the sac opened, when the bowel was found to be greatly inflamed and roughened, but could be easily replaced. The patient did not rally and died within an hour. At the autopsy there was found a general peritonitis, no appearances of strangulation and a small opening into the intestine.

It was thought that the wound might have been made at the time of the operation; but the edges of the wound being covered by the mucous coat, which is firmly adherent over them, leaves no doubt that the wound had occurred, not only during life, but also many hours before death and was a rupture caused by the fall sixty hours previous.

CASE II. The specimens were presented to the Warren Museum by Dr. F. A. Harris, Medical Examiner, who has kindly allowed me to use the case. A woman was brutally kicked about the groin and abdomen by her husband. Symptoms of peritonitis developed, and she was removed to the Massachusetts General Hospital, where she died thirty-six hours after the injury. The autopsy showed extensive ecchymosis over the upper part of the right thigh, but none of the abdominal walls. Upon opening the abdomen a general peritonitis with a dirty purulent effusion was seen. There was laceration of the omentum, and a small opening into the intestine, about four feet above the ileo-cæcal valve, was discovered while the organs were *in situ*. Upon their removal from the body another opening higher up was found and which I thought I had accidentally made in opening them. Careful examination of the edges showed that both wounds were alike and both presented the characteristic appearances of wounds occurring some hours before death, namely, the edges covered with the mucous coat firmly adherent to them and to the peritoneal surface for a short distance beyond, showing that two ruptures of the intestine were produced by the violence to which she was subjected and caused her death.

In conclusion it is to be stated that there is no difference in the appearance of wounds following rupture from violence as in the two last cases, and in wounds produced by cutting as in the case of the rabbits operated upon.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.

BY D. H. HAYDEN, M. D.

SEVENTEENTH ANNUAL REPORT BY PROFESSOR DEMME OF THE WORK DONE IN THE JENNER CHILDREN'S HOSPITAL IN BERNE DURING THE YEAR 1879.¹

FOLLOWING the statistical summary of children treated in the hospital and in the out-patient department, there is given an account, as in other years, of the author's experiments with various artificial foods for infants, as a result of which the infant's food of the "Cham Society" and that prepared by Tambur are added to the list of older preparations suitable for infants six to eight months old. Biedert's "cream mixture" proved itself useful repeatedly in obstinate cases. The counting of the blood corpuscles, with the different methods of feeding, showed an excess of the white corpuscles in children which were fed too early with starchy food, and often an easily-demonstrable

¹ Centralblatt für die medicinischen Wissenschaften, December 18, 1880.

improvement in the quality of the blood (increase of the red corpuscles) eight to ten days after changing the food, especially after placing the child to the breast. In one case there ensued a marked improvement after the transfusion of human blood with Pravay's subcutaneous syringe, two syringe-fuls being injected with an interval of three days between them. The blood was drawn into the syringe, previously warmed, from a vein, and in like manner injected. The author calls attention to the great importance of having good cows' milk, and enumerates many diseases possible to arise from the use of diseased cows (tubercular), or badly-fed cows, particularly the repeatedly-observed stomatitis aphthosa caused by the use of milk of cows fed improperly.

In a description of the relations existing between "the diphtheritis of scarlet fever" and "the pure primary diphtheritis (cynanche)" Professor Demme expresses himself in agreement with those who see therein the different diseases which can, however, in rare cases complicate each other. These latter cases he would designate as "diphtheritis of scarlet fever" as being cases of genuine diphtheria, the others, being peculiar to scarlatina alone, he would call "the catarrhal scarlatinal inflammation of the tonsils and pharynx," and "scarlatinal necrosis of the pharynx." Of unique cases particular mention is made of (1) a congenital tumor, tubercular in character, the size of a hazel nut, situated in the middle of the right hemisphere of the cerebellum, which was found in the case of an infant, female, twenty-three days old, which had been the cause of no symptoms. (2.) Case of recovery from epilepsy in a boy seven years old, of two years' duration, after the removal of a rectal polypus. (3.) Medullary carcinoma of the thyroid gland and of the left mamma in a boy five years old, the first having made its appearance in the third year, the latter in the fourth year of life. (4.) Pulsating struma in a girl seven years old, which began suddenly to grow after scarlatina, and which rapidly diminished in size, and ceased to pulsate, after the daily subcutaneous injection of one milligramme (grain $\frac{1}{100}$) of nitrate of strychnia. The residue was still further reduced in size by the injection of two to three drops of tincture of iodine into the tumor itself. In conclusion, the author gives a short summary of seven hundred and ninety-three cases of struma which came under treatment in the hospital between 1862 and 1879, of which 317 were boys and 476 girls. (5.) A congenital stricture of the œsophagus, in a girl five years old, with marked improvement through the continued use of bougies.

CHRONIC TUBERCULAR PERITONITIS.²

Professor Henoeh, at a meeting of the Berlin Medical Society, held November 24, 1880, at the conclusion of the report of a case where the disease began with pericarditis with a large effusion, was followed by ascites, and later by tubercular meningitis, and where the autopsy showed general tuberculosis, made some interesting remarks upon the subject of chronic tubercular peritonitis. He called attention to the quite frequent absence of any pain in the abdomen in this disease, and to the error of supposing that there must be tenderness on pressure in such cases. Cases undoubtedly happen where children complain of pain when strong pressure is made; but Professor Henoeh has seen many more cases where there was absolutely no

² Berliner klinische Wochenschrift, January 10, 1881.

complaint, and where the only symptom present was a progressive enlargement of the abdomen, with, finally, a protrusion of the umbilicus and dilatation of the abdominal veins. At the same time there was a continuously increasing emaciation. In the case reported, an interesting fact, observed for the first time by Professor Henoeh, was a leakage of the ascitic fluid through the umbilicus, trickling as from a sieve, and thus in part relieving the distended abdomen from a part of its contents. The discharge of peritoneal abscesses is not so uncommon through or alongside the navel, but the discharge of ascitic fluid in this way is something he had never seen before.

The author concludes with a consideration of the question whether there is such a thing as a chronic peritonitis without tuberculosis in children. He believes that there is, and reports such a case where the autopsy showed a simple chronic peritonitis, with enormous callous formations and connective-tissue growths. Other cases have been met with where there was so great resemblance to tubercular peritonitis that at first the differential diagnosis was impossible, and only at the end was this made by the fact of recovery. The children have an enlarged abdomen, which becomes more and more distended from month to month; there is no complaint of any pain, or at least it is very transitory; the abdominal veins become dilated; palpation and percussion detect a fluid, whilst examination of the lungs shows nothing abnormal. This latter is no proof against tuberculosis, for it has been shown by Rilliet and Barthelz that tuberculosis of the peritoneum and abdominal organs can exist without extending to the lungs. When, therefore, the lungs are free this does not show that the peritonitis is a non-tubercular one. In these cases there is much to make one think of tuberculosis, especially as the children become more and more emaciated and wretched. Professor Henoeh remembers five or six cases which recovered, one in particular, where the abdomen became so distended, and where the child became so wasted with hectic fever, that a fatal prognosis was pronounced, and yet recovery took place. Such cases Professor Henoeh would not speak of as tubercular peritonitis. It is possible that tubercles in the peritoneum may heal; but he would prefer to assume that in children who are not tuberculous and who come from perfectly healthy stock, a simple chronic peritonitis can take place, the cause of which is often not ascertainable.

The treatment in the author's cases consisted of long-continued (weeks, months) hydropathic wrappings of the abdomen. The abdomen was also painted with tincture of iodine, one fourth at a time. With regard to the alleged danger, in employing iodine with children, of producing albuminuria, the author has only to say that this never happened in his cases, and it cannot therefore be a so common accident as the French would make it out to be. Internally nothing was given but decoction of cinchona, alone or with acetate of potash; later iron. Bran baths were also employed. Thus the disease was left principally to the curative powers of nature, and the treatment had little to do with the recoveries.

PILOCARPINE IN SCARLET FEVER AND DIPHTHERIA.

The author's first contribution on this subject appeared in the *Revue Médicale de la France* (Paris), in the *Children's Hospital Bulletin*, No. 1, 1877, p. 1. It was also published in the *Revue Médicale*, xxv, Boud, H. H. 3 and 4, March 31, 1878.

appeared in 1877, when the remedy had been used by himself in thirty-three cases.²

The present very instructive and interesting article may be looked upon as a further contribution in the same direction, the author's experience having been enlarged by forty-two new observations. The conclusions arrived at are summed up at the end as follows:—

(1.) The different statements as to the efficacy of muriate of pilocarpine is in part explainable by the not yet separated presence in greater or less quantity of a second alkaloid of the jaborandi leaves, "jaborin." The physiological action of the latter, according to Harnak and Meyer, resembles that of atropia. The action of the former is more like that of nicotine.

(2.) The initial dose for subcutaneous injection should be from the end of the first year to the end of the tenth year 0.005 grammes (one twelfth grain), before the end of the first year 0.001 to 0.0025 grammes (one sixtieth to one twenty-fourth grain). When found to be well borne the dose can be used of double size, and several times daily. When administered internally the dose must be twice or three times larger, dissolved in distilled water, fifty to seventy-five grammes (about two ounces) with the addition of gum acacia if there is a disposition to diarrhoea.

(3.) Where the indications for a rapid effect are urgent (in uræmia, croup, etc.) the subcutaneous injection is much to be preferred, where a continuous and lasting effect is wanted the continuous and divided dose through the day is more appropriate.

(4.) Vomiting or symptoms of collapse that sometimes follows the subcutaneous injection of pilocarpine can, as a rule, be prevented by a previous administration of cognac, wine, strong coffee, or tea, likewise by a subcutaneous injection of ether. The same employment of stimulants is recommendable when the medicine is given internally.

(5.) By moderate doses, and when employed only for a short time, no weakening effect upon the heart will be noticed. When larger doses are given several times daily, over 0.01 (one sixth grain), and when the treatment is continued for two or three weeks, there ensues a diminution of the energy of the heart's contractions, manifested by irregular fluttering pulsations, with a sinking of the temperature, and the symptoms of a general collapse. As a result of the weakness of the heart there can ensue a transitory loss of consciousness and the Cheyne-Stokes respiration. With a cessation of the pilocarpine and the administration of stimulants these symptoms are rapidly removed.

(6.) The susceptibility to the action of pilocarpine varies very much in different individuals, also in the same individual at different times. There sometimes exists a vicarious relation between its diaphoretic and sialogogue action. As a part symptom of the general stimulation to the secretions, a marked expectorant effect is observable, especially, in certain cases, an abundant secretion of the nasal, laryngeal, and tracheal mucous membrane.

(7.) Another effect, though not constant, which takes place either at the height or at the end of its diaphoretic action, is an increase in the secretion of urine. The cause of the diuresis is to be found in the increased blood pressure caused by the pilocarpine, and the rapidity of the blood current in the vessels of the glomeruli, and perhaps also in the action of the

² Vide this JOURNAL, January 17, 1878.

medicine upon the innervation of the vessels of the kidneys, or even upon the central nervous system (floor of the fourth ventricle).

(8.) The erythema extending over the greater part of the body, which is occasionally observed at the beginning of the sweating, is due to the irritation, produced by the pilocarpine, of the peripheral system of vessels, especially of the capillary net-work of the skin.

(9.) In those cases of scarlatina where there is a delay in the appearance of the eruption, or where it is incomplete, and at the same time where there take place dangerous cerebral symptoms, as sopor, convulsions, etc., an energetic diaphoresis effected by pilocarpine, by subcutaneous injection, will remove in the quickest way from the blood the scarlatinal poison circulating therein, will bring out the eruption more completely, generally in an intense degree, and in this way most effectually put a stop to the cerebral symptoms.

(10.) Pilocarpine has no power to ward off or prevent the appearance of nephritis whether in an earlier or later stage of the disease by its employment regularly from the beginning or during the stadium floridum. On the other hand, it is an effectual remedy against dropsy as a symptom. The course of the kidney affection appears also to be a more favorable one under its use.

(11.) An attack of uræmia, in the course of a scarlatinal nephritis, in the rapidly developing forms of an extensive glomerulo and interstitial inflammation, cannot be prevented by the employment of pilocarpine. In cases of less severity and running a slower course a timely and continuous diaphoretic and diuretic action of pilocarpine is competent to ward off attacks of uræmia threatening to life, and likewise to cure them quicker than any other remedy hitherto employed.

(12.) As a part symptom of the general stimulation of the secretions is to be noted the expectorant action of pilocarpine by increasing the secretions of the mucous membrane of the respiratory tract, and a thereby liquefying of tough sputa. This effect contributes towards a more rapid recovery from catarrhal laryngitis, from genuine non-infectious and infectious croup, from catarrhal pneumonia, etc., also by its emetic action—like any other powerful emetic, though more lasting,—to the removal of symptoms of laryngo and tracheo-stenosis immediately threatening life. In genuine diphtheria, and in the so-called diphtheritic disease in scarlet fever, we observe, as an analogous effect, a more rapid and spontaneous loosening of the diphtheritic membrane and of fibrinous infiltrations of the mucous membrane. No specific action upon the infectious matter of the disease itself was demonstrable in the observations made by the author.

—The business of the London International Congress will be conducted in sixteen sections, and the arrangements of the general meetings include addresses to be delivered on Wednesday by Sir James Paget; on Thursday by Professor Huxley, who will take as his subject the connection of the biological sciences with medicine; on Friday, in German, by Professor Volkmann on modern surgery; on Monday, by Professor Raynaud, in French, on skepticism in medicine in past and present times; on Tuesday, by Surgeon Billings, on medical literature.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. JOHN G. BLAKE.

REPORTED BY DR. JOHNSON, HOUSE OFFICER.

I. INTESTINAL OBSTRUCTION.

P. D., aged thirty-eight, entered the hospital December 22, 1880, with the following history: Has had no defecation for four weeks. Constipation commenced the trouble, and the defections grew less in amount and after a few days there was no desire to have a movement from the bowels; knows of no cause; thinks his trouble is due to dyspepsia and constipation, the latter symptom having been present for several months; has had more or less pain in the abdomen for the past four weeks; nausea and vomiting for the past two weeks; no appetite; nasty taste in mouth, which feels dry; no thirst; tongue dry and slightly coated; has lost flesh and strength; no swelling of feet or legs; temperature 99° F.; pulse 90; respiration 36; he was given the following. *R.* Sulphate of morphia, one tenth grain; extract of belladonna, one third grain. *M.* Take in pill form every three hours. Abdomen to be covered with hot flaxseed poultice. Beef extract and broth by mouth.

P. M. Retention of urine. Catheter passed and 3xxi. of urine withdrawn.

December 23d. Increased pain in abdomen for past six hours; catheter passed, and 3xii. of urine withdrawn, and pain relieved; temperature 97° F.; pulse 82; patient's general condition fair.

December 24th. Abdomen distended and tympanitic; intestines aspirated and tympanitis relieved; pulse weaker; temperature normal. *R.* Brandy 3ss. every two hours.

December 25th. Patient very comfortable; little or no pain during the night; complains of sleeplessness; rectal tube passed into bowels and a large amount of warm suds injected without any apparent effect.

December 26th. Abdomen again tympanitic; tympany relieved by aspiration of bowels. *R.* Brandy, 3ss.; beef extract, 3ii. *M.* Taken by rectum every two hours; milk punch ad lib.; pulse 136; temperature 103.

December 27th. *R.* Quiniae sulph. gr. v. t. i. d. by rectum.

P. M. Temperature 101° F.; pulse 126; retains enemata fairly well.

December 28th. Patient stupid and slightly narcotized; omit ordered pill. *R.* Brandy, 3i. every hour.

December 29th. Delirium during the night; complains of pain in abdomen; resume the morphia and belladonna pill, one every three hours; temperature normal; pulse 105; rectal tube passed, and between five and six ounces of spirits of turpentine in two quarts of warm suds injected into the bowels. From this injection there resulted a very large defecation, which was hard in consistency and of a slaty color. At this time a great deal of gurgling was heard in the abdomen, though no gas escaped per anum.

Two hours after the above injection patient had a similar though smaller defecation. He is much ema-

ciated and failing fast; abdomen distended and superficial veins full; occasional retention of urine; the right parotid gland, which was slightly swollen yesterday, has increased to the size of the fist, and is hard and tender; patient has vomited but four times since entrance.

r. m. Ringing in ears; omit quinia.

December 30th. Patient slept well during the night; somewhat under the influence of opium; omit pill of morphia and belladonna; abdomen distended with air; distention relieved by aspiration; redness, swelling, and induration over nose and to an inch on either side; especially marked about the right eye.

Strained gruel to be added to ordered enema.

Six *p. m.* Temperature 102.8° F.; pulse 128; patient has failed a great deal during the past twenty-four hours; champagne and brandy, *p. r. n.*

December 31st. Temperature 100° F.; pulse 118; right eyelid so swollen that patient cannot open it; delirium during the night. *R.* Sulphate of morphia, one tenth grain; extract of belladonna, one tenth grain. *M.* Take every three hours in pill form. Patient's tongue has gradually become dry and brown.

Twelve *m.* Pulse scarcely perceptible. Has not retained enemas for past twelve hours; rapidly failing; died at 1.30 *p. m.*

II. CONSTIPATION.

E. R., aged twenty-two, entered the hospital January 20, 1881, with the following history: well until three months ago, then menstruation ceased; thinks she is pregnant; menstruation had always been regular up to that time; vomiting since menstruation ceased; most at night and very early in the morning; has had no defecation for twenty-nine days; complains now of headache, pain in eyes and breast; tongue slightly coated; no trouble with micturition; appetite good; has lost flesh and strength; temperature 98° F.; pulse 100; has always been constipated; on one occasion, previous to the present trouble, she went without a defecation for five weeks; complains of flatulence; the following was given per rectum: *R.* Ol. terebinth, $\text{℥}\text{iii}$.; ol. ricini, $\text{℥}\text{iss}$.; aqua, *℥j*. *M.* To be repeated three times at intervals of two hours.

R. Sulphate of magnesia one drachm in half a tumbler of water every hour for six hours, provided there is no defecation before the six doses have been taken. The first dose to be given two hours after the last enema.

January 22d. All the enemas were given, and after two doses of the sulphate of magnesia patient had a large defecation.

January 24th. Vomiting since early this morning; twenty grains of chloral were given per rectum and vomiting was relieved.

Nausea and vomiting commence every morning about five o'clock.

Patient ordered twenty grains of chloral per rectum every morning at 4.30 o'clock. Had no return of the nausea or vomiting while she remained in the hospital.

January 27th. Discharged well.

III. DIPHTHERIA.

The following line of treatment was carried out in the cases reported below:—

Steam impregnated with carbolic acid was allowed to enter the room freely.

Whisky was invariably given, the dose, and fre-

quency of repetition, depending on the age and the condition of the pulse.

The pharynx, tonsils, soft palate, and uvula were thoroughly painted four times a day with tincture of ferri chloridi.

The tincture of ferri chloridi was given internally four times a day.

Good generous diet was given, the bowels were kept open, and everything was done to make the patient as comfortable as possible.

CASE I. *M. T.*, aged eighteen, entered the hospital January 5th, with the following history: Difficult deglutition for two weeks; one week ago was obliged to give up work and go to bed on account of weakness; nausea and vomiting for past seven days; has slight cough; no trouble with micturition; bowels constipated.

January 5th. Diphtheritic membrane covers whole of left tonsil.

January 9th. Diphtheritic membrane now covers uvula.

From this date there was steady improvement. On the 15th inst. patient was allowed to sit up, and on the 17th inst. patient was discharged well.

On entering the temperature was 100.8° F.; the pulse 120. Both temperature and pulse reached the normal line four days after patient was admitted.

CASE II. *E. C.*, aged five, entered the hospital January 15th with the following history: Throat has been swollen and deglutition difficult for past three days; pain in back; feels weak; tongue coated; bowels regular; no trouble with micturition; temperature 102.2° F.; pulse 120; diphtheritic membrane covers both tonsils, and uvula.

January 19th. Membrane disappearing.

January 21st. Membrane entirely disappeared.

January 22d. Patient taken home against advice. The temperature reached the normal line on the third day after admission, and the pulse on the fourth day.

CASE III. *J. N.*, aged twenty-five, entered the hospital January 15th. Four days ago was taken sick with severe pain in abdomen, head, and back; two days since felt weak and first noticed difficulty in deglutition; tongue heavily coated; bowels regular; no trouble with micturition.

Glands at angles of lower jaw much swollen; tonsils very much enlarged and covered with a slough; diphtheritic membrane covers soft palate and uvula.

January 30th. Membrane has disappeared.

January 31st. While up thinks he "took cold"; intense injection of pharynx and tonsils.

Throat no longer painted with tincture of ferri chloridi, but nitrate of silver, thirty grains to the ounce of water, substituted.

February 5th. Discharged, well.

The temperature reached the normal line on the fifth day after admission; the pulse never rose above 90.

CASE IV. *S. R.* aged six, entered the hospital January 20th. Sick two days; feels weak; headache; neck somewhat swollen; deglutition painful; bowels constipated; no trouble with micturition; temperature 105° F.; pulse 155. Membrane covers right tonsil.

January 22d. Membrane has disappeared.

February 2d. Discharged well.

Temperature and pulse gradually fell from the day of entrance until they reached the normal line.

CASE V. *L. L.*, aged twenty-two, entered the hospital January 20th. Says she had diphtheria last June.

Present sickness began one day ago with headache, backache, pain in limbs. Neck somewhat swollen. Patient feels weak; bowels constipated; no trouble with micturition; tongue coated with brown fur; some nausea and vomiting.

January 21st. Nausea and vomiting this morning at 7.30. At eight o'clock A. M. chloral, twenty grains, given per rectum; no vomiting after nine o'clock A. M.; membrane covers right tonsil; pharynx considerably injected; tonsils enlarged and injected.

January 22d. Membrane has disappeared.

January 26th. Discharged, well.

The temperature never rose higher than 100° F., and on the fifth day it reached the normal line. The pulse, which was 90 on admission, gradually fell to the normal line.

CASE VI. L. R., aged twenty-four, entered the hospital January 20th. Sick one day. Sickness commenced with a chill, headache, pains in back, and difficult deglutition. Appetite good; bowels constipated; diphtheritic membrane covers both tonsils.

January 22d. Membrane has nearly disappeared.

January 27th. Membrane has entirely disappeared.

January 31st. Discharged, well.

On entrance the temperature was 103.8° F.; on the third day it had reached the normal. The pulse on entrance was 120; on the third day it had reached 80.

CASE VII. I. B., aged twenty-three, entered the hospital February 13th with the following history: Subject to sore throat. Present sickness commenced ten days ago with painful deglutition; five days later headache commenced; obliged to go to bed on account of weakness; since being in bed has had pains in joints; tongue heavily coated; bowels constipated; no trouble with micturition; appetite good; temperature 100° F.; pulse 88; tonsils much swollen, especially the right one; pharynx, uvula, and tonsils much injected; a somewhat disorganized membrane scattered in patches over right tonsil; a membrane the size of a thumb-nail on posterior wall of pharynx; a membrane the size of little finger-nail on left tonsil.

February 16th. Membrane has entirely disappeared. Patient discharged, well, at own request.

Temperature never rose above 98.4° F.

CASE VIII. C. D., aged three years and six months, entered the hospital February 17th. Glands of neck much swollen; patient very weak; tongue heavily coated and dry; temperature 102.5° F.; pulse 130; respiration 60; patient has been sick ten days; diphtheritic membrane covers nearly the whole pharynx, both tonsils, and uvula.

February 18th. A copious discharge from nose; respirations free, but fifty to the minute. Throat atomized every few hours with the following: \mathcal{R} Sodæ salicylatis two grains, tr. ferri chloridi \mathfrak{z} i., aquæ \mathfrak{z} ss. M.

February 19th. Pulse continues good; respirations less rapid than yesterday. \mathcal{R} Quinæ sulph. gr. ss. every three hours.

February 20th. Pulse rapid and weak; nostrils covered with dry mucus; passed a very restless night.

February 21st. Pulse strong, less rapid; respirations 38; coarse mucous râles heard throughout both lungs front and back. \mathcal{R} Ammo. carb., grs. ss., syr. senegæ, gtt. xx., aquæ menth. pip., \mathfrak{z} i. M. Take every three hours.

February 22d. Four greenish, watery dejections to-day. \mathcal{R} Tr. catechu., gtt. x., every three hours.

February 23d. Condition remains about the same. Five dejections to-day.

February 24th. Pulse rapid and feeble. Quinia increased to one grain every hour.

February 26th. Patient rapidly failing.

February 28th. Dead.

The temperature did not fall below 102° F. except on the morning of the fifth day, when it fell to 99.6° F., but that evening it was 103.8° F., and gradually rose until the day the child died, when it was 105.4° F.

CASE IX. A. H., aged six, entered the hospital February 18th. Sick four days with sore throat. Three days ago was languid and suffered on account of difficult deglutition; weakness and difficulty in swallowing still continue; diphtheritic membrane extends over posterior portion of right tonsil, covers whole of uvula and left tonsil.

February 19th. Membrane has not extended. Quinia sulph., one half grain, every three hours, was given. Membrane over right tonsil extending to uvula.

February 22d. Membrane over right tonsil size of little finger-nail; uvula clean; child bright and playful.

February 24th. Membrane has entirely disappeared.

March 2d. Discharged, well.

The temperature never rose above 100° F., and the pulse, which was 120 on entrance, on the third day was normal.

CASE X. J. E., aged six, entered the hospital February 18th. Sickness commenced last night with sore throat. Both tonsils swollen and inflamed; diphtheritic patch the size of the little finger-nail on the right tonsil.

February 21st. Membrane on both tonsils the size of the thumb-nail, with a narrow band over uvula and soft palate.

February 22d. Membrane very much diminished in size; a very small patch on right tonsil the size of a split pea.

February 23d. Membrane entirely disappeared.

February 28th. Discharged, well.

The temperature never rose above 101.2° F., and on the third day it was normal. The pulse, on admission, was 115, but on the third day it was normal.

CASE XI. E. G., aged twenty-five, entered the hospital February 20th. Sickness commenced five days ago with a chill, headache, and pain in the back. Right knee and leg swollen and painful, no pain in ankle or foot; bowels regular; no trouble with micturition; appetite poor; tongue dry, cracked, and covered with brown coating; slight difficulty in deglutition; membrane the size of a split pea on uvula, extending in a narrow line to both tonsils; temperature 101° F.; pulse 88; varicose condition of veins of right leg. Leg enveloped in a hot flaxseed poultice.

February 22d. Membrane covers uvula; tonsils clean.

February 26th. Membrane on tip of uvula, and a small patch the size of a split pea at either angle of its base; leg much swollen, and at points fluctuation can be detected.

February 28th. Membrane occupies only tip of uvula.

March 1st. Membrane has entirely disappeared; abscess in leg opened, and two ounces of pus discharged, giving much relief.

March 6th. Swelling and inflammation of leg much reduced.

March 12th. Discharged, well.

The temperature reached the normal line on the fourth day. The pulse never rose above 91.

CASE XII. K. S., aged thirty-five, was taken sick four days ago with headache, pain in back, a chill, and difficult deglutition. Bowels regular; no trouble with micturition; appetite poor; tongue heavily coated; right tonsil much enlarged; tonsils, uvula, and pharynx much injected; diphtheritic membrane the size of a thumb-nail over right tonsil.

March 4th. Membrane has extended to posterior part of right tonsil.

March 7th. Membrane much reduced in size.

March 9th. Membrane the size of a small lozenge.

March 11th. Membrane has disappeared.

March 18th. Discharged, well.

On the fourth day the temperature reached the normal. The pulse, which was 120 on entrance, was 90 on the third day, and never went higher.

IV. TWO CASES OF AMENORRHOEA.

These two cases seem to illustrate one of the recognized causes of amenorrhoea, namely, emigration.

CASE I. A. R., aged seventeen, unmarried, entered the hospital December 15, 1880. Menstruation began at the age of sixteen; was always regular every four weeks; flowed six days; only a slight headache the first two days of the flow. Mother died of phthisis. Always enjoyed good health. Sailed from Ireland last May; came by steamer; had a pleasant passage. Seven days before leaving Ireland was unwell, and has not menstruated since. Has a great deal of headache. Electricity was applied inside cervix uteri every day. She was given the following: R. Mistura ferri comp. ℥ii. t. i. d. R. Ext. gossypii ℥i. at night.

January 13th. Epistaxis every day for past three days.

January 28th. Menstruation commenced this morning.

February 1st. Ceased flowing this evening. While unwell the patient was kept in bed, and was not allowed to get up until three days after the flowing ceased.

CASE II. M. H., unmarried, entered the hospital January 17, 1881. Menstruation began at the age of eighteen; was always regular every four weeks; flowed two to three days; always had considerable pain; amount of blood lost was very small. Always enjoyed good health. No family history of phthisis. Sailed from Ireland May 15, 1880; came by steamer; had a pleasant passage. Was unwell last April 26, 1880. For the past three months has had headache most every day. Twice since last menstruation has had slight epistaxis. Electricity was applied inside cervix uteri every day, and the following medicine was given: R. Ferri sulph. gr. iiii. pulv. capsici. gr. i. quinine sulph. gr. i. ext. nux vomice gr. ss. M. Taken in pill form, twice after each meal. R. Ext. gossypii ℥i. at night.

January 26th. Flowed a little to-day.

January 31st. Pain in lower part of abdomen; tenderness on pressure over lower part of abdomen, especially marked over left ovarian region; severe headache; pain in left breast. Mustard paste applied on inside of thighs from knees to vulva.

February 9th. Pain in right breast and in lower part of abdomen. A mustard paste was applied to inside of thighs from knees to vulva. Patient had a hysterical convulsion during the evening. The pill ordered the 17th inst. was omitted, and the following

was substituted: R. Tr. aloes et myrrh. ext. ergot fl. aa gtt. xx., vini ferri ℥i. M. Taken t. i. d.

March 11th. Menstruation appeared. The flow continued four days, and was quite free. Patient was not allowed to get out of bed until two days after menstruation ceased.

In Case I. the pelvic organs were in a normal condition.

In Case II. the pelvic organs were normal except that the uterus was retroverted in the second degree, and the fundus was to the left side of the pelvis.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. T. CABOT, M. D., SECRETARY.

MARCH 21, 1881. DR. J. ORNE GREEN read a paper¹ upon

DESQUAMATIVE INFLAMMATION OF THE EAR.

DR. C. J. BLAKE said that the thoroughness with which the pathology of the subject had been treated by Dr. Green left very little room for discussion, and that remarks must therefore be necessarily confined to a citation of cases in further illustration.

Practically considered the subject is one of considerable importance to the general as well as to the special practitioner, as it is for relief from deafness caused by accumulation of cerumen that patients most frequently apply to the family physician, and in any one of these cases the ceruminous accumulation may merely mask the principal cause of the trouble, and in place of a comparatively innocent obstruction, readily soluble in warm water, and easily removed by syringing, there may be found the masses of laminated epithelium described by Dr. Green, entirely insoluble in water, and affording no adequate hold for the forceps when attempt at extraction is made by that means; this is especially the case when the centre of the mass has become hardaceous. The difficulties attending the removal of a mass of this character are considerable, not only because of its consistency and insolubility in water, but also because of the tendency to rapid congestion and swelling of the lining of the canal as the pressure caused by the mass is relieved by its piecemeal removal. Under these circumstances the fatty character of the centre of the mass may be turned to account by boring into it with a cotton-tipped probe dipped in a strong potash solution, the result being the formation of a soap, which is easily removed by syringing; the alternate application of potash and warm water may be repeated until the centre of the mass is washed away, when it is comparatively easy to remove the investing layers of epithelium by means of the forceps.

THE CHARACTERISTIC APPEARANCE OF WOUNDS OF THE INTESTINES MADE DURING LIFE.

DR. WHITNEY showed some specimens of wounded intestines, and explained and illustrated the method of determining by post-mortem examination whether these were produced during life or not. His paper is published on page 54 in this issue.

In answer to a question Dr. Whitney said that in case of rupture from ulceration the protrusion of the

¹ See page 54 of this number.

mucous membrane would not occur because in these cases the mucous membrane is extensively destroyed and fastened to the muscular coats by inflammation before the outer coats are ruptured.

DR. MINOT said that the question whether a perforation had occurred before or after death, recalled the case of a historical personage, in which the eminent Dr. Littré diagnosed the disease nearly two hundred years after the patient's death.¹

Henriette d'Angleterre, sister of Charles I., who married the Duke of Orleans, brother of Louis XIV., died suddenly June 30, 1670, of poison, as was supposed at the time, and has been generally believed since. On the afternoon before her death, after dinner, the duchess, according to her custom, called for a glass of chicory water, which she had no sooner drunk than she was seized with agonizing pain in the pit of her stomach. Collapse accompanied by vomiting followed, and she died in nine hours. Dr. Littré chanced to find, in the *Bibliothèque Nationale*, the official report of the autopsy, in which it is stated that the stomach was healthy except that a small hole was noticed in the anterior wall *which was supposed to have been made with the scissors*. The cavity of the peritoneum contained turbid serum, soft lymph, and other signs of peritonitis, besides some castor oil, which had been administered to the patient before death. No satisfactory explanation of the death was furnished by the examination, but Dr. Littré justly remarks that the case was evidently one of perforating ulcer of the stomach, and that the signs of peritonitis, along with the presence in the peritoneal cavity of the contents of the stomach, prove that the opening occurred before death.

DR. MINOT also asked leave to read the following communication from Dr. George W. Snow, of Newburyport, which was of interest in relation to the absence of signs of external injury in the case reported by Dr. Whitney:—

On Monday, December 27, 1880, the boilers connected with a large shoe factory in Newburyport exploded, killing three men instantly; a fourth victim died from his injuries thirty-five hours after the accident. The following account of two autopsies may be of interest:—

CASE I. John R. B., thirty years old, was employed in a shoe shop, a large, three-story building, situated about one hundred feet south from the boiler house. Immediately after the explosion he was found in the second story of the building, lying on the floor, dead. On removing the clothing from the body no marks or bruises were found except two abrasions over the left breast. On opening the thoracic cavity I found a fracture of the sternum. A piece about four inches long was separated from its attachments to the clavicle above, and broken obliquely from above downwards. Portions of the cartilages of the second, third, and fourth ribs of the right side, and of the second and third ribs of the left side were broken. On removing the sternum I found the pleural cavity filled with blood, the amount estimated to be about twenty-four ounces. The pericardium was ruptured, and the heart literally torn to pieces. The right and left auricles and right ventricle were ruptured; the left ventricle alone remained intact. The left pectoral muscle was

bruised to a pulp and infiltrated with blood, though the skin was not broken externally, and the only marks about the seat of injury, or, indeed, on the whole body, were the two slight abrasions above mentioned. The lungs and abdominal organs were found in a healthy condition.

CASE II. Oscar S., eleven years old, was playing in a wooden building one hundred and fifty feet from the boiler house. I saw the boy within half an hour after he was injured, and found him extremely pale, pulseless, with short and difficult breathing, though perfectly conscious. He retained consciousness until within six hours of death, which took place thirty-five hours after the injury.

Autopsy fifteen hours after death. Rigor mortis well established. There was a bruise over the right eye, and evidence of a blow beneath the right scapula. On opening the abdomen I found the cavity filled with a bloody fluid, and on removing the liver discovered a deep fissure at the upper border of the right lobe, also a superficial transverse fissure about three inches below the deep one. The other organs were in a healthy condition.

DR. POST showed some DECALCIFIED CHICKEN-BONE DRAINAGE TUBES. These were soft and pliable, and were prepared by the method of Dr. Macewen, of the Glasgow Infirmary.

The tibiae and femora of fowls are scraped and soaked in diluted hydrochloric acid (one to five) until they are soft. The articular extremities are then cut off with a pair of scissors, and the contents of the medullary cavity are pushed through. They are re-introduced into fresh dilute acid, and left until they are somewhat softer than is desired, as they afterwards harden somewhat in the carbolic solution. They are then soaked in carbolic acid and glycerine (one to ten) for fourteen days, when they are ready for use. They are then translucent and elastic, and in contact with granulations are absorbed in about eight days.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. E. SWAN, M. D., SECRETARY.

A CASE OF HYSTERO-NEUROSIS.

DR. BIXBY read the case, which was published in the number of the *JOURNAL* for June 30, page 606.

DR. SINCLAIR remarked that he had not taken interest in this class of cases, that he avoided them. He had found in the male sex symptoms not differing from those of the female.

DR. C. E. STEDMAN asked Dr. Bixby if he could judge what would have been the result in his case if local treatment had not been employed, and stated that he now had the case of a *man*, who had been too actively engaged in business, with pain in the back, weight at the top of the head, numbness of the spine, and other symptoms like those complained of by women with cervicitis, flexions, etc.

DR. HOSMER asked Dr. Stedman if different causes produced the same results, namely, overwork in the man and nothing to do on the part of the woman.

DR. LYMAN said he agreed with Dr. Minot that the patients required to be "bullied," but by some other than the family physician. He was aware of several instances where such treatment as would not

¹ Henriette d'Angleterre, Belle Sœur de Louis XIV., Est Elle Morté Em poisonnée? Par E. Littré (*La Philosophie Positive*, September, October, 1867, Paris).

have been submitted to from the family physician, had been for the time being very effectual. Dr. Lyman's own experience was that patients relapse on return to the freedom and indulgences of home; but in one instance in which he could do nothing with his patient this Philadelphia treatment had great influence, and she was permanently cured. Hystero-neurosis, he said, applied to cases of reflex action, where there is some generally unrecognized local disease, the cure of which is followed so suddenly by relief of the reflex and apparently principal disorder as to make it probable that the local disease was the chief factor in the general condition. There were, in fact, a great many cases where physical disturbance caused no local symptoms, but the cure of which gave immediate relief to the nervous disturbance in perhaps distant organs. Dr. Lyman referred to a patient with retroluxion, who every month for a few hours had pain in the back of her head and a boring pain through the temples. When the uterus was retroverted the pains became more severe, — once so severe as to make it quite a serious matter, — while restoration of the uterus gave immediate relief. Another case was one in which a peculiar cough, resisting treatment by himself and others, was immediately relieved on his discovering and rectifying a displaced uterus. In this case the cough continued for many weeks. A peculiarity of it was that it came only at night, keeping the patient awake till two or three o'clock in the morning. Dr. Lyman referred to the analogy of ear-cough, caused by some conditions of the ear, and relieved by local treatment, such as syringing out the meatus, or blowing out the middle ear. He gave the case of a patient with cough and dyspepsia, who had lost the ability to walk. A pessary relieved the cough and dyspepsia, and restored the locomotion, and that so suddenly after long and ineffectual treatment of other kinds as to make the cause and effect perfectly apparent.

Dr. Hosmer said there were two classes of cases which should be kept distinct, and asked if exercise were the cure for all. He remarked that broken-down women break down slowly and recover slowly. His plan had been absolute rest, good diet, making comfortable, passive exercise, and these could be instituted early. Bullying he thought better adapted to those cases which are purely hysterical, persons thinking of themselves being likely to have exaggerated estimates of the importance of their own symptoms and sensations. He insisted that the difference between these two classes should be carefully borne in mind.

Dr. Lyman said there was a large class of cases with symptoms which are traceable to local disturbance, hystero-neuroses, distinct from hysterical asthma, as decidedly reflex as the vomiting of pregnancy.

Dr. Blake remarked that investigations upon subjects of uterine disease had thrown much light upon the cause of hysteria. He referred to the case of Miss H. Wostenholm, who had made the circuit of all the hospitals, here and abroad, and had been the subject of treatment in most of them. It was supposed she had a phantom tumor. Etherization caused her abdominal swelling to disappear. A corset was once employed to compress the abdomen, but the woman declared the tumor was still there, resisting the corset. She was once the subject of an exploratory incision. She finally committed suicide, and an autopsy made by Dr. Blake and Dr. Bixby revealed both ovarian and uter-

ine disease, — more than she was credited with during life.

PLURAL BIRTH WITH COMPLICATION.

Dr. Brown reported a case of twins occurring in a primipara, a small person, twenty-five years of age. The first child was delivered by the head, the occiput at the left acetabulum. On making an examination the second child was found presenting by the lower extremities, one foot being recognized through the membranes within the os. After a few minutes' delay the membranes were ruptured, and a foot brought down. An attempt to bring down the other foot was unsuccessful, from some impediment which could not at that time be determined; but on bringing the breech to the external opening the cord was found tightly stretched from the umbilicus to the ankle, round which it passed. The knee was pressed firmly against the breast. On making careful examination no trace of rupture of external organs was found. The uterus contracted somewhat slowly. The placenta were united by their edges, the cords entering at a distance of three inches.

Recent Literature.

Minor Surgical Gynecology. A Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice. By PAUL F. MUNDÉ, M. D. New York: William Wood & Co. 1880.

Despite the numerous works on gynecology which have of late appeared, Dr. Mundé's book enters a field hitherto unoccupied, for the minute details of the manipulation necessary to examine and treat the everyday cases of the general practitioner can receive but the most limited attention in a general treatise on the diseases of women, and with this the physician who has had no special training for such work is dissatisfied. It is, then, just how to deal with ordinary cases that it is the purpose of the author to set forth. We recognize the fact that this is best accomplished by practical clinical instruction, a method, however, often impossible, and whose best substitute must be a clearly defined, minute, and well illustrated description of the processes. This is abundantly furnished in the volume before us.

Owing to cheapness of paper and printing the book is far less attractive in its appearance than some of those which have recently preceded it. But one becomes gradually tolerant of this, and perhaps the lessening in expense to the practitioner may be a sufficient offset to him.

The modifications of introducing and holding the Sims speculum are, we think, less desirable than the method followed by Sims and Emmet. We have found that the inexperienced nurse, or the friend of the patient called in for the occasion, succeeds best by holding it in the modified method here described, but that the trained nurse who has learned to extend the hand properly after the original method of its use, receiving the weight of the speculum and thereby the resistance of the perineum on the hand and wrist, has the instrument in much steadier control, and is able to continue it for a longer time. The figure of the modified method on page 76 seems confusing, apparently requiring the patient to lie in the right instead of the usual left, semi-prone position, in order to bring the right and left hands, as shown, to their proper places.

The method of seizing the anterior lip of the cervix (page 79) by hooking the tenaculum into the endocervical membrane must cause more pain than its introduction into the vaginal mucous membrane covering the cervix.

The position for examination shown as the correct one (Fig. 60) could, in our judgment, be improved by placing the patient more diagonally upon the table, that is, by moving the head, right shoulder, and arm farther to the edge opposite that where the hips are. In the figure the hips are right, but the shoulders are too near the centre of the table.

We cannot at all agree with the author in his preference for the introduction of the sound by the sense of touch. In the hands of the expert there is little or no objection to it, but Dr. Mundé's book is emphatically, he says, designed for the general practitioner, and by the general practitioner we consider it much safer that the probe should be used for all purposes except the determination of the calibre of the canal; even then its use should be preceded by the passage of the probe, and the sound then curved to correspond to the probe. Both these instruments are unquestionably most safely used through the Sims speculum. With the patient on the back the sound passed into the uterus by the ordinary practitioner offers too great a temptation to test the mobility of the organ. Violence may thus be done to the endometrium, or, worse still, inflammatory action outside the uterus be established. Any question as to the mobility of the uterus is most safely settled by bimanual examination.

The author's treatment of the subject of pessaries. Section XII., is admirable, and a close observance of the rules given for their use and care would, we are sure, lead to much greater efficiency in the cases requiring them.

A Text-Book of Practical Histology, with Outline Plates. By WILLIAM STIRLING, M. D., Professor of the Institutes of Medicine in the University of Aberdeen. Philadelphia: J. B. Lippincott & Co. London: Smith, Elder & Co. 1881.

This is a handsome quarto volume containing thirty lithographic outline plates, and in outward appearance, at least, differs widely from the numerous practical histologies that have appeared in the last few years. The purpose of the work, we are told in the preface, is a double one: "first to give plain, definite, and precise directions for the preparation and examination of the animal tissues; and, secondly, to ensure that the student executes a drawing of the majority of the microscopic specimens which he makes for preservation." Now the first purpose is that of several other works, and if it were the sole one would not justify a new publication, for some of those that we have are perfectly satisfactory. The directions for work, and the plan of the course, show little that is new, but they are plain, practical, and good.

The second purpose of the book is, therefore, the one on which its claims to originality rest. The author tries to combat the student's well-known unwillingness to draw anything except caricatures by giving outline plates of the various elements and organs, the details of which the student is to fill in with crayons or water-colors. The idea is a very good one; the only question is whether it can be put into application.

This depends largely on the instructor. The outlines are very well executed. Although, as has been said, this plan of filling in outlines is the only thing essentially new in the book, we look upon anything that will encourage drawing as so valuable that we are inclined to welcome this work as a useful aid to instruction, though it be no great addition to histological literature.

T. D.

Dysmenorrhœa. Its Pathology and Treatment. By HEYWOOD SMITH, M. D. London: J. and A. Churchill. 1881.

We are glad to see that the author treats dysmenorrhœa as the symptom of a pathological condition, not, as some of the text-books would teach, uniform in character. Various and very different pathological conditions, or perhaps some general disease, or the state of the blood, may, any one of them, be sufficient to produce the symptom which it is the province of the book to consider. From its title we were led to expect a much fuller description and analysis of the pathological conditions giving rise to dysmenorrhœa, but we fail to find this part of the work as thoroughly treated as in many of our text-books.

Most of the treatment recommended is cautious, conservative, and decidedly good. We are the more surprised, therefore, to find the author so universally advise the use of intrauterine stem pessaries for flexions of the uterus.

SIR ISAAC NEWTON ON THE VALUE OF SLEEP. — The following quaint letter from Sir Isaac Newton to a medical friend has only been recently published: —

LONDON, December 15, 1716.

"DEAR DOCTOR — He that in ye mine of knowledge deepest diggeth, hath, like every other miner, ye least breathing time, and must, sometimes at least, come to terr; alt for air.

"In one of these respiratory intervals I now sit doune to write to you, my friend.

"You ask me how, with so much study, I manage to retene my health. Ah, my dear doctor, you have a better opinion of your lazy friend than he hath of himself. Morpheous is my best companion; without 8 or 9 hours of him yr correspondent is not worth one scavenger's peruke. My practizes did at ye first hurt my stomach, but now I eat heartily enow as y' will see when I come down beside you.

"I have been much amused by ye singular *φαισμενα* resulting from bringing of a needle into contact with a piece of amber or resin fricated on silke clothe. Ye flame putteth me in mind of sheet lightning on a small — how very small — scale. But I shall in my epistles abjure Philosophy whereof when I come down to Sakly I'll give you enow. I began to scrawl at 5 mins frm 9 of ye clk. and have in writing consmd 10 mins. My Ld. Somerset is announced.

"Farewell, Gd bless you and help yr sincere friend,

"(Signed) ISAAC NEWTON.

"To Dr. Law, Suffolk."

New York Medical Record.

Medical and Surgical Journal.

THURSDAY, JULY 21, 1881.

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CREMATION.

A LARGE meeting was recently held at Bologna to advocate the introduction of cremation instead of burial as a means of disposal of the dead of the town. Many physicians are reported to have been present, and to have taken an active interest in furthering the proposition. It seems probable that Bologna will before long be provided with a public crematory, as Milan and Lodi in the north of Italy now are.

In the cremation hall just outside the city of Gotha in Germany, which is one of the best arranged of those thus far established, fifty-two bodies, five being those of women, have, since its erection, less than three years ago, been subjected to the process; of these bodies one was sent from so great a distance as New York, and one, at least, from England.

We have not at hand the exact number of bodies which have been reduced in the furnace at Washington, Pa., but believe it to be still quite small. To overcome existing prejudices against such an innovation upon old habits and customs it is essential, not only that the scientific process of combustion should be as complete, as rapid, and as imperceptible as possible, but also that the building and its surroundings should be attractive and in keeping with a solemn ceremony. The buildings at Milan and Gotha answer these requirements, the latter place, however, has the additional advantage of being provided with a Siemens' incineration apparatus in which the process of reduction takes place in superheated air, the body not being brought at any time in direct contact with the flames. Outside the cremation hall is an open portico in which the cinerary urns are arranged. Within is a hall where the religious ceremony, when such is desired, may be performed, and where the body awaits its removal to the furnace. For this nine hours of preliminary preparation are required. The air in the receptacle where the body undergoes incineration is heated to 600° Réaumur, and two hours elapse from the commencement to the completion of the process before the ashes are collected. Of these the average body of a man yields about six pounds, that of a woman about four. Only the officials and one or two of the nearest relatives are admitted to the chamber underground in which the furnace is situated. The cost of the process at Gotha is about twenty-five dollars.

At Milan the entire process may be watched through a small window; and the cost of conversion by the Gotha furnace, the one there in use, is only about one

dollar; in this apparatus, however, the body is subjected to direct contact with the flames. Venini's furnace has the same disadvantage, and is besides quite complicated, but it performs its work with rapidity and thoroughness.

A furnace constructed by Dr. C. W. Siemens was referred to by Sir Henry Thompson in his article on Cremation, in the *Contemporary Review*, which converted a body weighing two hundred and twenty-seven pounds, placed in a cylindrical vessel seven feet long, by five or six in diameter, the interior being heated to 2000° F., into five pounds of ashes in fifty-five minutes.

It is evident from the progress already made that the question of the best methods of cremation will receive a pretty definite and satisfactory solution long before the sentimental considerations involved are appreciably affected by argument or example.

Being convinced that in regard to this matter time will prove the most successful pleader, we wish in the short space left us to direct our readers' attention to the consideration of one of the not least important of the possible uses of cremation into which sentiment does not enter. In a small volume on Cremation recently published by Dr. Bermingham, of New York, a chapter is devoted to the Cremation of Dead Animals and Garbage, from which we make the following extracts:—

Although a moment's consideration will suffice to prove that this method of ridding communities of a large proportion of disease-producing matter is indubitably the most expeditious and safest yet proposed, nevertheless it has not come into general use.

The remarks of Sir Henry Thompson, in regard to the economical aspects of cremation, although applied to human remains, would more fittingly apply to the bodies of dead cattle, since it could not be urged against utilizing the bones of animals that it was indecent or in any sense shocking to the sensibilities of the most sensitive, but, on the contrary, would naturally be considered praiseworthy economy. He states "that London was computed, by the census of 1871, to contain 3,254,260 persons, of whom 80,430 died within the year. I have come to the conclusion, after a very carefully-made estimate, that the amount of ashes and bone-earth—such as is derived from perfect combustion—belonging to and buried with those persons is by weight about 206,820 pounds. The pecuniary value of this highly concentrated form of animal solids is very considerable. For this bone-earth may be regarded as at least equivalent to at least six or seven times its weight of dried and unburned bones as they ordinarily exist in commerce. The amount of other solid matters resolvable by burning into the gaseous food of plants, but rendered unavailable by burial for say fifty or a hundred years or more, is about 5,581,000 pounds, the value of which is quite incalculable, but it is certainly enormous.

This estimate is for London alone; for the United Kingdom multiply by nine in order to obtain the amount of valuable economic material annually diverted for a long term of years from its ultimate destiny by our present method of interment.

"This necessitates the purchase from other countries of bones amounting to half a million pounds sterling per annum."

It is very evident, from the above estimate, that the utilization of diseased cattle would effect no inconsiderable saving to a country, regardless of the amount that would be saved from the prevention of disease that would ensue from the adoption of such a plan.

As to the manner in which the bodies of dead animals might be burned, Dr. Beals suggests, in the *British Medical Journal*, that until suitable apparatus was devised the gas-works of towns could be made available by severing the animals into pieces and throwing them into the retorts, when almost instant combustion would take place, and the products be utilized.

It is certain that cremation of dead animals would be, both from a sanitary and economical view, an incalculable benefit. In an age when waste products of all kinds are made a source of revenue, it is remarkable that such a feasible and possibly prolific factor in the production of wealth should have been overlooked, or at least exist in such an undeveloped state.

What shall be done with garbage? is a question the solution of which has long vexed the executive power of street cleaning bureaus, and given the public, through the medium of the daily journals, a constant cause of complaint. The present plan of collecting it periodically, or rather spasmodically, and dumping it into the sea (the plan in operation in New York, involving great expense) is notoriously inefficient and abortive.

Among the plans suggested as a substitute for the present unsuccessful one cremation is advocated by many, and will, we believe, eventually prove the only practicable solution of the question.

The burning of the more easily combustible garbage should be individually effected in the place where it is produced, while that which could not be thus disposed of could be collected and burned by the proper authorities at a much less expense and with far greater efficiency than is the result of the present extravagant and ridiculously inoperative method.

We are conscious that the subject of burning garbage is an old story in New York city, and though its advisability may be admitted, the question of its adoption is complicated by that disgraceful blight on our city's sanitary progress, the influence of unprincipled politicians.

But the question of the best disposition to be made of garbage is not merely a local one, and should engage the attention of families and communities and armies in every land. The obstacles which interfere with the public adoption in New York do not exist in private families, and in many cities, communities, and armies. Wherever, therefore, this plan is feasible it should be tried, and if this is done a step in the promotion of hygiene will have been taken, whose beneficial results will constantly extend, and the saving—in life, and public and private expenditure—to the State and the individual will be incalculable.

MEDICAL NOTES.

—The number of applicants for the degree of doctor of medicine at the annual commencement at the Harvard Medical School, June 29, 1881, was eighty-five. Of these sixty succeeded in fulfilling all the requirements, and twenty-five failed to pass in all the examinations. There were four applicants for the degree to be conferred upon students attending the four years' course, but no one candidate was able to satisfy all the examiners. The quality of the graduates of this year may be inferred from the fact that thirty-two of the sixty have received literary or scientific degrees before beginning their medical education.

—The Wilmington (Del.) Board of Health, at a meeting, July 8th, decided to request and instruct all churches, Sunday-schools, and other organizations to hold no more meetings until further notice, owing to the alarming spread of the small-pox, and to advise that no more excursions, etc., take place this summer. The disease has not yet assumed an epidemic form, but its spread has been remarkable within the past few days. Action will at once be taken to prevent any further spread of the disease and to stamp it out altogether.

—The following paragraph from the daily press shows a growing appreciation of sanitary necessities:—

More than forty cases of scarlet fever having appeared at Keswick, in England, the medical officer traced their cause to a dairy from which the infected families received their milk. A single case had been brought to a house next to the dairy. The English are nearer to a successful solution of the problem how to deal with infectious diseases than we, in that almost every town and village has its medical officer, who is obliged to trace the infection to its originating cause, if possible, to isolate all cases of contagious fever, and, no matter what the rank of the patient, to compel the abandonment of the house in which the case has occurred, and its thorough disinfection. In all these actions he has the law to sustain him. With regard to typhoid and scarlet fever, both lately have been repeatedly traced to dairies. Exactly how the poisonous germs are communicated through the milk has not yet been discovered, but of the fact that they are so disseminated through whole neighborhoods there can be no doubt.

—I thank you for the copies of Sir Charles Hanbury's poetry, which extremely entertained me. I find tar-water has succeeded to Ward's drop; it is possible by this time that some other quackery has taken the place of that; the English are easier than any other nation infatuated by the prospect of universal medicines; nor is there any country in the world where the doctors raise such immense fortunes. I attribute it to the fond of credulity which is in all mankind. We have no longer faith in miracles and relics, and, therefore, with the same fury, run after recipes and physicians. The same money which, three hundred years ago, was given for the health of the soul, is now given for the health of the body, and by the same sort of people, women, and half-witted men. In the

country, where they have shrines and images, quacks are despised, and monks and confessors find their account in managing the fear and hope which rule the actions of the multitude.

My cure for lowness of spirits is not drinking nasty water, but galloping all day, and a moderate glass of champagne at night in good company; and I believe this regimen, closely followed, is one of the most wholesome that can be prescribed, and may save one a world of filthy doses, and more filthy doctor's fees at the year's end. — *Letters of Lady Mary Wortley Montagu.*

—The committee engaged in organizing the exhibition to be held at South Kensington on and after July 16, have agreed to set apart a considerable space for the purpose of illustrating the various appliances in ordinary use for the treatment of the sick at the chief London hospitals. Their request to exhibit a bed with its full equipment of ward furniture, along with splints or other apparatus in common use for fractured limbs at each hospital, has been readily acceded to by the governing committees of the twelve hospitals associated with medical schools, as well as by the Medical Department of the Army and Navy and Local Government Board. It had been felt that although the surgical appliances referred to would be best shown on the living model, it would have been unwise to introduce such in a miscellaneous exhibition, and considerable difficulty has been experienced in providing efficient substitutes, since lay figures are expensive and unobtainable in sufficient number from commercial sources; while the *papier-maché* figures in common use in shops are without joints, and are otherwise ill adapted for the purpose indicated. This difficulty has now been surmounted by the result of an appeal made to several members of the Royal Academy for the loan of their lay figures during the time the exhibition is open. Sir F. Leighton, Messrs. Milais, Calderon, Leslie, Frith, Yeames, etc.,—in fact, all the leading academicians,—have responded so readily to the request made to them that the number of applicants for relief considerably exceeds the number of beds at the disposal of the committee. It is proposed to have the hospital appliances arranged in saloons in the Albert Hall, contiguous to and in direct communication with the exhibition buildings, and it may be confidently predicted that the department, which will possess a scientific and humanitarian interest apart from the character of the rest of the exhibition, will prove especially attractive to foreign and country visitors, who will thus have an opportunity of seeing within small compass what is done at the best hospitals, without having to make a tour of the metropolis. — *Medical Times and Gazette.*

—Our readers may recognize some well-known names, some more easily than others, in the *British Medical Journal's* announcement of distinguished Canadian and American visitors expected to visit the forthcoming International Medical Congress, namely: Drs. Osler and Howard, of Montreal; Dr. Gordon, of Portland; Drs. Carter, Bigelow, and Lyman, of Boston; Drs. S. Gross, Jr., T. Morton, Horatio Wood, Theinson, Goodall, W. W. Keen, Cohen, and J. Mims

Hay, of Philadelphia; Dr. Yandell, of Louisville; Dr. Hutchinson, of Brooklyn; Drs. Austin Flint, Fordyce Barker, Otis, Sayre, Weir, Metcalf, Saunders, Lefferts, Lincoln, Bosworth, Jacobi, and Goodville, of New York.

—Brill's sea-water baths at Brighton have long enjoyed a high reputation, and now a company, entitled Brill's Sea-water Baths, London, and Savoy Mansions Company, has been formed to supply for London "tepid sea-water swimming baths" for gentlemen and for ladies, "hot sea-water baths," and "douche, vapor, and shower baths." A site has been obtained for the establishment on the Thames embankment, on the western side of Waterloo Bridge; and the sea-water is to be brought to the very doors of the baths by steam-vessels especially constructed for the purpose. — *Lancet.*

—It will have been seen that the society for the total abolition of biological investigation by experiment upon living animals has now enlisted the active support of Lord Coleridge, who invests it with a special weight by calling the meeting at his house, described in the reports as the residence of "the lord chief justice of England." The current misstatements were glibly repeated, and it is time that papers setting forth the truth were made more accessible than they now are. — *British Medical Journal.*

—A report by M. Rendu on the maternity department of the Tenon Hospital, in Paris, shows that, notwithstanding all possible precautions, as well as the isolation and the good arrangement of the buildings appropriated to that use, an epidemic of puerperal fever has broken out, and sixteen women have been attacked by it. M. Rendu has discovered that the wind, during the days in which the fever made its appearance, came from the east, that is to say, from the post-mortem room. — *British Medical Journal.*

—The following appreciative notice of the number of the JOURNAL issued on the centenary of the Massachusetts Medical Society is taken from the *Lancet*:—

The Massachusetts Medical Society has just been holding its centennial anniversary at Boston, when an address was delivered by Dr. Samuel Green, and one by Dr. J. Collins Warren. The Boston Medical and Surgical Journal for June 8th is wholly devoted to this celebration, and contains not only portions of Dr. Green's address, but many articles, extracts, and facsimile reproductions of antiquarian interest, illustrative of the period when the Society was first established. It reproduces a memoir of the venerable founder of the Society, Dr. Edwin Augustus Holyoke, who died in 1829 at the age of one hundred years, and a silhouette of him appears as a frontispiece to the journal, with a facsimile of the toast, "The Massachusetts Medical Society," written out by himself at the public dinner given in his honor by the faculty of Boston, Salem, and vicinity on his centennial birthday, August 13, 1828. The whole number is very interesting, and is an admirable instance of journalistic enterprise.

—The total of deaths in New York City is increasing rapidly from week to week. Deaths under five,

and deaths from diarrhoeal diseases occupying the prominent places in the returns.

— The twenty-fifth anniversary of Dr. Rudolf Virchow's appointment as Professor in the University of Berlin is to be celebrated on October 13th.

— A millionaire of Cincinnati is said to own the Eclectic Medical College of that city, and also John Robinson's Circus.

— In the case of seventy-five out of ninety-six decedents for whom burial permits were issued in Cincinnati one day last week the excessive heat was returned as the cause of death. Forty-one deaths from heat were returned in one day.

— The degree of LL. D. was conferred by Yale College, at its late commencement, upon Professor Austin Flint, of New York.

Miscellany.

MODERN SENSITIVENESS.

MR. EDITOR.—When the King of France was dangerously wounded by a lance point deeply imbedded in his upper jaw, Ambrose Paré, who in the light of the surgery of the day was in doubt whether the extraction might not cause death, ordered out four soldiers, thrust lance points in their faces, and operated on them, testing the best method of extraction.

Public opinion would not allow Dr. Bliss to test in the back of Guiteau (though a confessed assassin) the penetrating power of his own pistol, even if it were certain that the President's life could be saved by such an experiment. Yet it must be confessed that in some respects this would be more charitable than slowly to play with the disordered vanity of a fool, as Colonel Corkhill seems to be doing, and fully as useful as to allow the newspaper men to make a sensation of one who appears to be delusionally insane, thereby apparently exciting the emulation of other similar crazy people throughout the country. It is, however, surprising that a much-needed investigation on cadavera in regard to the course of projectiles and the penetration of pistol balls should excite a thrill of horror among the "sensitive and sensible," to use the excellent expression of the *Boston Herald*. If a thorough study be made on cadavera of the effect of pistol shots under a variety of circumstances and conditions, and frozen sections be made and photographed, the surgeon would have much more to guide him in diagnosis than now is the case. Any one who should attempt this, however, would apparently be in danger of being ostracized by the "sensitive" and perhaps also the "sensible."

Truly, advances in science are hardly won. The physician is taunted with knowing little, the community looking rather at what remains to be studied than at what has been won; and yet if he searches after truth in the only way open to him the community protests and regards him as an enemy of mankind. In the days of Pasteur we have people who seek to do away with vivisection; after Virchow's labors the greater part of the community regard autopsies as profanation; and after a war which has shown to the world the usefulness of surgery, our operators are hampered in their experiments on cadavera as to the best method of saving life and limb by the popular shrinking from a proper anatomy act.

I regret to see that your esteemed daily contempo-

rary, the *Boston Herald*, joins the throng in regarding those who earnestly strive for the acquisition of knowledge which they have reason to hope may be of use as violating the rules of common decency, and I trust that when its editor is pistolled by a stalwart — and the well-known independence of his views may yet expose him to such an accident — he may fall into the hands of a surgeon who has had ample opportunities for dissection, and who has learned all that can be learned by experiment *in corpore vili*.

Such sensitiveness needs to go but a little further before it will cry out against all dissection; and as surgeons must exist, it would simply be raising up a crowd of inferior men who would be willing to practice surgery without adequate training. The surgeon must then learn to operate by doing the necessary operations upon such patients as fall into his hands, rather than by previous experience upon the cadaver. The following is the paragraph in the *Herald* (July 13, 1881) to which I refer:—

"We are sure that all sensitive and sensible people will sympathize with the vigorous protest of John Swinton, in the New York press, against the horrible pistol practice upon dead bodies by a professor in Bellevue hospital, with a view to ascertaining the probable course of the bullet in the body of the President. Friendless patients who die in the public hospitals perhaps have few rights, after death, which so-called 'science' is bound to respect, but it ought to be possible for the public to protect the bodies of these unfortunates from needless outrage. A hundred shots might enter living human bodies at the precise point where the President was wounded, without taking the same course, or producing similar results. So much depends upon the position of the assassin and his victim; upon the cartridge and ball, the clothing, the quality of the bone and muscle, and a dozen other conditions. To suspend an inanimate body by the neck, destitute of clothing, and attempt to decide upon the probable course of the ball and nature of the wound in a case differing in every essential particular, is something more than folly. It is an outrage which Mr. Swinton does not characterize too severely, and which cannot be stopped too soon for the credit of the institution. SURGEON.

Boston, July 14, 1881.

REVELATIONS UNDER ETHER.

MR. TOM BIRD, instructor in the use of anesthetics at Guy's Hospital, confides to the *Lancet* the distressing freedom of speech to which patients have exposed him when under the influence of ether:—

My first case of ether mania was that of a man between forty and fifty years of age, who had undergone a simple operation for which he required to be deeply anesthetized. Chloroform was denied him,—reason unassailable. Gas and ether had been used, the operation lasting from ten minutes to a quarter of an hour. For two hours he literally confessed; as he expressed it in the evening, "I knew what I was saying perfectly. I knew that I ought not to say it, but I could not help it, and you ought not to have left her (the nurse) in the room." He was right, but I did not know why until I met with my second case some eighteen months afterwards. It was that of a young married woman, a hospital patient, whom I saw from half an hour to three quarters after the operation. She was recounting to her mother (not present), in the clearest tones, subject matter that I do not think she would have ever confided if conscious; it was a subject that had evidently been laid by in memory. For a quarter of an hour I tried to divert in every way her attention to her present condition, insisting that her mother was not present, without the slightest

avail; she was totally oblivious of everything but her story. The patient was a lady of education and refinement, and her language had not the slightest fault in its expression, but her bedroom was a "palace of truth."

There is not the slightest connection between the symptoms of these two cases, and the ramblings of chloroform, which are disconnected, illusory, and easily diverted, occurring mostly during administration, or the gibberish of methylene bichloride,—the latter is not even noisy, but this ether mania is a noxious thing and the lesson I would draw is that the patient should be left only in the care of a discreet and responsible nurse until all self-control returns.

BROOK STREET, W.

OUT-PATIENT ABUSE AT THE MASSACHUSETTS GENERAL HOSPITAL.

THE new system of admission of out patients at the Massachusetts General Hospital, of which notice was formally given, has now been in operation three months. The result is considered very satisfactory. No great number has been excluded, but enough to confirm the previous impression, that positive imposition was practiced. During a corresponding quarter last year (1880) 4556 patients were admitted; of this number 3033 were residents of Boston, 1523 were resident outside of Boston. During the three months ending June 30, 1881, 3638 were admitted; 2321 were residents of Boston, 1317 were from outside of Boston. As these statistics show, there has been no marked relative decrease either amongst the residents or non-residents. The effect upon the Hospital has not been to diminish the number of admissions, as the number admitted during April, May, and June exceeded the number admitted during the corresponding months of last year by 42. Neither was the class of patients of the poorer class, as the number of paying patients exceeded those of the corresponding quarter of 1880 by 40. During the three months, 323 applicants seemed to be questionable cases for free treatment; investigations showed that 238 were deserving and 155 undeserving. The results are quite satisfactory and it is believed that further experience and more careful discrimination will allow further elimination of the undeserving class.

FOURTH OF JULY CELEBRATIONS AND THE SICK.

MR. EDITOR.—While lying awake on the night of the third of this month, I was reminded by the noise of an old idea that a civilized community owes protection to its members against unnecessary noise, as against other evils that can only be controlled by the public as a whole; and that we in the large cities have outgrown the propriety, if there ever was any, in the present style of celebrating the Fourth of July.

If people choose to risk gunpowder accidents that is their own lookout, for the sinner is apt to be the victim; and if the Fire Departments choose to risk giving their forces sharp exercise in July, that is no concern of a medical journal; but the unnecessary noise, and wantonly depriving the sick of their sleep, is a matter in which the profession may well take an interest. The writer believes that he has seen death hastened by the endless noise for two nights and a day,

and every physician must have seen the dread with which sick people sometimes look forward to thirty-six hours of racket.

The amount of distress from loss of sleep in babies, just at the beginning of hot weather, and of consequent fatigue for their mothers, must be worth the attention of the Society for the Prevention of Cruelty to Children.

If the death roll of the Fourth of July could be compared with that of the revolutionary regiments, it would, I think, be seen that peace has its horrors as well as war, with a difference: the one necessary and glorious, the other unnecessary and silly.

The writer would be sorry to see the celebration, or the military celebration, of the Fourth abandoned; but believes it very easy to substitute something more adapted to a large city than tin horns or Chinese crackers, which can be in place nowhere except at the circus; and he believes that processions with music should not pass through the streets either before the tired workers of the town are awake on July 4th, or after they are in bed, as is done before every presidential election. Will our Board of Health consider the matter?

E. M. B.

TYPHOID FEVER IN CHILDREN.

IN an article in the *London Practitioner* for June, by Dr. Henry Ashby, physician to the hospital for sick children in Manchester, we find the following statement, in regard to typhoid in children:—

Typhoid fever in children does not differ very materially in its course, pathology, or treatment from the typhoid of adults. There are, however, a few points of interest in connection with the disease as it affects children that are perhaps worth noting down when a series of cases are fresh in the memory. It has been pointed out by several writers that before puberty the disease, as a rule, is seen in a milder form than after that epoch; and that, as a broad rule, children are more susceptible to its influence than adults, especially those of maturer years.

In considering the question of children suffering from the disease in its most favorable form, we shall not be very far wrong in taking the mortality as our guide. The mortality for all ages from typhoid fever is from fifteen to twenty per cent., according to Murchison and other authorities. Now Barthez and Rilliet, Hillier, Gerhardt place the mortality of children of ages from two to twelve at ten per cent. In our own hospital during the last nine years, two hundred and sixty-five cases have been treated, with twenty-one deaths, making a mortality of nearly eight per cent. These facts point pretty certainly to the conclusion that a child contracting the disease has a much better chance of having it in a milder and less complicated form than if he waited till puberty was passed and manhood reached before taking it.

The typhoid of children more often aborts, that is, runs a course of two weeks instead of three or four, than the typhoid of adults. That such cases are in reality typhoid in character may be known from the presence of spots, rounded abdomen, remittent temperature, etc., and their occurrence in houses where undoubted cases have recently occurred. In other cases the temperature is characterized by well-marked remissions of three or even four degrees all through its course, but more especially after the middle of the

second week. Such cases are rarely actually ill; in the morning especially they will sit up in bed, thread beads, play with dolls, and, but for a heavy look about their eyes and a glance at the temperature chart above their beds, it would be difficult to persuade one's self that they were suffering from any febrile disease. As a rule, such cases are not accompanied by much diarrhoea, do not relapse, and make a favorable recovery. On the other hand, cases will occur as severe, and accompanied by as much weakness and prostration, as any that may be seen in adults.

POST-MORTEM EXAMINATION ON PROFESSOR SKODA.

THE *Lancet* gives the following details of the post-mortem examination on Professor Skoda:—

Skoda had expressed a wish that his body should be carefully examined in all parts, and had asked Professor Heschl to perform for him this last service. Heschl, however, died some weeks before Skoda, and the news of his death was received by the latter with the exclamation, "Now some one else must examine me." The task was intrusted to Dr. Chiari, and the examination was made on the 14th of June, in the presence of Schrötter, Kohn, Chrastina, and Kraus. The following is a condensation of the official account: The body was thin and pale, and the lower limbs œdematous. The skull was of moderate thickness, the bone and dura mater being adherent. The arachnoid was somewhat opaque over the convexity, and separated from the convolutions by a considerable quantity of serum. The larger arteries were degenerated and calcified. The brain, including the meninges, weighed thirteen hundred grammes (forty-five ounces), considerably below the average in weight; indeed, adult male brains of lighter weight are not often met with. The convolutions were of the ordinary configuration, the sulci being wide. The cerebral substance was somewhat diminished in consistence. The ventricles were rather large, and filled with clear serum. There was no local lesion. The mucous membrane of the air-passages was reddened. On the right side there were extensive pleural adhesions, and slighter adhesions on the left side. In the apex of each lung were black pigmented radiating scars. The pulmonary tissue was elsewhere somewhat congested and œdematous. The bronchial glands were indurated, and filled with black pigment, and in one of them the right recurrent laryngeal nerve was imbedded. The heart presented eccentric hypertrophy in all parts, especially in the left ventricle. The muscular substance was pale and friable. The endocardium was thickened and opaque in some parts of the left ventricle. The tricuspid, mitral, and pulmonary valves were normal; the aortic valves were shriveled, thickened, and calcified at the base, so as to be manifestly incompetent; the size of the orifice was also diminished. The aorta was somewhat dilated, and presented atheromatous and calcareous degeneration. The coronary arteries were atheromatous and calcified, and their orifices narrowed. The liver was small and pale, and in the gall-bladder were two calculi. The spleen was enlarged and dense; the kidneys small and slightly granular, with a small calculus in the right. The alimentary canal was normal, but there were two inguinal and an umbilical herniæ.

THE SANITARY CONDITION OF THE ROMAN HOTELS.

THE *Times* and *Gazette* reproduces some accounts of the sanitary condition of the Roman hotels, which may be of interest to travelers and to physicians:—

The *Italian Times* Sanitary Commission is making steady progress with its inquiry into the sanitary condition of the hotels of Rome, though at one time it was threatened with serious opposition from a very unexpected quarter. A general meeting of the Italian Medical Society was summoned to discuss, among other subjects, "Measures to be taken in view of the arbitrary interference of certain foreign medical practitioners with the hygienic condition of the Roman hotels." This proposal appeared to be very absurd and uncalled for, for the hotel-keepers themselves welcomed this inquiry, and two of the most distinguished members of the Society, Drs. Manassei and Fioridespini, are members of the sanitary commission. However, in consequence, apparently, of a letter from Dr. Fioridespini, the proposed discussion was allowed to drop. But the *Popolo Romano* has published an article from an Italian physician, denying the right of foreign physicians to interfere with Roman sanitary questions, in which he tells a little story that shows how desirable it is that hotel-keepers in Rome should be supervised and educated in other matters besides questions of drainage, ventilation, and other structural defects. He says: "A short time since a Protestant clergyman attended a lady, one of his co-religionists, who died of typhoid fever in one of the principal hotels of Rome. The next day the same clergyman called on the Bishop of Gibraltar, who had just come to Rome, and had gone to lodge in the same hotel. To his great surprise he found him occupying the very room in which the lady had died of typhoid fever the day before." The *Italian Times* remarks: "The Italian physician apparently sees nothing disquieting or improper in this." English visitors to Rome will take a very different view of it from that of the Italian physician, and it is to be hoped the sanitary commission will "make a note of it." It is very satisfactory, meanwhile, to learn that the Quirinale, Coustanzi, Bristol, Europa, Molaro, Anglo-Americano, Parigi, Russie, and Victoria hotels have already been inspected, and that the proprietors have in all cases expressed their willingness to carry out the reforms suggested. We are glad to learn, also, from the *Italian Times* of June 4th, that the municipal council of Rome had just recently appointed a committee to examine and report upon the town drainage, especially with reference to the connection between the hotel drains and the general system of sewers.

THE SMALL-POX AND INOCULATION.

APROPOS of distempers, I am going to tell you a thing that will make you wish yourself here. The small-pox, so fatal and so general among us, is here entirely harmless by the invention of *ingrafting*, which is the term they give it. There is a set of old women who make it their business to perform the operation every autumn, in the month of September, when the great heat is abated. People send to one another to know if any of their family has a mind to have the small-pox; they make parties for this purpose, and

when they are met (commonly fifteen or sixteen together) the old woman comes with a nut-shell full of the matter of the best sort of small-pox, and asks what vein you please to have opened. She immediately rips open that you offer to her with a large needle (which gives you no more pain than a common scratch), and puts into the vein as much matter as can lie upon the head of her needle, and after that binds up the little wound with a hollow bit of shell, and in this manner opens four or five veins. The Grecians have commonly the superstition of opening one in the middle of the forehead, one in each arm, and one on the breast, to mark the sign of the cross; but this has a very ill effect, all these wounds leaving little scars, and is not done by those that are not superstitious, who choose to have them in the legs, or that part of the arm that is concealed. The children or young patients play together all the rest of the day, and are in perfect health to the eighth. Then the fever begins to seize them, and they keep their beds two days, very seldom three. They have very rarely above twenty or thirty in their faces, which never mark, and in eight days' time they are as well as before their illness. Where they are wounded there remain running sores during the distemper, which I don't doubt is a great relief to them. Every year thousands undergo this operation; and the French ambassador says pleasantly, that they take the small-pox here by way of diversion, as they take the waters in other countries. There is no example of any one that has died in it; and you may believe I am well satisfied of the safety of this experiment, since I intend to try it on my dear little son. I am patriot enough to take pains to bring this useful invention into fashion in England; and I should not fail to write to some of our doctors very particularly about it, if I knew any one of them that I thought had virtue enough to destroy such a considerable branch of their revenue for the good to mankind. But that distemper is too beneficial to them not to expose to all their resentment the hardy wight that should undertake to put an end to it. Perhaps, if I live to return, I may, however, have courage to war with them. Upon this occasion admire the heroism in the heart of your friend. — *Lady Mary Wortley Montagu.*

RUPTURE OF THE PLANTARIS MUSCLE.

In *The New York Medical Journal and Obstetrical Review* for July, 1881, Dr. A. B. Judson gives three cases in which he diagnosed this injury. He remarks that it is seldom found described in systematic works on surgery, although its occurrence is probably not very uncommon. Its most remarkable feature is the trivial nature, or almost entire absence, of an immediate cause. Persons are attacked while quietly walking in the street, stopping suddenly under the impression that they have been shot in the leg. Apart from oedymosis, which is met with in but a limited number of cases, the only objective signs are oedema and deep-seated inflammation, and these are by no means constant. If there is an obvious gap in the muscles, with an adjacent muscular tumor, the case is to be considered one of rupture of the muscles, the term *ruptured foot* being conveniently used to indicate those cases in which the exact lesion remains undetermined. The diagnosis depends on (1) the suddenness of the

attack; (2) the insignificance of the apparent cause; (3) the location of the trouble; (4) the pain, which is absent or slight, when the part is at rest, and produced or aggravated by those motions of the limb, active or passive, which disturb the muscles of the calf; and (5) the great disproportion between the objective and subjective symptoms. Recovery is always protracted, and is probably not much facilitated by treatment, which, however, should not be neglected, for the prognosis is sometimes unfavorable especially when the affected limb is the seat of deep varicose veins, or shows traces of former phlebitis. Local and general remedies should be directed toward the relief of pain. Repair of the injured structures should be promoted by preventing motion or disturbance of the part affected. The condition which seems best adapted to secure this object is that of enforced fixation with the knee moderately flexed and the ankle moderately extended. As recovery progresses, locomotion will be facilitated by a high-heeled shoe, which prevents the foot from being unduly flexed on the leg. Cases of this injury present opportunities for the exercise of judgment in the decision of the question of abandoning further rest and resorting to motion and exercise.

CHEMICAL EXAMINATION OF DRINKING-WATER.

REQUEST FOR SPECIMENS OF SUSPECTED WATER.

A REQUEST for specimens of suspected drinking-water appears in a late number of the *National Board of Health Bulletin*, a careful study of the chief methods in use for the chemical examination of potable water, so far as organic matter is concerned, having been undertaken by order of the National Board of Health. It is particularly requested of the correspondents of the board, of medical men throughout the country, and of others interested in sanitary matters, that any well-marked case of disease which may seem on medical grounds fairly attributable to organic impurities in drinking-water be promptly reported to Dr. J. W. Mallet, University of Virginia Post Office, Albemarle County, Virginia, with a few lines stating clearly the medical nature of the case, and the character of the evidence on which the water in question is suspected of having actually caused disease in persons who have used it.

It is further desired that a sample of each such water be forwarded for examination, *but not until notice has been received from Dr. Mallet that the analysts are ready to proceed with it*, since it is important that no useless delay should occur between the shipping of the sample and its investigation in the laboratory. In notifying any one who may be able to furnish specimens of suspected waters that may be forwarded, clear instructions will be sent as to the quantity of water required, and the mode of collecting, packing, and shipping it.

It is particularly desired that no case be presented on doubtful or vague evidence, since one important object of the inquiry demands that all such be rejected, and only those cases examined which involve the strongest grounds for believing that mischief has really been caused by organically foul drinking-water.

The cost of packages and transportation for samples will be borne by the Board of Health.

HAY-FEVER.

M. DE BUDBERG's remarks at a meeting of the Société Vaudoise de Médecine, republished in the *British Medical Journal*, would indicate that Americans monopolize neither the knowledge of the sufferings from hay-fever nor the want of knowledge of its causes and treatment. M. de Budberg stated, at the Société Vaudoise de Médecine, that hay-fever is prevalent in Switzerland, as much amongst the Swiss as amongst the English, and that its frequency seems to increase at the present time. The clinical description of this disease has been known since the time of Phœbus. Dr. Blackley has demonstrated the majority of the causes of it; but we have not yet found any certain method for its cure. The object of M. de Budberg's work is to draw the attention of his colleagues to a method of treatment discovered by Helmholtz, and employed successfully by M. de Budberg, but as yet but little known. The first case was observed by M. de Budberg in an Englishwoman, who had suffered from it for twenty years. The treatment employed consisted of nasal irrigations of solution of quinine, recommended by Helmholtz (1 part in 750 of water). These irrigations brought away masses of brownish mucus, in which

were found small round yellow corpuscles, of smaller dimensions than the blood corpuscles. It did not contain either vibrios or bacteria. After two or three douches, the patient was perfectly well. The attack was arrested from that time. A solution of chlorate of potash was employed, and no relapse occurred, although the patient frequently passed flowering meadows. Every time that she attempted to suspend the treatment, a relapse occurred, which, however, was promptly ameliorated by the use of the douche. M. de Budberg thinks that the yellow corpuscles found in the nasal mucus of this lady were pollen corpuscles. The nasal douche freed the mucous membrane from them; hence its curative effect. In cases in which the mucus contained bacteria, Helmholtz's solution of quinine would probably be indispensable. In all cases, it is necessary that the douche should be made most carefully, so as to entirely wash out the whole of the nasal mucous membrane. Dr. Blackley, in his excellent monograph, relates that he induced hay-fever in his own person by the introduction, on the nasal mucous membrane, of various kinds of pollen. He cites more than sixty different kinds of them,—as a rule, graminaceous pollens.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 9, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhœal Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	1144	777	52.36	38.82	6.03	5.42	3.58
Philadelphia.....	846,984	442	244	36.20	21.27	3.17	4.07	4.98
Brooklyn.....	566,689	405	269	50.86	40.99	4.69	3.21	3.46
Chicago.....	503,304	463	325	49.89	36.93	4.32	2.81	1.51
Boston.....	362,535	130	45	23.85	8.46	3.08	8.46	1.54
St. Louis.....	350,522	250	144	39.20	31.20	1.60	—	.80
Baltimore.....	332,190	282	191	51.42	39.72	3.55	3.90	.71
Cincinnati.....	255,708	—	—	—	—	—	—	—
New Orleans.....	216,140	142	53	18.31	7.75	—	2.11	2.11
District of Columbia.....	177,638	116	68	37.93	33.62	2.59	1.29	—
Pittsburgh.....	156,381	158	100	50.00	25.95	5.70	3.80	6.33
Buffalo.....	155,137	63	27	20.63	9.52	9.52	3.17	4.76
Milwaukee.....	115,578	49	31	24.49	10.20	6.12	4.08	2.04
Providence.....	104,857	51	25	35.30	15.69	—	7.84	1.96
New Haven.....	62,882	42	—	35.71	26.19	7.14	2.38	—
Charleston.....	49,999	44	21	25.00	20.45	—	—	2.27
Nashville.....	43,461	23	13	30.43	30.43	4.35	—	—
Lowell.....	59,485	24	10	20.83	8.33	—	4.37	—
Worcester.....	58,295	25	9	16.00	—	12.00	—	4.00
Cambridge.....	52,740	19	6	36.84	10.53	—	10.53	—
Fall River.....	49,006	23	18	8.70	—	—	4.35	4.35
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	10	4	30.00	—	10.00	10.00	—
Springfield.....	33,340	7	2	28.57	—	—	14.29	—
Salem.....	27,598	12	3	16.67	16.67	8.33	—	—
New Bedford.....	26,875	15	3	13.33	—	—	—	6.67
Somerville.....	24,985	7	2	14.29	—	14.29	14.29	—
Holyoke.....	21,851	—	—	—	—	—	—	—
Chelsea.....	21,785	6	3	33.33	16.67	16.67	16.67	—
Taunton.....	21,213	13	9	15.38	—	7.69	7.69	—
Gloucester.....	19,329	7	1	42.86	—	—	28.57	—
Haverhill.....	18,475	4	0	—	25.00	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	1	1	—	—	—	—	—
Fitchburg.....	12,405	4	0	—	—	—	—	—
Twenty-four Massachusetts towns..	195,996	51	22	37.25	17.65	5.88	9.80	3.92

Deaths reported 4032 (no return from Cincinnati); 2426 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1749, diarrhœal diseases 1229,

consumption 329, lung diseases 177, diphtheria and croup 163, scarlet fever 114, typhoid fever 42, measles 39, small-pox 38, malarial fevers 33, cerebro-spinal meningitis 30, whooping-cough 24, puerperal fever 16, erysipelas 12, typhus fever nine.

From *typhoid fever*, Chicago nine, Philadelphia and Pittsburgh six, Baltimore five, New York and Boston four, Providence two, Brooklyn, St. Louis, Charleston, Worcester, Cambridge, and Brookline one. From *measles*, New York 13, Baltimore nine, Pittsburgh seven, Brooklyn and Chicago three, Providence two, Milwaukee and New Bedford one. From *small-pox*, Philadelphia 16, Chicago 10, New York seven, Pittsburgh three, Brooklyn two. From *malarial fevers*, New Orleans nine, St. Louis eight, Chicago four, Brooklyn and New Haven three, District of Columbia and Pittsburgh two, Baltimore and Buffalo one. From *cerebro-spinal meningitis*, New York seven, Chicago six, St. Louis four, Pittsburgh three, Worcester, Lynn, and Pittsfield two, Philadelphia, Buffalo, Milwaukee, and Springfield one. From *whooping-cough*, New York seven, Chicago five, Brooklyn and St. Louis three, District of Columbia two, Philadelphia, Boston, Milwaukee, and Cambridge one. From *puerperal fever*, New York, Chicago, Boston, St. Louis, Baltimore, and Lowell two, Philadelphia, Pittsburgh, Milwaukee, and Gloucester one. From *erysipelas*, New York and Baltimore three, Philadelphia, Brooklyn, Chicago, Providence, Cambridge, and Taunton one. From *typhus fever*, New York nine.

Twelve cases of small-pox were reported in Brooklyn, 27 in Chicago, two in St. Louis, one in District of Columbia, one in Buffalo, 30 in Pittsburgh, four in New Bedford, two in Westfield; diphtheria 17, scarlet fever five, in Boston; scarlet fever 16, diphtheria eight, in Milwaukee.

In 10 cities and towns of Massachusetts, with a population of 1,035,883 (population of the State 1,783,086), the total death-rate for the week was 18.02, against 17.00 and 15.64 for the previous two weeks.

For the week ending June 18th in 149 German cities and

towns, with an estimated population of 7,896,848, the death-rate was 26.7. Deaths reported 4058; 2003 under five: pulmonary consumption 574, acute diseases of the respiratory organs 309, diarrheal diseases 242, diphtheria and croup 140, scarlet fever 85, typhoid fever 49, measles and röteln 48, whooping-cough 31, puerperal fever 24, small-pox (Königsberg, Ratisbon two, Munich, Berlin, Charlottenburg, Kottbus, Hamburg, Aachen) nine, typhus fever (Königsberg, Thorn, Bromberg) three. The death-rates ranged from 15.1 in Potsdam to 38.8 in Chemnitz; Königsberg 30.7; Breslau 29.2; Munich 33.2; Dresden 22.4; Berlin 30.8; Leipzig 22.3; Hamburg 24.7; Hannover 22.4; Bremen 31.1; Cologne 28; Frankfurt 20.1; Strasburg 30.4.

For the week ending June 25th, in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 18.5. Deaths reported 2700: acute diseases of the respiratory organs (London) 210, small-pox (London 88) 93, measles 91, whooping-cough 88, diarrhoea 73, scarlet fever 50, diphtheria 23, fever 23. The death-rates ranged from 9.7 in Plymouth to 23 in Liverpool; Bristol 17.4; Birmingham 18; Leeds 18; Manchester 18.5; London 19.1; Sheffield 20.6. In Edinburgh 17.4; Glasgow 18.7; Dublin 24.5.

In the 21 chief towns of Switzerland, for the week ending June 25th, population 479,934, there were 23 deaths from diarrheal diseases, acute diseases of the respiratory organs 20, measles 14, typhoid fever 13, diphtheria and croup seven, whooping-cough one, puerperal fever one. The death-rates were: Geneva 17.5; Zurich 26.4; Basle 31; Berne 35.1; St. Imier 29; Herisau 14.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.		Thermometer.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
July, 1881.	Mean.		Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun.,	3	29.961	72	86	61	70	47	78	65	SW	W	W	9	7	4	R	O	F	—	—
Mon.,	4	29.879	69	81	64	64	61	75	67	W	E	W	1	3	4	C	R	F	—	—
Tues.,	5	29.911	66	74	60	73	71	91	78	C	E	C	0	8	0	F	C	O	—	—
Wed.,	6	29.889	67	88	62	79	78	90	82	C	E	C	0	8	0	H	F	H	—	—
Thurs.,	7	30.045	71	81	62	73	61	78	71	C	E	SW	0	5	3	H	F	O	—	—
Fri.,	8	30.031	66	77	63	92	73	78	81	S	E	SW	1	7	3	R	C	C	—	—
Sat.,	9	30.107	74	87	61	66	39	61	63	C	C	SW	0	0	5	H	C	C	—	—
Week,		29.975	69	88	61				72										7.05	.26

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 9, 1881, TO JULY 15, 1881.

MASS, L. M., captain and assistant surgeon. Now awaiting orders at Washington D. C., to report in person to commanding officer, Davis's Island, New York Harbor, for temporary duty at that post. S. O. 158, A. G. O., July 13, 1881.

COMBES, L. T., captain and assistant surgeon. Now awaiting orders at Cincinnati, Ohio, to report in person to commanding officer, Columbus Barracks, Ohio, for temporary duty at that post. S. O. 158, C. S. A. G. O.

GARDNER, J. de B. W., captain and assistant surgeon. The extension of leave of absence granted him March 14, 1881, from A. G. O., further extended six months. S. O. 157, A. G. O., July 12, 1881.

SHANNON, WILLIAM C., captain and assistant surgeon. Assigned duty with headquarters to the U. S. Commission from Fort Belvoir to the Fifth Agency. On return of commission to Belvoir, to remain his station, Fort D. A. Russell. S. O. 62, Department of the Platte, July 6, 1881.

BOOKS AND PAMPHLETS RECEIVED. — A Clinical Contribution to the Study of Post-Paralytic Chorea. A Contribution to the Study of Localized Cerebral Lesions. By E. C. Seguin, M. D. (Reprint.)

Habitual Mouth Breathing; its Causes, Effects, and Treatment. By Clinton Wagner, M. D. New York: G. P. Putnam's Sons. 1881.

Third Annual Report of the State Board of Health of the State of Rhode Island for the Year ending December 31, 1880.

Petition of the State Medical Society to the General Assembly in the Interests of State Medicine in Louisiana.

Hip Injuries, including Hip-Joint Disease, and Fractures of the Femoral Neck, Splint for. By De F. Willard, M. D. (Reprint.)

Hip-Joint Disease; Death in Early Stage from Tubercular Meningitis. By De F. Willard, M. D. Microscopical Appearances, with Cuts. By E. O. Shakespeare, M. D. (Reprint.)

What Shall we do with the Inebriate. By T. D. Crothers, M. D. (Reprint.)

Are all Anesthetics Dangerous which contain Chlorine, Bromine, or Iodine? By Edward T. Reichert, M. D. (Reprint.)

Original Articles.

CONTAGIOUS AND NON-CONTAGIOUS YELLOW FEVER.

BY THOMAS H. BUCKLER, M. D., OF BALTIMORE.

WHEN, in the summer of 1855, half the people of Norfolk died or disappeared from epidemic yellow fever, which is spread, carried, and communicated through contact of germs with morbid atmospheres, and not by contagion or infection, from the sick to the well, daily indirect intercourse was kept up with Baltimore.

I wrote out at the time the conditions on which this intercourse might be safely maintained.

The Bay Line of boats from Baltimore exchanged, every morning in Hampton Roads, near Fortress Monroe, and later in the season at a more remote point opposite the Ripraps, passengers coming and going by the steamer Coffee from and to Norfolk.

No restraint whatever was put on passengers going either way, and the result was that a large number sickened after reaching Baltimore, and of these, about seventeen, of whom special notice was taken, died, some of them in crowded and questionable localities, without in a single instance communicating the disease to any one.

Mr. T. died at —, when the hotel was unusually crowded, after an illness of five days, his room having, in a very marked degree, the peculiar odor of the disease.

A lieutenant of the navy died at a crowded boarding-house on the southwest corner of Charles and Fayette Streets.

A deck hand died on Fell's Point, in one of those human pig-sties described in the report of Dr. Chancellor.

All of these had been attacked within a few hours after their arrival from Norfolk, but in no instance was the disease communicated to a single inhabitant of Baltimore.

If a quart of air from about the Norfolk wharves had been carried in a closed box, and let loose near the Basin and docks, or over one of the slaughter-house drains running through the city, it might, by acting through catalysis on air prepared to receive it, have converted the whole surrounding atmosphere into its kind, and have produced thereby an extended epidemic of non-contagious yellow fever.

The Norfolk visitation was the true epidemic, non-infectious fever, which appears, as far as its past history shows, in cycles, at intervals of about seventeen years, and carries in its march a fearful mortality, far beyond that of any other known malady of modern times.

Propagated solely by the intermingling of morbid atmospheres or waters, it is carried from one seaport to another by taking, in sea-going vessels, the infected air or water from a port in which the disease exists, and thereby introducing the catalytic poison or germ into an atmosphere charged with the products of zymotic ferment, and where, like an air-plant, it finds elements on which to feed and propagate its lethal kind.

True epidemic yellow fever, clearly not contagious or infectious in the slightest degree, has, unhappily, been too often confounded with a less fatal, but contagious and infectious malady, which is also character-

ized by the phenomenon of yellowness, even more marked and constant than that of true typhus icterodes, in which latter the saffron color does not, in many cases, appear until after death.

Infectious yellow fever of an internal hemorrhagic character occurred amongst the free negro population of Baltimore from the first of April to the middle of July, 1846, and an epidemic of a like kind, also affecting negroes, happened in Philadelphia some years before. The cases came from every ward in Baltimore, and were so numerous that the spinning and other work-rooms had, for want of sufficient hospital accommodation, to be converted into fever wards.

I saw but two mild cases in whites, one an Irish girl, and the other the daughter of a prominent citizen. Several nurses, as well as my memory serves me, six in all, sickened, and of these two died. None but nurses took the disease, showing that its poison only had effect at short distances.

The whites of the eyes were deeply jaundiced in every case, and after death all the internal tissues usually white were found saffron-colored. Wherever loose cellular tissue existed, clots of blood, of greater or less size, were found extravasated. In the cellular plot-work of the lungs I observed in every case, out of dozens examined, masses of coagulated blood, from the size of a millet-seed to that of a pullet's egg, and in numbers too numerous to be counted, even in a single lobe. Blood was also effused into the connective tissue, between the mucous and muscular tunics of the stomach and intestines, in spots differing in color, but as well marked in shape and size as those on the stems and branches of the conium maculatum in its green state, but in no single case was there black vomit or other sign of decomposed blood passed from the stomach or bowels.

It appears, therefore, that while in this form of infectious yellow fever blood is only effused underneath, in the epidemic, non-infectious, true disease, of more common occurrence, it exudes through the mucous membrane into the stomach and intestines.

The disease carried to the alms-house spared neither age nor sex. Infants at the breast, old men and women, and those of intermediate ages suffered alike, the attacks increasing in mortality as the ages of men exceeded forty-five, but in women the adverse effect of age was less apparent.

The two whites, both women under twenty, and both of whom recovered, had a slight exanthematous efflorescence over the chest, upper part of back, and shoulders, but very sparsely scattered on loins and limbs. The same measly erythema happening in blacks would be hid from view by pigmentum nigrum.

In Stirling Street, occupied on both sides by Irish, German, and negro families, living in separate small houses, while all the negro dwellings were closed, every soul in them having been attacked and sent to the alms-house hospitals, I could not find, on diligent personal inquiry, that a single white was or had been sick with the peculiar malady. The Hanseatic tenement-house, occupied by seven negro families, and remote from Stirling Street, was also closed, all its inmates having been attacked and sent by city police to the alms-house.

The first cases of this disease having been brought from Ell Alley, back of the public stores, and near Gay Street wharf, gave rise to fear that the disease might have been imported, but this apprehension was

soon allayed by new cases dropping in from other parts of the town remote alike from each other and from Ell Alley.

It would appear, therefore, that a differential diagnosis ought in all cases to be carefully and clearly drawn between fever like the one just described, for which the isolation of individuals laboring under it, rarely required, might still be justified, and true epidemic yellow fever, typhus icterodes of systematic writers, in regard to the prevention of which extreme vigilance is so often required, and where in every case it is for the safety of individuals and communities so absolutely necessary to quarantine the vessels containing yellow fever germs or yeast in the air of closed compartments or in bilge-water, but where passengers and sailors may, without risk to a human being, be allowed perfect liberty to go beyond the ship or infected region when and where they please.

With this understanding the horrors of quarantine, growing out of the idea that restraint to individuals is necessary, would in the very large majority of instances be entirely avoided.

The evils and terrors connected with quarantine depend on the needless confinement of individuals, and not on the absolutely indispensable detention of vessels, and as a very general rule dry cargoes transhipped by wholesome vessels may be allowed to enter the port or ports to which they are consigned.

Nothing could illustrate more clearly the foregoing view, or furnish stronger proof of its correctness, than the following cases, and the circumstances surrounding them.

During the summer of 1855, when yellow fever devastated Norfolk, a family composed of four members, and four servants, went from Baltimore to Old Point Comfort, to spend the season, as had been their custom, in a cottage close to the water's edge, on Hampton Roads, and not twenty yards from the outer wall of Fortress Monroe.

They apprehended no danger, and having been informed by the officers of the fort that a strict sanitary cordon was, and would continue to be, enforced against Norfolk and Hampton, where fever also existed, they felt safer, with their ideas and opinions in regard to infection, than they could possibly be in Baltimore, whither, without restrictions of any sort, a number of people came every day from Norfolk.

The commander of the fort, believing that safety depended not entirely on distance, but rather on avoiding communication with any person or contact with anything coming from the infected region, would not allow the steamer *Coffee*, from Norfolk, to stop, as she had been accustomed to do, at the Old Point Pier for the daily receipt and dispatch of letters, packages, stores, etc., brought no longer direct from Norfolk, but only after having exchanged passengers and mails with the Baltimore boat lying in the roadstead.

For the convenience and dispatch of sending a row-boat from shore for letters, the *Coffee* was ordered to come to, and lie off in the open roads, at a point about a hundred yards from an extemporized platform on shore, to which ear boats could be moored, much nearer the fortress than the pier is, and directly opposite the cottage occupied by the Baltimore family.

From the open windows of a room looking on the water, and about forty yards distant from the point of transhipment, a mother and daughter, aged respectively about sixty and twenty years, watched for several days

the pitching of post matter and packages from the steamer to the row-boat and back.

As a matter of course, when the *Coffee* stopped, closed compartments containing the bad air shut up in them at Norfolk being opened to get things out, whiffs of it were sent by the breeze blowing in the direction of the cottage, to be breathed by these ladies, who were both seized the same morning with a slight chill ushering in yellow fever.

This looks as if the poison, whatever it may be, causing this disease acts catalytically, not only on atmospheres primed with the products of zymotic ferment, producing its like, but also directly on human blood, giving rise to ferment in it, and all the fearful array of phenomena characterizing yellow fever. Surely there is no other disease for the stamping out of which preventive medicine has so important a part to play.

The degrees of modern civilization in different countries may be measured better by the relative advancement each, compared with the others, has made in sanitary science, and its practical applications in architecture, engineering, and the arts generally, as applied to social life, than by any other scale offered by individuals or committees for the judgment of their peers.

To resume: both ladies having spent several consecutive seasons at this cottage, and being much beloved by the families of the garrison and people surrounding it, were from the moment of seizure under the tender and assiduous care of the physicians, officers, and women of the place: all, regardless of rest or personal convenience of every kind, did much and were prepared to do more, had time and opportunity afforded them the power. All the means and remedies so generally unavailing in this disease were used. When I saw them on the fourth day the mother was laboring under profound coma with stertor, and died the next morning. The daughter had dejections of dark decomposed blood from both stomach and bowels, and survived her mother only a few hours. It should here be noted that while all inside of the fortifications, and people outside of them, were exposed to the air immediately surrounding these unfortunates, before and after death, yet these two were the only cases which happened during that entire season at Old Point Comfort, or in its immediate neighborhood.

Was this disease communicable from the individual laboring under it, or would the same immunity have been enjoyed, had variola, rubella, or any other well-known infectious or contagious disease been introduced amongst a like number of unprotected men, women, and children?

A strict military cordon having been kept up, and nobody from Norfolk or Hampton having been allowed to land or come near the fort, how is it possible that these two ladies, the only persons attacked at Old Point, could have contracted the fever in any other way than by inhaling the whiffs of yellow fever air, let out from compartments which, having been closed in Norfolk, were, when the *Coffee* stopped, opened within ten rods of its victims?

These two cases having been thus contracted, while hundreds of refugees went directly from Norfolk to Baltimore, where many died without communicating the disease to a single human being, furnish irrefutable and conclusive proof that the people of Norfolk also contracted the fever from breathing the previously infected air of the place, and not from coming in contact with, or in proximity to, any one laboring under the

disease; that the air got sick first, by having had introduced into it yellow fever yeast, by a vessel from the West Indies; that the sufferers from it got ill from breathing the air on which the fever germ, poison, or yeast had already exerted its power of catalysis; and that additional strata of air were leavened successively is proven by the gradual enlargement of the disease-producing area, from day to day, the zone extending step by step, until it reached, at the close of the epidemic, a distance of five miles in every direction around Norfolk.

Excluding then the idea that this disease was propagated by either contagion or infection, we are forced to the conviction that the introduction into and spread of yellow fever amongst a community or family is due solely to the catalyzing elements contained in imported air or water, and that favored by a nutritive atmosphere charged with the products of zymotic or pestilential ferment, they synthetically blend and breed their like.

But sea-going vessels are not the only vehicles by which air impregnated with yellow fever yeast is carried from one community, plantation, or family to another.

The closed compartments of an express wagon, or of a railway post or baggage car, having been shut up in a fever-stricken town, and opened at the first relay, ten, twenty, or fifty miles off, may let loose the destroying angels that will, before a day has passed, produce legions of them, and yellow fever as a consequence.

An unseen enemy, of all others, excites always the greatest terror, and as the demon, yellow fever poison, can only, like the ghost of Hamlet's father, take psychologically the form of spectral hallucinations, or the more real shape of some unfortunate tramp or wretched wayfarer, the unreasoning country people having now imps, both actual and imaginary, to deal with, and being inspired by old Satan, and fear, the most vehement and brutal of all emotions, get out their shot-guns to warn him off or shoot him, if he comes in tangible shape, when the real enemy flanks them, by taking passage in the closed compartments of an express wagon or train to be let out in their rear, at some cottage, plantation, or farm-house, there to engender with air already polluted, and breed yellow fever.

Was the fever at Memphis true, imported, non-contagious typhus icterodes, or was it local, domestic, and self-originating? And did it resemble in other respects the yellow fever which was so fatal amongst the free blacks of Baltimore in 1816?

I incline to the opinion that there must have been at least a faint likeness, since true imported fever rarely happens, epidemically, two consecutive seasons in the same place.

In 1855 Norfolk lost half her population, but in 1856 she was entirely free from fever.

No doubt the eggs were there, producing other forms of zymotic disease, but to breed yellow fever, and leaven the loaf of bad air up to the epidemic standard, an importation of fresh yeast from the West Indies would have been required.

—Heschl, the successor of Rokitsky, as professor of pathological anatomy in the Vienna Medical School, was born in 1821, and took his degree in 1849. He was Rokitsky's assistant for four years, and afterwards was successively professor at Olmütz, Cracow, and Gratz. He was a good teacher. His *Compendium of Pathological Anatomy* was published in 1855.

THE INOCULABILITY OF TUBERCULOSIS.¹

BY WILLIAM F. WHESEY, M. D.

IN the paper this evening it is proposed to give a brief summary and criticism of the principal experiments which have been made with the view of solving what must be considered one of the most important questions of the day, namely, the inoculability of tuberculosis, a question not only of great theoretical interest but one of which the practical importance cannot be over-estimated, and the right solution of which, it is to be hoped, may give some indications for the prevention of this dreaded disease.

The possibility of the infection of one person from another has frequently been urged, and the cases of persons who have died from chronic lung diseases after long and faithful care of phthisical patients have been brought forward in support of this idea; but against this it has been argued that these were merely cases of coincidence, not to be wondered at, considering the great number of persons that die from such diseases, roughly estimated at one fifth of all deaths; and furthermore, if there was any connection between the two, it was merely that the second person had become debilitated by the long care, and thus was in a condition favorable for the development of the disease which was perhaps already there, through hereditary transmission.

The honor of having first attempted to advance the knowledge of the tuberculous processes by direct experiment is generally conceded to Villemain, who, in 1865, presented his first communication to the Academy of Sciences in Paris. Since then, the subject has been investigated from various points of view by the different experimenters, but all the experiments fall naturally into three classes, according to the way in which the tuberculous substance has been introduced into the economy of the animal; and a clearer understanding of the matter can be reached if each class is followed out separately, rather than if the simple chronological order of the whole is adhered to.

These three ways are, first, by direct inoculation of tuberculous material; second, by its introduction as food into the alimentary canal; and lastly, by allowing atomized particles to be inhaled.

The original experiments of Villemain² consisted in the direct inoculation of material which was taken from the lungs of persons who were said to have died from tuberculosis. The seat generally chosen for inoculation was behind the ear, and in some cases a seton impregnated with the material was allowed to remain in the neck. In all of the animals thus operated upon, tubercles were found not only in the lungs, but also in other organs. In 1866 he repeated his experiments, and obtained the same result. He also inoculated a rabbit from a cow, and from the first a second rabbit. In this manner he succeeded in inoculating guinea-pigs, but failed with dogs and cats. Tubercles were found in the lungs of the animals experimented upon after from ten to twenty days, and in the other organs in the fourth month. These experiments of Villemain aroused great interest, and were immediately repeated by a number of other observers.

Vogel³ made like experiments on various animals, a

¹ Read before the Suffolk District Medical Society, April 30, 1881.

² Villemain. *Gazette médicale de Paris*, December 16, 1865.

³ Vogel. *Deutsches Archiv für klinische Medicin*, 2 Bd., s. 364, 1866.

eat, a cow, and a colt, but with entirely negative results.

Herard and Cornil¹ recorded the entire success of their inoculation of two rabbits with true tuberculous matter, while the results were negative when inflammatory products were used.

Hoffmann² was enabled to produce milary tuberculosis in two rabbits after inoculation with cheesy masses.

Genodet³ gave a brief notice of inoculation with softened tuberculous masses, and found, when the animal was killed, five months later, a mass of cheesy and partially softened glands in the mesentery.

In 1867 Lebert and Weiss⁴ published an account of forty-four experiments, which were divided into groups according to the nature of the substance and the way in which it was inoculated. The first series consisted of eleven experiments on rabbits and guinea-pigs, and was by direct inoculation. In the second series pus was injected into the veins of two dogs. Eight animals formed the third series, and these were injected subcutaneously with the contents of phthisical cavities and sputa from persons suffering from chronic lung diseases. All the animals in these series died shortly after inoculation. Then came a series of eleven experiments in which lymph glands, sarcomatous and cancerous masses were used, and finally another series of eleven, in which charcoal or quicksilver was injected into the veins. In the lungs of many of these animals, in whatever way they were treated, there were found grayish or cheesy disseminated nodules, which were like tubercles in their histological structure, and from their having been produced under so many different circumstances, they were looked upon by the authors as due to inflammatory origin, and they were thus led to consider tubercle as the result of simple inflammatory process, and deny to it any specific character.

Waldberg⁵ published a series of experiments in 1867, in which he arrived at the same conclusions as Lebert and Weiss.

Petroff⁶ however, reported one case in which, after the injection of tuberculous material into the pleural cavity of a rabbit, there was found what he considered as true tubercles at the end of twenty days.

Langhans⁷ comes next, who made a step forward in that he chose the conjunctiva bulbi as a point for inoculation in order to better watch the sequence of events. The result was that after a certain period of incubation there appeared a number of small, discrete, white spots, entirely different in appearance from what was produced if simple masses of inflammatory detritus were used for the inoculation. Secondary nodules were found in some of the internal organs, but as these were often found to be intimately connected with parasites, he considered that the previous experimenters had not been careful enough in this regard, and that the subject could not be considered as definitely settled, although he himself believed in the specific nature of the affection.

Klebs and Valentin⁸ introduced tuberculous masses into the peritoneal cavity of animals. In three cases, in which, according to them, true tuberculous matter was used, there followed a tubercular peritonitis and then a general infection. In nineteen cases in which various other substances were introduced negative results only were obtained.

Cohnheim and Frankel⁹ in like manner obtained tubercles after placing pieces of cheesy material in the peritoneal cavity of guinea-pigs. Then particles from bodies which were not tuberculous were found to work equally well, and finally pieces of indifferent substances, such as paper, rubber, etc., gave rise, apparently, to the same products. The results of these experiments were interpreted at that time as supporting Buhl's theory that the origin of tuberculosis was to be found in some local cheesy deposit, which in these cases was formed about the material used. Later Cohnheim was led to believe that these results were from some accidental inoculation from an unknown source, as both he and Frankel were unable to repeat these experiments successfully in other places.

Chauveau¹⁰ records success after the direct injection into the vessels, and also from subcutaneous injection, of tuberculous material.

In 1873 Bollinger¹¹ obtained one positive result among eight animals, using cats, dogs, and goats for his experiments.

From this time the attention of experimenters was turned in other directions, and it was not until 1877 that any advance was made in the way of direct inoculation. In that year was published Cohnheim's¹² Hand-Book of General Pathology, in which he gives an account of some experiments in which he chose the anterior chamber of the eye as the seat of inoculation. A piece of freshly extirpated scrofulous lymph gland was brought into the anterior chamber of the eye of an Albino rabbit by means of a small linear cut through the cornea on one side. After a few days the opacity of the cornea and the aqueous caused by the operation cleared up, and the inoculated piece was seen lying clearly defined against the lens. Thus affairs remained for weeks, the only change noticed being that the piece became a little smaller. Suddenly at the end of from twenty to thirty days the scene changed; there appeared in the tissue of the iris a number of small, transparent, grayish nodules, which projected a little into the anterior chamber of the eye, and between which the iris was intensely and diffusely reddened. In the following days the number of nodules increased, while some of the earlier ones reached a millimetre in diameter. From this time the appearances remained stationary for several weeks in some of the cases. In others there appeared a severe keratitis, and the eye was lost with a general panophthalmitis. In these cases there was no cheesy focus formed about the inoculated mass, but the eruption of tubercle followed simply after a stage of incubation.

These experiments of Cohnheim have been repeated by Baumgartner,¹³ who at first was unsuccessful, but found that his ill-luck lay in the fact that the material which he employed was not perfectly fresh. In order

¹ Herard and Cornil. *La Phthisie pulmonaire*, Paris, 1867, page 110.

² Hoffmann. *Deutsches Archiv für klinische Medicin*, Bd. I, 2, 181, s. 110.

³ Genodet. *Gazette hebdomadaire*, 1867, N. 2.

⁴ Lebert and Weiss. *Virchow's Archiv*, Bd. 46, s. 14.

⁵ Waldberg. *Berlin klinische Wochenschrift*, 1867, No. 1.

⁶ Petroff. *Archiv*, Bd. 44, s. 120.

⁷ Langhans. *Übertragung der Tuberculose auf Karmichen*, München, 1868.

⁸ Klebs and Valentin. *Virchow's Archiv*, Bd. 44, s. 242.

⁹ Cohnheim and Frankel. *Virchow's Archiv*, Bd. 45, s. 216.

¹⁰ Chauveau. *Revue de Med. vet.*, 1872, page 337.

¹¹ Bollinger. *Archiv für experimentelle Pathologie und Pharmacologie*, Bd. 1, s. 356.

¹² Cohnheim. *Vorlesungen über allgemeine Pathologie*, Bd. 1, s. 607.

¹³ Baumgartner. *Berlin klinische Wochenschrift*, 1880, No. 13.

to obtain this he used the lungs of cattle which were killed on account of tuberculosis (the so-called pearly distemper), and brought a small quantity of this in a state of fine division into the anterior chamber of the eye. After fourteen days a true tuberculosis of the iris developed, followed in the course of three to four months by a general tuberculosis of the lungs, liver, kidneys, etc., accompanied by symptoms of general marasmus. From these animals others could be inoculated, and so on through several generations. If the eye was enucleated before the time for the appearance of the general symptoms the animal's life could be saved. Experiments were also made by introducing various other substances, but the result was merely a purulent inflammation, which was never followed by a general tuberculosis. From the necessity of finely dividing the tuberculous masses, Baumgartner thinks that the virus must be contained in the state of fine molecular division within them, and considers the possibility of some form of micrococcus being connected with it.

Such are the chief experiments which have been made with the end in view of the direct inoculation of tuberculosis; there are several other questions which have been incidentally touched upon which will be considered later, as they are also common to the two other classes of experiments.

The class of experiments which will be next considered is that in which the attempt has been made to produce infection by introducing tuberculous substance into the alimentary canal.

The first who experimented in this direction was Gerlach,¹ at that time director of the Royal Veterinary School in Hanover, and the results were published in 1869. He obtained positive results in five out of six animals—two rabbits, two swine, a lamb, and a calf—that were fed with the milk of a tuberculous cow (pearly distemper). The length of time which the animals lived after the commencement of the feeding was from forty-two days to three months.

Klebs² published a few experiments in which he used the milk from tuberculous cows for feeding guinea-pigs. In four out of five animals there were found cheesy masses, which were held by the author to be of tuberculous origin, in the mesenteric glands and liver. In two cases milk was given after boiling, and these were also found to be infected in like manner. The case of a dog is also given, which died with all the appearances of tuberculosis after he had accidentally taken for a long time the milk of a tuberculous cow. These experiments of Klebs do not seem to have been conducted with sufficient care, in that there is no record of any control having been kept on the experiments by feeding a like number of animals on milk which did not come from tuberculous cows, but otherwise leaving them under the same conditions.

In 1872 Bollinger³ made experiments by feeding eleven animals with masses from the lungs of tuberculous cattle. In the cases of four dogs and one lamb the results were negative or doubtful. In the case of five goats the result was a positive one, while in one animal, which was used to control the experiments, and which was fed on cheesy pus from the liver of a pig, the result was negative. As a conclusion from

this he formulates that feeding with fresh tuberculous masses from the lungs of cattle produces no tuberculosis in the carnivora, while the feeding of the herbivora with cheesy and fresh tuberculous masses produces a wide-spread tuberculous infection, which finds its anatomical expression in intestinal ulceration, hyperplasia of the intestinal follicles, marked swelling and cheesy degeneration of the retroperitoneal glands, and often in tuberculous eruption in the peritoneum, the liver, and lungs.

Against these experiments are to be ranged those of Colin and Friedlander,⁴ the former of whom denied entirely the infectiousness of the pearly masses from the cow, and the latter thought that the miliary bodies which were found in the course of his experiments failed to have all the histological characteristics of tubercles, and considered the whole process as one of chronic pyæmia.

Positive results were obtained, on the other hand, in 1877 by Orth,⁵ who employed rabbits, and introduced the substance by means of blunt forceps into the upper part of the pharynx, in one case the animal eating the tuberculous masses voluntarily. The experiments were so arranged that five animals were placed in a cage under the same circumstances, and four cages were used, in all twenty animals. In each set of five animals one received fresh masses from tuberculous cattle, one the same after it had been boiled for a few minutes, the third and fourth received raw and boiled cheesy masses from human subjects, while the fifth animal remained as control. In all four cages the animals which received the raw masses from cattle were found to be infected, as were also three out of the four which received the cooked; while those which had received the raw and boiled cheesy masses from the human subject, as well as the controlling animals, remained healthy. The lymph glands of the neck were found affected in all of the infected animals, having cheesy centres, and at the periphery presenting the characteristic appearance, both to the unaided eye and by the microscope, of tubercles. In the stomach of one and in the intestinal tract of the greater number of the affected animals were found ulcerations, in which were nodules resembling tubercles in their histological structure. In the animals which showed the slightest changes in the seat of inoculation there were found in the lungs discrete miliary nodules, which in the more extensively affected animals had formed solid masses, often with cheesy degeneration and cavities. These were subjected to a careful histological investigation under the direction of Orth, and were found in their structure, in the presence of giant cells, and in the absence of vessels, to correspond fully with the tubercles found in human lungs. In the liver, kidneys, pleura, and omentum, were also found similar tuberculous nodules. By a comparison of his results it was found that there appeared to be a certain time for incubation required before the gross appearances of tuberculosis were seen, which was about two months. Orth suggests that the infection is connected with bacteria, but was unable to demonstrate any.

Virchow⁶ began in 1876 a series of experiments, the results of which were published about a year ago. First of all he is inclined to doubt the anatomical iden-

¹ Gerlach. Virchow's Archiv, Bd. 51, s. 290.

² Klebs. Arch. für experimentelle Pathologie und Pharmakologie, Bd. 1, s. 163.

³ Bollinger. Arch. für experimentelle Pathologie und Pharmakologie, Bd. 1, s. 356.

⁴ Friedlander. Deutsch. Zeitschrift für praktische Medicin, 1874, No. 42.

⁵ Orth. Virchow's Archiv, Bd. 76, s. 217.

⁶ Virchow. Berlin. klinische Wochenschrift, April 5 and 12, 1880.

tity of the pearly distemper of cattle and tuberculous of man, on the ground that it has a tendency to calcification rather than to cheesy degeneration, forms enormous pedunculated masses hanging free in the serous cavities, and without the tendency to ulcerative destruction. His experiments were made principally with the end in view of proving whether the milk of animals affected with the pearly distemper could reproduce the disease when fed to other animals. His first objection to the experiments which have been performed up to this time is that the various chronic inflammatory processes which occur spontaneously in animals are not sufficiently well known even to veterinary specialists, and in pigs, which he used in considerable numbers, from their alliance to man through their omnivorous habits, serofulous glands occur so frequently, and their detection during life is a matter of so great difficulty, that results founded upon their presence must be accepted with great caution. The possibility of coincidence was also well illustrated by one case in which several animals were found to be tuberculous after having taken the milk for some time from a cow which was diagnosed during life as affected with the pearly distemper, but whose lungs were found filled with echinococci cysts at the autopsy. The only result which he thinks is justified from his experiments is that more animals were found to be tuberculous among a certain number which had been fed upon the "pearly" milk than among the same number which had been fed upon healthy milk. Further and varied experiments must be tried before the matter can be decided.

The last class to be considered is that in which the substance is brought directly into the lungs, either by direct injection through the trachea, or by allowing the animal to remain for a certain time in an atmosphere impregnated with fine particles of the substance by means of an atomizer. The first experiments of this kind were made by Lipp¹ by direct injection through the trachea. His original I have not been able to see, but from the citations of succeeding authors judge that his results were to him, at least, positive. At about the same time Tappeiner² published the account of his experiments, which were made upon eleven dogs, and were arranged in the following manner: A dog was placed in a cage about one cubic metre in dimension. About a tablespoonful of sputa from persons affected with tuberculous cavities was then diluted with water to 300 to 500 cc. of water, and then thrown into the cage by means of a large atomizer. The experiments were varied in the amount of fluid and the length of time to which the dogs were submitted to the inhalation. In general they inhaled once or twice daily for a period extending over three to four weeks. In all but one of these cases tubercles were found in the lungs, and in the greater portion of the animals in the other organs also, after the third week from the time of the commencement of the inhalation. A curious clinical phenomenon, and one which should have weight in determining whether this eruption of miliary granules is identical with that in the miliary tuberculosis of man, is the fact that the dogs, instead of becoming emaciated, held their weight, and in some cases even increased.

As arriving at a different result by employing the

same methods is next to be considered the work of Schottelius.³ He tracheotomized various kinds of animals, sixteen in all, and blew through the canula by means of a rubber balloon various substances reduced to the state of a fine powder. These were of two classes, — organic substances capable of undergoing decomposition, feces, and pus from a psoas abscess, and inorganic substances, lamp-black, cinabar, and precipitated Berlin blue. The result of the inhalation of the inorganic substances was simply to produce slight chronic interstitial changes which were without marked effect on the general economy of the animal, while on the other hand if the organic substances were used there followed an inflammation, with a tendency to destruction of the lung parenchyma, accompanied by circumscribed foci of inflammation in the lymph vessels and notable changes in the wall of the bronchi. In order to control these experiments he arranged a cage and atomizer after the manner of Tappeiner, and had four dogs inhale daily for several weeks (1) the sputa of phthisical persons, (2) sputa from patients who were not tuberculous, (3) finely rubbed up Limburger cheese, and (4) fresh calf's brain. In all of these there were found similar miliary granulations in the lungs, which, whether they were to be considered as tubercles or not, prove to him that the conclusions of the former experimenters, Lipp¹ and Tappeiner, in assigning a specific character to tuberculosis, were not justified in this regard, since a similar state of affairs could be produced by such different means. Whether or not this point can be proved by later experiments it will in no way detract from the value of Schottelius's work, of which the brief limits of this paper will not allow room for a sufficient abstract, but which should be carefully read by all experimenters in this field.

During the last year Tappeiner⁴ has repeated his experiments again, in the Pathological Institute in Berlin, with positive results. In the case where phthisical sputa was used tubercles were found in four cases, the anatomical diagnosis resting upon the authority of Drs. Israel, Grwitz, Friedlander, and Professor Virchow. In the cases where pus from ulcerating serofulous glands was used, and sputa from chronic bronchitis, the results were negative. In regard to the work of Schottelius he claims that he erred in injecting and allowing such large doses to be inhaled, for in this manner the substances all acted simply as foreign or putrid bodies; while in his own experiments the amount inhaled at one time was so small that no local reaction was produced at the time, and it was only after a period of incubation that the eruption of miliary granulations took place, which shows the specific character of the disease.

The same conclusions are supported by the observations of Bertheau,⁵ which were made on dogs and rabbits, and in which he was careful to use other animals for control.

In addition to these a book has been published within the last year by Professor Max Schuller⁶ on the experimental production of tuberculous and serofulous diseases of the joints. He used the method of injecting tuberculous material into the lungs, and finds that after the general infection of the animal the process

¹ Schottelius. Virchow's Archiv, Bd. 73, s. 524.

² Tappeiner. Virchow's Archiv, Bd. 82, s. 353.

³ Bertheau. Deutsch. Archiv für pr. Med., Bd. 26, s. 523.

⁴ Schuller. Experiment. Untersuchungen über d. Entstehung der rheumat. u. tubercul. Gelenkleiden.

⁵ Virchow's Archiv, Bd. 74, s. 393.

also localizes itself in a joint which may have been contused at the same time. The work is altogether too extensive to be gone into in detail, but his conclusions need to be confirmed by other observers, as septic and pyæmic processes are by no means excluded from his results. He has been aided by Reinstadler,¹ who has endeavored to cultivate the germs found in the tuberculous masses, and claims to have produced tuberculous by the intra-pulmonary injection of the results of these injections, their breeding.

CONCLUSION.

The conclusion which we are obliged to draw is that there is still uncertainty in the matter, considering that all the experimenters are not agreed in the results which they have reached. It is true that almost all have obtained an eruption of miliary bodies after injections, inhalation, and feeding with what was presumably tuberculous material; but the interpretation as to what these really were has differed with the experimenter, the one side holding that they were simple inflammatory products, the other that they were true tubercles. Then, again, allowing that they are tubercles, is the tubercle the result of a specific process, or is it simply one of the expressions of inflammation that may arise as the result of various irritants?

Taken by themselves the latest experiments of Cohnheim, Tappeiner, and Orth, who are perhaps the more worthy of belief in that they have been able to avoid some of the errors of the earlier investigators, seem to point clearly to the fact that tuberculous is an acute infectious disease, and Klebs has proposed for the nodules of syphilis, glanders, and tuberculosis the name of infectious tumors rather than that of granulation tumors, under which name they have been associated together by Virchow on account of their histological character; and Cohnheim has gone so far as to propose as a test for tubercle, not its histological structure, not its peculiar arrangement of cells of varying size, without vessels and with a tendency to cheesy degeneration, but its capability of inoculation.

But whatever may be the opinion of individuals, the mass of scientists have a right to demand more and clear proof, and it may confidently be expected, with the light thrown upon the subject already, that within the next five or ten years sufficient proof will be furnished to prove or disprove the question.

So much for the scientific aspect of the question; and while we are waiting for this solution of the subject there are hints thrown out in these experiments which may serve as guides in practice. It is with this in view that I have brought the experiments before you according to the ways in which the substance has been introduced into the body, and these, as you remember, are by direct inoculation, as food, and by inhalation. The first need not detain us. As to the second, there is little danger of directly eating tubercle it is true, but there is a disease of cattle which has only very slight anatomical differences from, and is believed by the greater part of observers to be identical with, human tuberculous; and if the results obtained by certain experimenters are verified it does not require a very acute mind to see the danger of infection that is run by all of us, but especially by children. Our present state of knowledge does not warrant us in getting up a popular excitement or scare on the

subject, but it behooves us as physicians to thoroughly investigate the source of supply when we place a patient upon milk diet, and above all when we wish that a weakly child should have the milk of one cow be sure that that cow is healthy.

The other possibility of infection lies in the atmosphere in the neighborhood of tuberculous patients becoming charged with particles by their expirations and coughing. And knowing how utterly powerless we are to cure the disease when once established, we should impress upon those in close attendance upon the sick person the necessity of holding their breath when duty or affection brings them into close proximity to the face of the sufferer, especially during the act of coughing. Also the great desirability of keeping a strong solution of carbolic acid or thymol in the vessels used for the reception of sputa from such patients, especially in hospitals, where the patients had perhaps best be kept in a separate ward.

A CASE OF ABDOMINAL ABSCESS IN RIGHT ILIAC AND INGUINAL REGION.²

BY E. W. CUSHING, M. D.

G. L., male, aged twenty-two, quadroon, slight, fair, of rather delicate health, but usually well, was employed in a publishing establishment.

As part of his duty he daily carried a bag of silver coin up a long flight of stairs; he never had any difficulty in doing this, but on January 22, 1881, having carried a weight rather heavier than usual, some forty pounds, he was seized with violent pain in lower abdominal region, so that he went home and went to bed, supposing that he had "strained something." For five days he kept his bed, having fever, abdominal pain, and difficulty in urinating, with much pain in region of bladder.

On the sixth day he went to work again, but could do nothing, and had to be sent home in a carriage.

On the seventh day I was called and found him somewhat feverish; the face anxious and drawn; able to walk with great difficulty and only by moving slowly, bent forward, and assisting himself by supporting the right thigh with both hands. The pain was referred to the right iliac region, and was especially severe after urinating. The urine was thick, muddy, having an abundant deposit of urates. Rest and warm applications with an infusion of triticum repens was advised.

The condition remained about the same until February 6th, the fifteenth day, when there was more decided fever, great pain, and a tumor formed in the right iliac fossa which became more evident on the next day, when Dr. Ellis saw the case in consultation and concurred in the opinion that suppuration was going on, and that the case was very serious.

On February 9th, the seventeenth day, Dr. Beach was called in consultation, particularly with regard to the question of attempting to open the mass in the right iliac fossa supposed to contain an abscess.

Dullness was now found in the right iliac fossa, five inches in length, parallel to Poupart's ligament, and two inches in width; the boundaries ill-defined; great tenderness on pressure; no redness; the skin not adherent; no signs of pointing. Nothing could be dis-

¹ Reinstadler. Arch. für exper. Pathologie und Pharmakologie, Bd. 11, s. 103.

² Read before the Suffolk District Medical Society, April 30, 1881.

covered by the rectum, except great tenderness on the right side of the pelvis. The pulse was 120; temperature not much elevated; appetite good.

Dr. Beach was not inclined to urge an operation, because he strongly suspected that some disease of the bone was at the bottom of the trouble, because there was no indication of adhesion between the skin and the tumor, no sign of pointing anywhere. Moreover the symptoms were not urgent, there was no general peritonitis, no failure of strength. There was a strong probability that any incision would open into the peritoneal cavity, and on the other hand a good chance that the abscess might open into the bladder or rectum, or pass under Poupart's ligament and open in the thigh. There was in fact great pain along the course of the anterior crural nerve; great tenderness and some swelling in Scarpa's triangle. The thigh measured one inch more, at this point, than the other thigh. Palliative treatment was therefore employed, cataplasms, injections with oleate of morphia, two per cent. solution; rest, morphia hypodermically, etc.

Four days afterward, February 13th, on the twenty-first day, the abscess broke into the bladder. The skin over it had never become adherent, and there was no sign of pointing externally. A large amount of pus was discharged with the urine, the tumor rapidly disappeared, and no point showed dullness any longer. The acute suffering of the patient was greatly relieved, and hopes of recovery were entertained.

Six grains of quinine were taken daily, with whisky, beef tea, etc. In three days there was slight improvement as far as regards strength, but still the temperature remained at the same point, 102° F., the pulse was always about 120, there was still a large discharge of pus with the urine; this, however, had no very bad odor. So the case dragged along for two weeks longer until at the beginning of the fifth week of the illness the patient grew worse. A slough formed under the right heel and another on the sacrum, the urine acquired a horrible odor, the strength failed, the pulse rose to 140. Finally on March 3d all pain ceased, patient thought he was dying, and sent for me in the night to say good-by. There seemed to be no special cause for this prostration, no chill at any time, only great pain in the right thigh and in urinating for the last few days. The quinine was increased to twenty-five grains daily, and for several days a pint of brandy daily was consumed.

The patient rallied, the back and heel were relieved by an air bed, poultices were applied continuously to Scarpa's triangle, where an attempt at pointing was apparent, and ten days later, on March 13th, an incision was made just over the suppurous opening. At least a quart of urine and foul pus was evacuated, a catheter introduced into the incision passed seven inches downwards and towards the sacro-iliac articulation. The whole cavity was washed out with phenyle and water, and this answered very well as a disinfectant. A large drainage tube, five inches long, was introduced and left in the wound, and supporting treatment continued. To make a long story short, the patient lingered three weeks with pulse ranging from 110 to 180, consuming fifteen to twenty five grains of quinine daily, with plenty of whisky and Miller's export beer, which is better than lager for such cases. The wound was daily washed out, and the great slough on the sacrum treated with ichthodol. The liver was observed to be hugely enlarged, the lungs normal, emaciation terrible.

On April 4th the patient died, after terrible suffering, ten weeks and two days from the first signs of trouble.

The autopsy was held twenty-four hours after death. The heart and lungs were normal; immense slough over sacrum; the kidneys largely swollen, cloudy, hyperemic; the liver hugely enlarged, fatty, yellow; no general peritonitis; in region of cæcum the intestine was adherent to the lateral abdominal wall; the drainage tube lay in a channel passing down towards the spine, crossing the common iliac vessels, and lying on the psoas; no dead bone could be found anywhere in connection with this tract. Deeper down in the pelvis the bladder had a perforation opening into a sloughy cavity which extended down to the sacro-iliac synarthrosis; this was denuded, as was also the ramus of the ischium; the finger could be passed down and out of the pelvis, under the ramus, passing into another sloughy cavity outside the pelvis, in the thigh; the lining of the bladder was very sloughy. On opening the thigh a huge cavity was found connecting indirectly with the original point of incision, and directly with the pelvis under the ramus of the ischium. The whole acetabulum and head of the femur, with the trochanters, was denuded and carious; the cavity extended nearly to the knee and posteriorly into the buttock, and was full of foul pus and sloughy tissues. It could not be washed out by the drainage tube, and was apparently formed by the urine sinking in the pelvis, passing out of the latter under the ramus, and then destroying the inter-muscular connective tissues very extensively in the thigh, hip, and buttock.

It is hard to see how any practicable counter-incision or system of drainage could have prevented this, and yet it would seem that it was the extravasation of urine and the consequent destruction which carried off the patient rather than the original abscess first felt in the right iliac fossa.

There are several points of interest connected with this case, and first as to the probable advantage which might have been derived from an incision in the iliac region. It did not appear from the autopsy that there was any denuded bone above the pelvis, the intestine was not perforated, the appendix was normal, there was never any great derangement of the action of the bowels.

An incision carried down to the tumor would probably have opened the peritoneal cavity, although possibly it could have been made external to and behind it; in that case there is some chance that the patient would have weathered the attendant risks of cellulitis and peritonitis, and escaped.

After the abscess opened into the bladder it soon became evident that it was not fully discharging its contents, and that in all probability urine must be escaping into the tissues. Now if some means of draining and washing out the cavity could have been devised before the injury became too extensive, the patient might have recovered. This question must come up, not infrequently, in connection with wounds and injuries of the bladder, and abscesses opening into it, and with modern advances in antiseptic surgery it might be possible to do something. Especially in cases of women an opening into the vagina drains the pelvis readily, and in this case the urine had worked its way under the muscles and was pointing at the inside of the tuberosity of the ischium when death occurred. An attempt was made to keep a catheter in the bladder, but it was not tolerated. The

effect of large doses of quinine, twenty-five grains daily, was very marked in this case, prolonging life apparently for several weeks after the patient was almost moribund; in cases not necessarily fatal it must often have the power of tiding over the critical time until convalescence can set in. During the last week a pellicle of oil was observed several times on the urine, and although nothing in amount to compare with a case of oily urine which I recently reported, it was correctly held to indicate extensive destruction of tissue by the urine. If the patient had not been already so emaciated there would probably have been more oil observable on the urine.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.¹

BY D. H. HAYDEN, M. D.

TREATMENT OF PLEURISY IN CHILDREN.²

At a meeting of the New York Academy of Medicine, held March 24, 1881, Dr. J. Lewis Smith read a paper on the above subject, in which he spoke of the treatment appropriate to each of the three stages:—

(1) The stage which precedes the effusion; (2) the stage of effusion; and (3) the stage of absorption and convalescence.

In the beginning of the disease measures should be adopted which are appropriate for reducing inflammation and limiting exudation. The abstraction of blood, in idiopathic pleurisy, may be beneficial if judiciously employed, but only one or two or three leeches should be employed in a robust child two, three, or four years old. As a rule, the loss of blood is injurious in all cases of secondary pleurisy, such as follows scarlet fever, etc., and also if the quantity of effusion is great. Emollient and simply irritating poultices are serviceable in the first stage, and he recommends a mixture of one part of mustard to sixteen of linseed. It should be made very wet, spread thin, applied over the chest in front and behind, covered with oil-silk, and changed twice in twenty-four hours. For children under six or seven months of age rubbing the chest with camphorated oil and applying a simple poultice may be sufficient.

Blistering at this early stage of the disease should not be employed, as it increases the inflammation, and Dr. Smith has seen a case which terminated fatally, in which there was found an increased area of inflammation corresponding exactly in situation, size, and shape to a blister that had been applied.

The indications for the use of internal remedies in the first stage are to diminish the frequency of the pulse, relieve the pain, and allay the cough.

To a child *three* years old the tincture of aconite may be given in doses of half a drop, and for a child *six* years old in doses of *one* drop every three hours for two or three days. In the first stage of primary pleurisy the cardiac sedatives may be used; but digitalis is a safer and better remedy in all other cases, and it also can be used in the second stage.

To a child two years old the tincture of digitalis may be given in doses of *one drop every three hours*, and to a child five years old *two* drops with the same interval. An opiate is ordinarily required: Dover's

powder, one to three grains, every three hours. Hyoscyamus may be used to relieve the pain and cough; digitalis may be combined with an opiate, and morphine and aconite may be combined. In secondary pleurisy digitalis is preferable to aconite.

In the second stage, unless the effusion is small, measures designed to remove it are required. The propriety of using blisters in this stage is very doubtful. A relaxed condition of the bowels favors absorption of serous effusion. Diaphoretics do not aid much in the removal of fluid. Pilocarpine produces a depressing effect, which renders it unsafe.

Diuretics and tonics are beneficial. Digitalis, with the acetate of potash, is very serviceable.

R̄ Infus. digitalis ʒiv.
Potass. acetat. ʒi. M.

S. Teaspoonful every three hours to a child four or five years old.

Bitter tonics are especially useful in this stage, and the acetate of potash may be combined with a decoction of cinchona with good results. A full amount of nutriment should be taken, with but little fluid. Of course, the suggestion to use a dry diet and diminish the quantity of drink is not applicable to young children. If the appetite and the general health are good, and there are no symptoms due to the presence of the fluid, but little medication is necessary. If there are such symptoms and the fluid does not disappear, the question of surgical interference arises, and the indications for it are the following:—

(1.) Oppressed breathing, due to the liquid present, whether it be sero-fibrinous, purulent, or hæmorrhagic.

(2.) If there be flat percussion-note over the entire affected side, with displacement of the heart, even if there be no dyspnoea, for the latter may occur suddenly.

(3.) Moderate effusion, without material decrease in quantity by absorption after some weeks of treatment. There is danger that catarrhal pneumonia, terminating in cheesy pneumonia and tuberculosis, may occur in portions of the compressed lung. Besides, the longer the lung is compressed the slower will it return to normal expansion after the pressure has been removed.

(4.) A moderate quantity of fluid coexisting with disease of the opposite lung, or of the lung of the affected side.

(5.) Extension of the inflammation to the pericardium. Pericarditis as an extension of the inflammation is not infrequent.

(6.) The existence of valvular disease of the heart.

(7.) The presence of pus, empyema.

Dr. Smith recommends the eighth intercostal space, perpendicular to the angle of the scapula, for the place of puncture. The thickness of the thoracic wall is one half inch; in emaciated children it is less. Introduction of the canula to the depth of one inch is sufficient to pass beyond the exudation and allow the liquid to flow through the canula. Dr. Smith does not mention the operation of making a permanent opening, except to speak with disfavor of ever excising a portion of the rib for this purpose. Washing out the cavity he disapproves of as unnecessary, except where the pus is offensive.

ON MILK-INDIGESTION IN YOUNG CHILDREN.³

Children who are brought up in the usual way, upon milk and milky foods, may suddenly begin to ex-

¹ Concluded from page 57.

² New York Medical Record, April 9, 1881.

³ Eustace Smith, M. D., F. R. C. P. London, British Medical Journal, June 4, 1881.

hibit symptoms of indigestion, which renders an immediate change in their diet indispensable if serious consequences are to be avoided. In hand-fed babies this unfortunate accident is common enough, and the mortality amongst such infants may be in a great measure attributed to it. The same thing may occur, however, in children who have been weaned at the usual age, and it is therefore sometimes met with in young children twelve or eighteen months old.

The inability to digest cow's milk is usually a temporary infirmity, arising from some casual derangement of the stomach and bowels. In other and less common cases the fault is in the milk. Thus infants who are weaned very young often find cow's milk to be beyond their powers of digestion, and unless special precautions be taken to adapt it to their immature organs serious consequences may ensue.

Other causes may make cow's milk appear to be indigestible. Thus the child may be overfed, its meals being too large or too frequently repeated; or the feeding apparatus may have been neglected, so that fresh milk put into a dirty bottle may have begun to ferment before the child swallows it. These causes may, however, be put on one side. The kind of milk-indigestion now spoken of is that in which, for whatever reason, a perfectly pure, fresh milk, given in suitable quantities, and with all possible precautions to make it digestible, is found to disagree. The author divides the general symptoms into three classes, according as to whether the prominent feature is constipation, vomiting, or diarrhoea. Cases where *constipation* is a marked symptom are generally found amongst young infants. The motions are scanty and rare. The bowels sometimes remain confined for twenty-four hours or longer, and when they are at last relieved hard, clay-colored balls, stained with green mucus, are expelled with great effort and straining. These balls consist of masses of hard curd.

A full dose of oil, which clears away the curd, allays the symptoms for a time, but usually, if the milk diet be continued without any change, they return in a day or two, and the child is in the same distress as before.

It is usually in cases of artificial feeding that these symptoms are found; but sometimes, although rarely, we see them in children who are nursed at the breast. When the indigestion is due to catarrh of the stomach it is readily amenable to treatment. All that is necessary is to put a stop to the milk for a day or two, and to clear away undigested curd by a full dose of castor oil. It, however, the fault be in the milk, and not in the digestive organs of the child, some change in the method of feeding is indispensable.

The author reports a curious instance of this difficulty in a boy seven months old. The child had been suffering for some weeks from severe abdominal pains; his bowels were very confined, and the motions consisted almost entirely of curd. He was taking nothing but the breast. Aperients had been found to relieve the child for a time, but the symptoms always returned when the effect of the purgative had passed away. Whenever the breast was stopped for a few days he immediately improved, but relapsed as soon as suckling was resumed. The child was evidently suffering from inability to digest the curd of his mother's milk, and it became a matter of the greatest importance to do so, otherwise he would have to be weaned, and fed in a different way. Attempts had been made by medication of the mother and modification of her

diet to alter the quality of her milk, but without success. The intervals between the times of suckling were increased; alternate meals of barley water were given from a feeding-bottle, and the quantity of milk taken in the course of the day thus diminished. No improvement, however, followed, but the griping and fretfulness continued. The plan was at last adopted of giving the child barley water from a bottle immediately before he took the breast. This method succeeded perfectly, and the child had no further unpleasant symptoms. In this instance the infant's stomach was in a perfectly healthy state. The fault lay in the mother's milk, which was too heavy for the child's power of digestion. Should this happen in the case of a wet-nurse the nurse must be changed, or the child be weaned and brought up by hand.

In the large majority of cases of milk-indigestion in infants reared at the breast the fault is in the digestive organs of the child, an attack of gastric catarrh having rendered him, for the time, incapable of digesting his mother's milk. In these cases the indigestion is a temporary failing, and is easily remedied by suitable treatment. Without judicious management the derangement may be prolonged indefinitely, and it not infrequently happens that the mother is ordered to wean her baby under the mistaken notion that her milk is unfit for its support.

In cases of gastric catarrh, where the complaint is acute and severe, *vomiting* is usually the most prominent symptom. Under such circumstances milk becomes a positive poison. The author reports a case of this kind in an infant two months old. She had been brought up by hand, and was being fed upon milk and barley water in equal proportions. The child was ordered to be kept warm and perfectly quiet. A weak mustard poultice was applied for an hour to the epigastrium. The milk was stopped, and the child was fed with weak veal broth and thin barley water mixed together in equal proportions, and given cold, at intervals, with a teaspoon. A few drops of brandy were given occasionally, as seemed desirable. The progress was steady to recovery. The most important part of the treatment was the substitution of veal broth and barley water for the milk. Directly the supply of fermentable matter was stopped, fermentation ceased, acid was no longer formed, and the digestive organs returned to a healthy condition. In contrast to this acute case the author then reports a case where the complaint was chronic, the inability to digest cow's milk having extended over a lengthened period.

Gastric and intestinal disorders, like the second case reported by the author, often date from the time of weaning, a catarrh of the stomach being set up by the abrupt change from human milk to artificial feeding. Such cases are readily treated, however severe may be the vomiting, by restricting the diet to equal parts of veal broth and thin barley water, given cold in small quantities at a time, by warmth to the belly and extremities, by perfect quiet, and by suitable remedies. According to Dr. Smith the best sedative is liquor arsenicalis, half a drop for a dose, given with a few grains of bicarbonate of soda in some aromatic water. After a few days of such treatment the power of digesting milk usually returns, but at first it should be given sparingly, freely diluted with barley water, and only once or twice in the day.

The class of cases in which *looseness* of the bowels is the prominent symptom is then described by the

author. The stools are not at first watery; for a time the motions are semi-solid, and have the color and consistence of putty. There ensues a gradual loss of flesh. If proper treatment be not resorted to the case becomes one of obstinate chronic diarrhoea, or else the child falls an easy victim to some intercurrent disease.

Such cases in the early stage are often spoken of as cases of "inactive liver," the white stools being supposed to be merely the result of insufficient biliary secretion. Cholagogues are, however, in such cases quite useless. A dose of gray powder produces, perhaps, one dark stool, but afterwards the motions are of the same character as before. When a chronic diarrhoea is regularly established the cases are often called "consumption of the bowels." It is needless to say that they have no relation at all to "consumption," but are a purely functional derangement, a chronic catarrh of the bowels, excited and maintained by undigested food. The post-mortem appearances, except for the wasting of all the tissues, differ very little from those in health, but in long-standing cases we may find ulceration of the bowels. There is, however, no sign of gray tubercle.

The author reports a typical one of these cases in a young girl, aged fourteen months, with an intestinal catarrh and gradual loss of flesh of two months' duration. The treatment adopted consisted of exclusion of milk from the diet, and the child was fed with whey and cream, veal broth and barley water, yolk of egg, and Mellin's food dissolved in barley water. She took at first an alkaline solution of iron with half a drop of liquor arsenicalis in each dose. This was afterwards changed to quinine dissolved in iron wine, and cod-liver oil, and it was not long before the child was convalescent.

In all cases of functional derangement in children the tendency is to recovery if nature be allowed her way. This is especially true of derangements affecting the alimentary canal. If the irritant, whatever it may be, which is the cause of the disturbance be removed, the organs quickly resume the normal exercise of their functions. Unfortunately, well-meant efforts to relieve the distress are often themselves the cause of its continuance. The child is weakly and wasting, therefore he requires nourishment, but the utmost care must be exercised in selecting the kind of food to be given. To continue the supply of fermentable food when the stomach and bowels are already filled with the products of fermentation is a certain way of hindering the patient's restoration to health. If, on the contrary, we cut off the supply of fermentable matter, unless the strength be too much reduced, recovery follows as a natural consequence. In such cases milk and the ordinary farinaceous foods must, for a time, be withdrawn from the diet. The best substitutes are those which have been mentioned, namely, weak veal broth and barley water, in equal proportions, cream and whey, a dessert-spoonful to four ounces, yolk of egg (beaten up, in the case of infants, with whey or veal broth), and Mellin's food for infants, dissolved in barley water or in equal parts of this and whey. Veal broth or chicken broth is better than beef tea, for the latter is often irritating to the digestive organs of young children, especially if there be any diarrhoea.

Sometimes when cow's milk cannot be digested ass's or goat's milk is more successful, and sometimes a child, much reduced by digestive disturbance dependent upon

an unsuitable dietary, at once recovers when put again to the breast. More often, however, milk of any kind seems to act as an irritant poison, and no hope of relief can be entertained until it is excluded from the diet.

Hospital Practice and Clinical Memoranda.

AN UNUSUAL CASE OF STRANGULATED HERNIA.

BY GEORGE JEWETT, M. D., FITCHBURG.

WAS summoned at midnight, April 9, 1881, to visit a patient of Dr. W. H. H. Shepard in Westminster, from whom I learned the following facts:—

The patient, Mr. Perkins, was about fifty-five years old; had left inguinal hernia for many years, for which he had worn an ordinary truss with perfect relief until within the past four months, since which time the use of truss was unsatisfactory, and he became aware that the hernia could not be fully reduced. April 7th went to bed well; on the morning of the 8th felt pain at epigastrium, with nausea, when the hernia appeared in an unusually large volume, filling the scrotum. He observed it was larger and harder than ever before, but reduced it entirely, as it seemed to him, without much difficulty. He remained quiet the remainder of the day, nothing occurring until the afternoon of the 9th, when the hernia reappeared larger and harder than ever, and could not be reduced. He soon sent for his physician, who also failed in taxis. At time of my visit there was prostration, nausea, but not much vomiting. The tumor was large, very hard, and not resonant, nor markedly tender. Without effort at taxis I introduced an aspirator needle, and drew, by estimate, about five ounces of bloody serum, which soon coagulated upon standing. Decided to give opiates, apply ice, and wait till morning. Nine A. M. Patient had nausea; not much pain; had slept some; hands and feet cyanosed and cool; nose and ears cool; was evidently sinking. The hernial tumor was still larger, apparently solid. The patient etherized, instruments and hands carbolized, I proceeded to operate without delay. The tissues covering sac were much infiltrated. On opening the sac a jet of bloody serum spurted freely, and a coil of intestine, livid in color, was exposed; two or three long, well organized clots were floating in the serum.

A careful examination of the strangulated gut showed the serous coat had been stripped off for a space one inch in width and two in length. The outer margin revealed a thickened mass of lymph, which had glued the intestine to the scrotal wall, and recently had been torn from its connections. A bloody serum oozed from the abraded surface. The stricture was high up, and when relieved the intestine could not be fully returned. Exploring the region of the obstruction, I found a fibrous band binding the intestine to the abdominal wall as far as I could reach. This I carefully separated as far as possible with my index finger, cleansed and carbolized the parts, and returned the contents to the abdomen without further difficulty. The cut surfaces were carefully cleansed, and as the wound was partially closed the patient began to cough, when considerable bloody serum and clots were forced from the abdominal cavity. After some further delay

the dressing was completed. The patient made a good recovery, and a month or thereabout after expressed himself in good condition for business.

New Instruments.

ON THE USE OF JENNISON'S TUBE.

BY J. VINCENT SMITH, M. D., MELROSE.

THE accompanying engraving gives a very good idea of a new instrument for intra-uterine injections, invented by Mr. C. R. Jennison, of Boston, about two years ago, which greatly reduces the dangers of a very useful method of treatment of some of the morbid conditions of the body of the uterus.

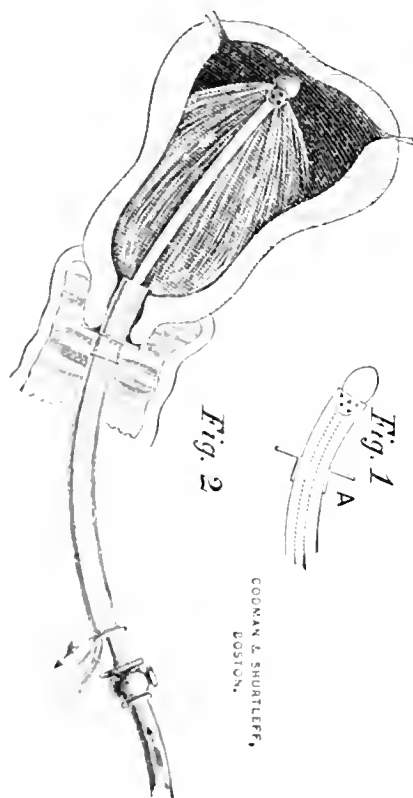


Figure 1 shows the tube as it should be when introduced; Figure 2 when *in situ* and operating. It consists of a curved canula, A, on which is a sliding gauge, B, by means of which the distance that the canula is introduced into the uterus may be known. C is a tube connecting with a Davidson syringe at one end and terminating at the other in a bulb, having lateral openings which are covered by the canula when in position for introduction. When the instrument has been introduced to the desired distance the tube is advanced toward the fundus and the fluid injected. The openings are of fine calibre and so made that they throw the liquid obliquely backward. Some of the advantages of Jennison's tube are: that the preliminary dilatation of the cervix is not required, the canula affording a very free exit for all the fluid that can be forced through the tube, and therefore the injection may be used at once when occasion demands; that it prevents the fluid from striking the fundus, and that the fine openings so pulverize it as to preclude the possibility

of its striking any part forcibly; that it may be used in cases of flexion where it is not safe to use injections by ordinary means even after dilatation.

Topical applications in the form of injected fluids undoubtedly afford the most effectual agency for treating the leucorrhœa that results from a granular condition of the mucous membrane. The effect is more uniform and efficient than can be attained by the use of crayons, solid agents, or cotton wrapped about a sound and saturated with the remedy, as recommended by Playfair, for the latter either act unequally or become so coated with mucus as to be rendered inert. But this method of treatment has been followed by bad results in so many instances that it is now seldom used except in cases of metrorrhagia. The principal cause of these results, however, is that the fluid is prevented from escaping freely, either by a return of the flexion, where flexion exists, or by contraction of the cervix, which may take place when fluids are injected into the uterus even though it has previously been thoroughly dilated.

To avoid the danger that attends the use of intra-uterine injections the fluid must not impinge the fundus, it must enter the uterus in fine jets in order that it may strike the inner surface with the utmost gentleness, and a perfectly free exit must be provided so as not to distend it. These requirements are fulfilled by the invention of Mr. C. R. Jennison. I have used this tube in a large number of cases without having seen any disagreeable results whatever from its use, and I commend it to the attention of the profession as a valuable addition to the armamentarium of the gynecologist.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

ANNUAL meeting April 30, 1881, Dr. F. W. DRAPER in the chair. Seventy-nine members present.

Dr. W. F. WHITNEY read a paper entitled *The Inoculability of Tuberculosis*. Vide page 75 of the JOURNAL.

Dr. E. W. CUSHING said that although it would be impossible to arrive at any exact conclusion from the experiments detailed by the reader, he agreed that it was incumbent upon the physician to caution any one inhaling the air expired by a tuberculous person. There was a wide-spread belief among the laity that tuberculosis was contagious, and he thought that almost every one in active practice had seen cases which seemed to support this theory, even if not sufficient for proof.

Dr. E. W. CUSHING reported a case of abdominal abscess in right iliac and inguinal region. Vide page 79 of the JOURNAL.

Dr. H. W. BROUGHTON asked if the large doses of quinine had given rise to any disagreeable symptoms.

Dr. CUSHING replied that some tinnitus aurium had been complained of from twenty-five grains, which disappeared when the dose was reduced to eighteen grains.

Dr. F. C. SHATTUCK said that his experience had led him to the same conclusions with regard to the tolerance of and benefit from large and continued doses of quinine in some cases; he instanced a case of em-

pyema bursting into a bronchial tube, in which ten grains were given thrice daily for more than a fortnight, before any ringing in the ears was noticed. The patient finally recovered completely, and it certainly seemed as if the quinine tided him over a very critical time.

Dr. G. H. LYMAN spoke of the use of hydrobromic acid as a solvent of quinine, and stated that it diminished the unpleasant effects of quinine. He did not consider twenty-five grains a particularly large dose to administer per diem in a case where there was any septic element to contend against.

Dr. D. HUNT called attention to the fact that blindness and deafness were both known to occasionally follow the use of quinine in doses much smaller even than had been mentioned by the previous speakers. He thought that often other tonics might be used as succedanea which did not have this demerit.

Dr. LYMAN remarked that he had often used salicylic acid in large doses in place of quinine, but had found the same unpleasant effects; referring to Dr. Hunt's remarks, Dr. Lyman thought the danger of giving quinine was rather in its long continuance, even in small doses, than in cases where we had to deal with such a disease as septicemia; personally he should fear the effect of one grain thrice daily given merely as an ordinary tonic more than sixty grains where there was septic condition to counteract.

Dr. WATERMAN asked if it might not have been possible to drain the abscess by keeping a catheter in the bladder.

Dr. CUSHING replied that the idea was entertained at the time, but found impracticable on account of the swelling and tenderness of the urethra.

Dr. T. S. BILLINGS, M. V., present by invitation, read a paper entitled *The Foundation of Veterinary Institutions in the United States*, of which the following is an abstract:—

Veterinary like human medicine traces its descent from the Aryan people, Choraha, one of the earliest of Hindoo medical writers, having been accredited with writing upon animal diseases. The history of veterinary medicine may be logically divided into two periods, the ante-scholastic and the scholastic, the first extending from the earliest dates of medical history to the year 1762, which marks the introduction of the second with the foundation of the first veterinary school at Lyons, France.

The schools of Europe are all governmental, founded, funded, and controlled by the respective governments. Those of Britain, like our medical schools, are private and, in a certain sense, irresponsible institutions. The cause leading to the establishment of the European schools was not, as many might suppose, the desire to educate a large number of practical veterinarians, but they were called into being to educate men capable of studying into the source and nature of those terrible animal pests which had been the scourge of Europe for centuries, and against which the practical empiricism which had until then existed had been proven to be powerless.

In this country we are still over a century behind the best countries of Europe in reference to veterinary medicine. We have not only to make laws for the suppression of contagious diseases, but to supply means for the education of young men suitable to execute them. While the countries of Europe had only to face the question of the suppression of the strictly pure animal pests, the progress of time has developed a new and very

important field for the veterinarian of our day, which is not of secondary importance to the former, namely, his part as a public hygienist in the study of the nature of those diseases of our animals, and diseased conditions, which bear an important relation to the public health, such as anthrax, tuberculosis of cattle, milk supply, trichiniasis, etc.

In this country we have also another very important question to consider, which those of the continent of Europe have escaped, namely, whether it is more likely to best serve the public good that laws for the suppression of the contagious animal diseases be of a national or state character, and the same is true of schools or a school for the education of veterinarians.

The fact of the transportability of diseased animals, and the natural desire of drovers to rid themselves of such, and the danger of the extension of infectious diseases by this means, makes it at once apparent that state laws, with their natural nonconformity, can never realize the desired end; hence it seems best that a national code of laws, leaving the execution of the same to the state authorities, is the only plan by which this end can be attained. Those veterinary hygienic laws which have to do with the prevention of human diseases may naturally be left to the respective States. The question of a national as opposed to our present plan of chartered private schools for the education of veterinary students is one which should also have serious consideration, and which must result in favor of a national school, to every unprejudiced mind. The evils which now exist with reference to our medical schools can only so be avoided. We should then have but one standard of education, and the public would have the best means possible of knowing that the American educated veterinarians had received something like a uniform education. The sad rivalry for students which now exists between medical schools could not then come to pass, and the country could not then be flooded with a whole army of incompetent practitioners, as is now the case in human medicine.

That the medical profession occupy a very responsible position in influencing the people and legislation in regard to these questions is indisputable, and it is to be hoped that it will not be found wanting as to this duty.

Officers were elected for the ensuing year.

PROCEEDINGS OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

STATED meeting second Thursday of May. Vice-President Marcy in the chair.

Dr. MARCY read by appointment a paper on *Abdominal Surgery*. The grand advance which general surgery has made during the last fifteen years he attributed in part to a better knowledge of diseased processes, and preëminently to such practical researches as those of Professor Lister. Until the present century, gastrotomy was limited to exigencies requiring the delivery of a child by abdominal section, and to operation for strangulated hernia. The triumphs of the ovariologist have done more than all other combined causes to remove the fallacious opinion, so long and universally held, that the peritonæum was sacred from the surgeon's knife. "Now, with suitable precautions, the peritonæum is subjected to surgical manipula-

tions almost without fear or danger;" but hereas elsewhere must be combined "that much rarer talent, a discriminating judgment and sound common sense, to be exercised as to the *where and how* of operative interference, supplemented with a belief in and familiarity with the antiseptic treatment of wounds."

First, operations confined to the abdominal wall, including wounds, which should be carefully closed, after attention has been given to the underlying cavity and contents. Second, exploratory incisions, freely practiced to gain surer information of the condition of organs; and still again, operations undertaken for the various hernias, the many failures in which have always been an opprobrium of the surgeon.

Antiseptic surgery is believed to offer a sure and safe cure for hernia. An operation devised by the author was illustrated by the following report:—

Mrs. M., fifty-five years of age, had had several children, had presented umbilical hernia since birth of a child, eighteen years before; sometimes troublesome but generally cured for without difficulty; had never worn truss. Abdominal walls very fat. Finally, had an attack of unusual distress and could not reduce the tumor. First seen by the doctor after twenty-four hours. In bed, suffering severe pain, tumor of size of a small orange, tense, gurgles on pressure, surface red and abraded from efforts at taxis. Failing in manipulation, gave ether, dissected superjacent tissues from sac covering tumor, and, opening the ring, attempted reduction without entering the peritoneal cavity. Failing in this, cut open the sac, which contained, *inter alia*, a coil of intestine four inches long, of a dark purple color. Intestines were generally much distended with gas, and gave trouble by protruding at the wound. The sac was excised, the peritoneum carefully adjusted with (caribou) carbolized suture, deep silver suture added with the lead button, and the superficial wound was closed by silk, a drainage tube being placed in the pocketed wound; the entire operation being done under the completest antiseptic protection.

Nausea and vomiting ceased at once after the operation, and the record of a week following showed the thermometer at no observation to exceed 100° F., at the end of which time the pulse was 84, and the temperature 99.4° F. Hereupon, removed drainage tube and button sutures, retaining the wire loosely twisted. Wound completely closed, and dressings scarcely stained. Slight troubles appeared a few days later, but the patient made a good recovery, and the operation was a success.

This is illustrated an operation first done by the writer in 1870, and since many times repeated with the happiest results. It consists in exposing the rings, refreshing the parts, if the sac is large, generally excising it, carefully bringing the peritoneum into coaptation with the continuous suture of catgut, closing the rings in a similar manner, and pocketing by external sutures. The catgut not only holds the parts in favorable apposition, but is replaced by connective tissue, thus furnishing bands of permanent reinforcement. Quite lately, tendinous ligatures have been substituted, as they are believed to remain longer unchanged.

In a glance at ovariectomy, emphasis was laid upon the remarkable diminution in mortality from the operation within the last ten to fifteen years, as illustrated by the latest statistics of Spencer Wells and others. Especial attention was called to a recent contribution by Dr. No. 2207th, entitled *A New Method of Per-*

forming Ovariectomy, in which, among other points, he discusses the danger of the patient from shock, which he regards but another name for reduction of temperature,—the result of peritoneal exposure. Another entirely new modification of previous practice was the immersion of a patient in an antiseptic bath, after operation, in order to obviate the dangers which in severe and complicated cases may ensue from defective drainage from the peritoneal cavity. The writer closed this part of his paper with appropriate allusion to the labors in this field of the late president of the society, the younger Storer.

After allusion to the treatment of uterine tumors, with statistics, also to Freund's operation, the operation of Poro of Pavia was instanced, which provided for the removal of the pregnant uterus; mother and child both saved. Isaac Taylor, a year ago, in New York, reported a successful case by a modified method, the main features of which were detailed. A recent total of thirty-six cases by Poro's method gives as results the survival of nineteen mothers and twenty-six children.

The expedient which abdominal surgery offers for tubal pregnancy and the points of Battey's operation having been briefly reviewed, a survey of measures of surgical interference, other than such as pertain to gynecic surgery, closed the paper; and first, reference was made to the treatment of acute perforation, typhlitis, etc., and brief statistics were given. Removal of the spleen, first successfully done in Italy, in 1519, has its grave dangers much lessened by our modern antiseptic methods. A similar remark applies to nephrotomy also. Revised statistics give, of the latter operation, thirteen recoveries and nine deaths; but of the deaths two cases were so severe as to have been left unfinished.

Among later triumphs may be included Billroth's resection of the stomach for cancer. Koeberle recently removed two metres of the small intestine for multiple strictures, with recovery. Czerny, in 1880, removed two portions of the large intestine for cancer, with recovery from the operation; and Reybord, in 1833, removed four inches of cancerous descending colon with like happy result. The author closed his survey with eloquent expressions of his hopes and expectations from the surgery of the future, which must effectively solve the problem of safe and final relief for the sufferer from fibroid tumors of the uterus.

The paper being before the society for discussion, Dr. CLARKE recalled a case of strangulated hernia, eleven years ago, treated by Dr. Marcy and himself; it was extreme in every way and complicated with asthma. This was one of the first operations in which he had witnessed resort to antiseptic surgery. Result, satisfactory in every way. Here catgut was used with intent of its disappearance by absorption. The temperature hardly went up at all after the operation.

Dr. W. S. BROWN practically distinguished two classes of cancer, whether of stomach, intestine, or wherever developed: first, the case in early stage, when disease may still be strictly local, and second, the case farther advanced, and involving constitutional impregnation. Under latter circumstances should refuse to operate, except when an operation was demanded, the patient intelligently appreciating probabilities. We can promise little better than a brief respite, with expense and risk thrown in.

Dr. WARNER agreed with Dr. Brown in the main. As the physician gets older and loses or has had grati-

fied a portion of his early ambition, he is less disposed to operate in true cancer, except at the urgent intercession of the patient; for if it is true cancer we know it will return. Many things are to be considered in abdominal section and removal of a portion of the intestine. Should never operate, in whatever degree of urgency, unless we are sure we can make the patient more comfortable, but in ovarian tumor there is but one opinion among the intelligent, — make the attempt of removal, and this even in a bad case. As to fibroid, the day is coming when we shall have a better system of surgery than now. Was very much interested lately in Dr. Thomas's illustrations of the work of his scoposaw, and his remarks on the same.

Dr. BROWN still further illustrated his position respecting the two stages of cancer. Twelve years ago he had operated upon a cancerous breast, in its early development, and it had never returned.

Dr. WARNER recalled a case which came to his knowledge in his early residence in Boston. A tumor was removed from a patient, which four surgeons pronounced to be cancer, but which subsequent expert investigation showed to be non-malignant. The character of a tumor, especially in its early stages, is difficult to determine; if its removal is not followed by a return of the disease should doubt its being cancer at all except upon positive evidence. A lady in Lowell had almost the entire breast removed twenty-five years ago, and had enjoyed uninterrupted health since until lately, when death resulted from some form of malignant disease of a portion of the liver or of the pyloric orifice. This was the longest respite he had ever known. Had removed and helped remove many cancers during the period of his association with Dr. Storer, and not one tells a favorable story. In one case had operated greatly against his judgment; wound healed kindly, but the disease soon returned in a more virulent form than at first, and patient died rapidly. Charlotte Cushman's history illustrates this principle. The doctor gave several other illustrative cases.

Dr. CLARKE asked how long the interval was between operation and return of the disease.

Dr. WARNER replied, with some only a few weeks; a few may go three to five years.

Dr. M. L. BROWN gave a general average of two and one half years.

Dr. WEEKS considered the value of antiseptic surgery to be especially established in hernias, and we expect much from it in twists and in typhilitis. Did not see, in fibroids, why we may not cut down and excise as we would other growths, especially if they be external and subperitoneal.

Dr. FRISBIE testified to the value of antiseptic methods in surgery. Seriously doubted the policy of operating in any form or stage of cancer, but would inquire whether the cancer was likely to return any sooner if it were located internally, as in the uterus or the stomach.

Dr. WARNER replied, more rapidly as respects the uterus; was uninformed as to the stomach. The doctor recalled an instance in which he had operated for cancer of the neck of the uterus. Had felt very hopeful of results, but disease soon returned with new malignity, and speedily pervaded and consumed the whole organ.

Dr. NORRIS gave the details of an operation he had lately witnessed for hernia by Heaton's method. Result favorable and gratifying. Success seemed to

depend both upon acupuncture and also the insertion of a mixture containing extract quercus alba, alcohol, ether, and morphia in certain fixed proportions.

Dr. WARNER believed much depended upon the needle, which was made in a peculiar way, and, if he was rightly informed, was somewhat barbed, and designed to tear somewhat as it was withdrawn, and so help set up adhesive inflammation.

Dr. MARCY added that a surgeon in Philadelphia had pursued a series of cases operated upon by Heaton's method, and for a time was enthusiastic over results, but later observation had obliged him, in a large measure, to retract and candidly confess his disappointment.

Dr. CLARKE reported a case of strangulated hernia, where intervention of the aspirator made taxis possible, but tumor in due time returned.

Dr. MARCY, in closing the discussion, quoted Dr. Sims as recently declaring that antiseptics had done for abdominal surgery what nothing else could have done. Why cannot we make full use of this resource in operating on fibroids? Take a thoroughly antiseptic room, wash patient with a solution of carbolic acid, keep the acid evaporating from the furnace or otherwise during the operation, and throw spray upon the walls. In a recent case he had attempted the removal of a fibroid, intending to excise and leave the uterus behind; was obliged to desist on account of unforeseen obstacles, which were detailed in the report. Closed the wound, and left patient as comfortable as possible: there was no rise of temperature, and patient was practically well in one week.

As to the removal of cancerous growths from the abdominal cavity, he was taught by Bennett that cancer is, originally, a local disease, and this he still believed. Was cognizant of instances of removal, wherein the disease had not yet recurred for eight or nine years. The doctor cited other cases in illustration. Had removed the whole breast presenting a tumor of the size of the fist; a few weeks afterward swollen glands appeared in the axilla, whereupon he reopened the incision, and removed both all cicatricial tissue and the entire glands. Operation a success. In other cases whose event had been less fortunate he felt he had a right to his opinion, although it might differ, as in one case reported, from that of other physicians consulted, and he had been able to do a good deal for the unfortunate sufferer. He must still doubt, however, if we ought to interfere with cancer of the stomach. Finally, he would reiterate the position he had assumed in his paper of the essential necessity, on the part of the successful practitioner of surgery, in determining the proper course to pursue in situations of peculiar doubt and difficulty, of qualities of rare good sense and judgment, discrimination and experience.

Adjourned.

AN EPIGRAPH "ON A QUACK."

"I was a quack, and there are men who say
That in my time I physick'd lives away;
And that at length I by myself was slain
With my own drugs, ta'en to relieve my pain.
The truth is, being troubled with a cough,
I, like a fool, consulted Dr. Gough,
Who physick'd me to death at his own will,
Because he 's licensed by the state to kill:
Had I but wisely taken my own physic,
I never should have died of cold and 'tisick.
So all be warned, and when you catch a cold,
Go to my son, by whom my medicine 's sold."

Medical Times and Gazette.

Medical and Surgical Journal.

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THE DISPOSAL OF REFUSE MATTER BY CREMATION.

IN continuation of our remarks on the subject of cremation in the last number of the JOURNAL we wish to direct attention to an interesting and valuable report rendered to the sanitary committee of the Commissioners of Sewers of the City of London upon some new methods of disposing of all kinds of refuse by cremation. The report is drawn up by Dr. W. Sedgwick Saunders, who is medical officer of health and analyst for London, and includes extracts from the reports of the sanitary and streets committees upon the same subject.

A deputation from these two committees visited certain towns in the north of England, among others Leeds, Warrington, Bradford, and Manchester, in which a system of cremation for the disposal of refuse is already in successful operation. This system involves two propositions, namely:—

(1) The destruction by fire of everything combustible in house and trade refuse; (2) the separation of the vegetable from the animal and mineral matters, and its conversion into charcoal.

The first process is accomplished in an apparatus termed a destructor, the second in a furnace called a carbonizer.

The destructor as described in general terms by its inventor, Mr. Fryer, of Nottingham, is a form of furnace designed for the reduction by fire of substances that contain only a small proportion of combustible material. A destructor of six compartments will consume 13,104 tons of refuse in fifty-two weeks of six working days, and of the total mass delivered eighty per cent. is entirely consumed by the fire. The carbonizer is also the invention of Mr. Fryer. In this machine six tons of market refuse produce one ton of charcoal without cost for fuel, and this charcoal being equal to the ordinary commercial article readily sells for twenty shillings a ton.

In one of the places visited by the deputation it learned that the sanitary authorities had saved £5000 a year under the process of cremation, out of a previous outlay of £17,000 under the old system. In another district, with a population of 60,000, the visitors found that the whole business was conducted by five men employed at a cost of nine pounds per week, and that with this plant upwards of 1000 cart-loads of house refuse were treated.

From a careful inspection of the various processes

in active operation the deputation of the sanitary and streets committees of London came to the unanimous conclusion that the system of cremation of refuse, including animal (condemned meat), vegetable, and mineral matters, as already inaugurated in the towns visited by them, is sound in theory and desirable in practice; that it has already passed beyond the experimental stage; and that it offers enormous advantages upon sanitary grounds, and is not to be despised for its commercial results. These gentlemen report that they not only saw a work consisting of poisonous and disgusting elements dealt with, and satisfactorily disposed of, without nuisance of any kind, but learned that products having a marketable value can be, and are, produced without any infraction of true hygienic principles, whilst at the same time these may have the effect of materially reducing the expenses.

Dr. Saunders sees in cremation of refuse a new line of departure of singular promise, and recommends the adoption by the commissioners of sewers of London of the system as described in his report.

All engaged in the investigation share the opinion that the establishment of such a system in the city of London will effect an enormous saving in the charges now incurred under the existing régime.

If this is true as regards London, what might not be accomplished by the adoption of such a system in New York, and in other large cities on this continent? The adoption of some process similar to that described by Dr. Saunders is surely only a matter of time, and we hope the subject will be kept steadily before the public mind. This form of agitation has our hearty sympathies, and as regards refuse we are willing to be classed with the Nihilists.

TOY PISTOLS AND THE DAILY PRESS.

THE daily papers have contained numerous items in regard to the many accidents following the use of miniature pistols. Apparently such accidents have been very frequent of late, and certainly in Baltimore they have been followed by an unusual mortality, twenty-three deaths due to a subsequent tetanus having occurred up to the present writing, if we can rely upon apparently authentic reports. The newspapers have very wisely taken occasion to preach sermons upon the impropriety of teaching the infant mind how to shoot with actual powder. Although the weapon is furnished only with a blank cartridge, the pasteboard wadding is able to penetrate the skin, and makes a sufficiently ugly wound to enable the toy to be classed as highly dangerous, as the writer has personally witnessed; and we heartily sympathize with all attempts to banish the murderous plaything. But while we gladly coöperate in all legitimate methods of attaining such a result, and have only praise for all legitimate newspaper enterprise, we cannot think that the object sanctions even the slightest departure from truth. The following item from the *Boston Journal* of July 20th has been especially brought to our notice:—

“Reports of the deadly effects of the toy pistols so

popular with boys on the Fourth of July continue to come in from all sections of the country. Boston has not been free from their devastations, several fatal cases of lockjaw being reported as the direct result of wounds in the hand which they have inflicted. The trade in these toy pistols seems to be responsible for almost as many deaths as are caused by the sale of weapons whose distinct purpose is to kill."

This statement was so startling in view of the very rare appearance of tetanus in this locality, that it seemed proper to make inquiries into the matter. By the records of the Board of Health there had been, from the 4th of July up to noon of the 20th, when inquiry was made, not one single death that in any way confirmed the statement of the *Journal*. Such carelessness in regard to facts is greatly to be regretted, and if ever the *Journal* moralizes on the influence of the daily press, that great educator of the people, may it add a single observation on the duty of the press to publish facts and not fancies, and at least to make sure of one death before it prints a wholesale obituary.

"METHOD IN MADNESS."

NOTWITHSTANDING its length we reproduce entire an editorial from the *Lancet*, with the above title. The attempted assassination of our president and the last murder in an English railway carriage have furnished the writer the text upon which to base his remarks. These we heartily commend to the perusal of our readers, not merely because the views expressed coincide with and support those advanced in the issue of the JOURNAL for July 14th, in an editorial upon the crime at Washington and its lessons, but mainly because in the two articles may be found an indication of the stand-point from which the best professional thought on both sides of the Atlantic is discussing some very delicate and difficult problems nearly affecting the happiness and welfare of society. The profession at large is even now not far behind its most enlightened and liberal specialists in its manner of regarding the relations between crime and insanity, but there are many among the laity — and those not the least intelligent and philanthropic — who will find themselves changing very greatly their present ideas, to which the word crude does scant justice.

Time and again since the shooting at Washington various daily journals have proved to their own entire satisfaction, and perhaps to that of their readers, that the assassin could not possibly be insane, because, according to his own confessions as well as the testimony of others, he could plan, and plot, and calculate, and even wait. Such observations seem also to have sufficed to settle the whole question for men having enjoyed the advantages of legal training and perhaps connected with official positions. The legal profession and the public would probably be most persuaded by a hard and fast definition of insanity. As such has not yet been framed in a manner to withstand criticism, and is not likely to be, each case must be investigated on its own merits, and there will be room for

mistakes, for ignorance, and for humbug. For all that, the discrimination between crime and insanity in their various proportions, and the methods of dealing with the different phases of both as they act and counteract upon each other, are sure to become more precise, and at the same time more humane and more protective to society.

MEDICAL NOTES.

— Under the head A Centennial Celebration, the *British Medical Journal* expresses a gratifying appreciation of the number of the JOURNAL published in honor of the centenary of the Massachusetts Medical Society.

"There is probably only one medical society in America which is in a position to celebrate its centennial anniversary. This is the Massachusetts Medical Society, which has just entered upon the second century of its existence, having been incorporated on the 1st of November, 1781. In honor of this event, the Boston Medical and Surgical Journal has published a special number devoted to centennial recollections and documents relating to the foundation of the Massachusetts Medical Society, including fac-simile letters, summaries, portraits, and other medical documents of the last century relating to the history of the society. Among others is a fac-simile of a certificate of fumigation after small-pox in 1776. It runs thus: 'These Certify that Eabenesor Stimpson has been so smook'd and eleane'd as that in our Opinion he may be permitted to pass into the Country without Danger of communicating the Smallpox to any one.' The number is one which is of great interest, and does credit to the patriotism and culture of our American colleagues. The Boston Medical and Surgical Journal is itself an excellent type of much that is most commendable and respectable in journalism — reserved, accurate, polished in form, and carefully noting all that is most promising and trustworthy in contemporary research. Its pages can never be consulted without profit and satisfaction."

— For the sake of simplicity and concentration the title page of the JOURNAL no longer exhibits the names of members of its editorial staff, but its readers still profit by the valued contributions of the JOURNAL's old representatives in New York and Philadelphia, Drs. P. Brynberg Porter and Frank Woodbury.

— Two hundred and sixty deaths from sun-stroke and 150 from excessive heat were reported in Cincinnati for the week ending July 16th. The total deaths for the week were 583, the average of total weekly deaths being about 115.

— According to late advices the number of medical men from outside Great Britain announced to attend the International Medical Congress in London was about 800. The aggregate attendance is expected to reach 2000. Earl Granville, foreign secretary, holds a reception of the foreign members on the 6th of August.

— The expenses of the congress are expected to reach \$30,000.

— Milk is insufficiently used in making simple puddings of such farinaceous foods as rice, tapioca, and sago. Distaste for these is engendered very often, I believe, because the milk is stinted in making them, or poor, skimmed milk is used. Abundance of new milk should be employed, and more milk, or cream, should be added when they are taken. In Scottish households this matter is well understood, and a distinct pudding-plate, like a small soup-plate, is used for this course. The dry messes commonly served as milky puddings in England are exactly fitted to create disgust for what should be a most excellent and delicious part of a wholesome dinner for both children and adults. — *Dr. Dyce Duckworth, in Popular Science Monthly for August.*

— In the sudden death of Dr. Maurice Raynaud (it is said, from angina pectoris) another has to be added to the great number of such occurrences that have told so disastrously of late on the profession in France, in the persons of Lorain, Chauffard, Broca, Delpsch, and Peisse. Although of late suffering much at times from overwork, Dr. Raynaud furnished no indication of approaching danger, and had recently been more than usually cheerful, in consequence of his having been selected to deliver the French address at the approaching Medical Congress. Indeed, he was playing with his children three hours before his death. Scarcely fifty years of age, he commenced his medical career by the production of a thesis, *Les Médecins du Temps de Molière*, which attained great popularity. He was an indefatigable worker, both at his profession and in literature, and at the time of his death last week was physician at La Charité, Agrégé of the Faculty of Medicine, member of the Section of Medical Pathology of the Academy of Medicine, and Officer of the Legion of Honor. Possessed of great oratorical power, much was anticipated from the address he was commissioned to deliver. — *Medical Times and Gazette.*

— The deaths from diarrhical diseases in Boston for the week ending July 25d were forty-two, as against fourteen for the preceding week.

— Ready method of preparing fomentations. Take your flannel, folded to the required thickness and size, dampened quite perceptibly with water, but not enough to drip, and place it between the folds of a large newspaper, having the edges of the paper lap well over the cloth, so as to give no vent to the steam. Thus prepared, lay it on the heated surface of the stove or register, and in a moment steam is generated from the under surface, and has permeated the whole cloth sufficiently to heat it to the required temperature. This method is often very convenient and efficient where there is no opportunity to heat much water at a time. — *Michigan Medical News.*

— In connection with the paper of Dr. Monat on Hospitals, the *Lancet* announces that it intends to publish on the 10th of July The Lancet Map of Medical London in 1881, showing the exact position within the metropolitan area of the metropolis of every hospital in it. This map has been prepared with considerable care, and will show foreign guests the resources at present

at command in dealing in medical institutions with the indoor treatment of disease and accidents in the largest city in the world. The information conveyed by it, aided by an explanatory index, will tend to show the urgent need which exists of some redistribution of the medical relief of the poor of London and its surroundings.

NEW YORK.

— The governor of the State has vetoed the bill providing for the construction of another aqueduct for the purpose of increasing the water supply of New York, on the ground that the present supply, if properly husbanded, is sufficient, and the outlay required for the purpose would therefore be a waste of money. There is, unfortunately, reason to believe that this action on the part of the governor is to be attributed to political expediency rather than to an honest regard for the public welfare, and it is greatly to be regretted because there can be no doubt that, notwithstanding the greatest possible economy that could be practiced in the use of the present water supply, there would be urgent need for an increase by the time that so extensive a work as the construction of a second and larger Croton aqueduct could be completed.

— As usual at this season of the year, the infant mortality in the city is exceedingly large, and with a view of reducing this as much as possible the annual temporary corps of fifty physicians has been appointed, and is now engaged in making house-to-house visitations in all the tenement districts of the city, for the purpose of caring for all sick and feeble children not under medical attendance. With the same end in view the various sea-side sanatoria have been opened, and the excursions of the St. John's Guild Floating Hospital are being made several times each week, as usual in July and August.

— The Citizens' Committee of Twenty-One have just published, in pamphlet form, their report in regard to the late street-cleaning agitation. In the course of it they refer to the law that was finally passed by the legislature as follows: "It is a radically defective legislative compromise, to which the Committee of Twenty-One is not a party, and the responsibility for which it does not assume; it is obviously a measure originating in a desire to appease popular indignation, and to escape popular reprehension by an apparent concession to the demand of the people for some change in the system of street-cleaning." In conclusion the report states that the work of the committee is not yet completed, and that its organization will be continued, because legislation will be required at the next session to complete and perfect the details of the new plan, if it is found on the whole to be sufficient, or if it is not so found to procure another and a better law. "Certain trading politicians," it goes on to say, "are relying upon the public becoming apathetic and indifferent on the subject, and being satisfied with half-way concessions. They count upon the proverbially short memory of grievances of the citizens of New York. The committee proposes not to let the subject be forgotten

so long as there is occasion to preserve its remembrance."

— An ordinance has been passed by the board of aldermen and approved by the mayor which makes it a misdemeanor to throw banana skins and other similar substances on the sidewalks, and requires all dealers in fruit and vegetables to have copies of the ordinance conspicuously posted about their places of business, so that their customers may become aware of its provisions. The law was first proposed some time ago by an alderman who saw a woman slip on a banana skin in the street and fall with such violence that she broke her leg.

— An infant, six months old, recently died of an overdose of opium through a druggist's mistake. The physician who was attending the child ordered seven powders containing opium for it, but the druggist who put up the prescription divided the quantity of the drug specified into only two powders.

— An exceptionally large number of New York physicians have gone abroad this summer, and most of them will attend the sessions of the International Medical Congress in London.

Miscellany.

SOME CRITICISMS ON A PAPER READ BY DR. PELTZ BEFORE THE PHILADELPHIA MEDICO-LEGAL SOCIETY.

MR. EDITOR, — In the issue of the JOURNAL for June 30th, an account is given, in a letter from Philadelphia, of a new departure in the practice of medicine advocated by Dr. Peltz, of that city, in a paper read before the Philadelphia Medico-Legal Society. He advises physicians, in view of "the adulterations and substitutions practiced by druggists, and their extortionate prices," to prepare their own prescriptions. An earnest protest on the part of the pharmacists is certainly not uncalled for. A grave and sweeping charge of unprofessional conduct is made against them as a body, — a charge which is galling in the extreme to a class of men having a natural pride in their profession, and an earnest desire to advance its usefulness and honor.

In the general defence of pharmacy I do not feel called upon to speak. "There she stands." I cannot do better than refer you to the learned volumes which contain the annual reports of the American Pharmaceutical Association. Moreover, if the profession have fallen from their high standard the burden of proof is on their accuser, and he has not sustained it by the isolated instances which he has given, even supposing them all well founded. It is unjust to insinuate that these petty exceptions are the rule. If a profession is to be annihilated for the sins of its worst members, where, I respectfully ask, would the doctors be?

Against no body of men could the charges of Dr. Peltz's article be brought with less foundation than against the pharmacists of Philadelphia. In their high standing in their profession, in the contributions which they have made to pharmaceutical and medical science, — in everything, in fact, but the alleged "self-interest and want of principle," — they stand preëminent. Among the many eminent names which adorn their rolls, let me mention particularly those of Maisch,

Remington, Proctor, Shinn, Taylor, and the late lamented Parrish. It was through the exertions of Philadelphia druggists that an act was passed by the legislature in 1872, part of which I quote in order to show the security afforded to physicians and to the public against inexperience on the part of pharmacists. After providing for the examination and registration of all persons who propose to keep drug stores, or to put up prescriptions, it continues as follows: —

"Sec. 8. No person not a graduate in pharmacy shall be allowed by the proprietor or manager of any store to compound or dispense the prescriptions of physicians (except as an aid under the immediate supervision of said proprietor or his qualified assistant) unless he has been at least two years apprenticed in a store where medicines are compounded and dispensed, and has attended one full course of lectures on chemistry, materia medica, and pharmacy; and no proprietor shall leave his store in charge of any but a qualified assistant." . . .

Section 10 is especially worthy of Dr. Peltz's attention, for it provides in substance that any person who shall knowingly falsify or adulterate any drug or medicinal substance, or any preparation authorized or recognized by the Pharmacopœia of the United States, or used or intended to be used in medical practice, and shall sell the same for medicinal purposes, shall be guilty of a misdemeanor, and, upon conviction thereof, shall pay a penalty not exceeding five hundred dollars, and shall forfeit to the commonwealth all of the articles so adulterated.

Dr. Peltz implies that pharmacists are an unnecessary class, rather an obstruction to the public health than otherwise, and that physicians can with the utmost ease do for themselves what the pharmacists now do for them. This, I venture to say, is a serious mistake. It is no disparagement to the noble profession of medicine to say that the carpenter is not a more necessary ally of the architect than is the pharmacist of the physician. Centuries ago, indeed, when medicine was in its infancy, one man might learn all that was then known; but in the vast progress of scientific knowledge the study has long since resolved itself into a group of learned professions, any one of which demands the devoted study of a lifetime. That of the physician is one, and that of the pharmacist is another. I protest against the introduction of a combination, the result of which can be neither good physicians nor good pharmacists, but inferior "medico-pharmacists."

The long history of the pharmaceutical profession in the western world from the revival of learning after the dark ages down to the present day, when it is better organized and equipped than ever before, more watchful and solicitous than ever for the public health, is in itself the best argument for the necessity of its existence. It has gained, so to speak, a "prescriptive" right to live. No "irrepressible conflict" does or can exist between the two professions. They can be neither rivals nor enemies, but only allies. It is the part of the physician to watch the symptoms, to locate the disease, to prescribe and administer the remedy. It is for the pharmacist, acting in this respect as the *responsible agent* of the physician, to furnish the materials in the form prescribed.

Has the advocate of the novel scheme of reform considered the difficulties in the way of its adoption? Besides the elaborate and costly apparatus with which every respectable pharmaceutical establishment is fur-

nished, there must be kept on hand some five hundred kinds of herbs, and drugs and chemicals, tinctures and elixirs without number. Now if a physician undertakes to put up his own prescriptions he too must keep on hand all these various materials, for any of them may be needed at any moment. And yet many of them will lie on his shelves months and years unused. Corruption and deterioration inevitably result, unless new drugs are bought at frequent intervals and the old thrown away, which involves ruinous expense. The pharmacist's stock, on the other hand, is always changing, and therefore likely to be always pure.

Again, supposing the physician to have procured the drugs and apparatus, can he, amid the engrossing duties of his own profession, acquire the skill in manipulation, the knowledge of chemical effects, the delicacy of taste and smell, and keen perception of shades of color which enable the trained pharmacist to detect almost imperceptible traces of impurity, and to distinguish between the deadly poison and the harmless drug, which to the unpracticed eye appear identical?

Another obstacle — perhaps the most insuperable of all, as the author of the innovation will discover as his practice increases — is the waste of valuable time involved. A physician with an extensive practice cannot attend to his patients and his prescriptions too.

The charge of extortionate prices brought against pharmacists — and physicians — by persons who undervalue experience and skill, reminds one of the story of the darkey who grumbled because a doctor had charged him twenty dollars for cutting off his leg. "Why, Sambo," said a more philosophic friend, "De gen'l'man did n't charge you but five dollars for de sawin'; de fifteen dollars was for de *know how*."

The public should take into account the long and weary years spent by the pharmacist in acquiring his skill, and the grave responsibilities attending his business. Few of them acquire a competency, for theirs is a profession poorly paid, except by the respect of the community and the consciousness of good work faithfully done.

PHARMACIST.

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.

THE attention of the alumni of the Albany Medical College is called to the following announcement: —

At a meeting of the executive committee of the alumni, held June 16, 1881, the president stated that he had given considerable thought to the matter of prize essays to increase the interest in and efficiency of the association. He had concluded to offer an annual prize of one hundred dollars, to be called "a surgical prize," and would announce as the subject for an essay this year, Colles's Fracture, its Pathology and Treatment, the paper to be accompanied either by a pathological specimen illustrating the fracture, with or without dislocation of the ulna, or by a careful dissection of the hand, wrist, or forearm.

After favorable remarks by members of the committee, on motion of Dr. L. Hale, Dr. Van Derveer, the president, was appointed a committee of one to give the matter further consideration. Subsequently the president reported that the heirs of the late Prof. Alden March, M. D., LL. D., desired to give the sum of one hundred dollars as an annual "March Memorial Prize," the essay for the coming year to be on the Pathology and Treatment of Morbus Coxarius. Also,

that Mr. McClure, a governor of the Albany Hospital, had decided to give the sum of one hundred dollars annually as an "Armsby Memorial Prize," the essay to be on some anatomical subject. That for the coming year will consist of a minute description of the genito-urinary organs of the male, together with a carefully dissected specimen of the same. The president further reported that the heirs of the late Prof. James MacNaughton, M. D., had offered the sum of one hundred dollars as a "MacNaughton Memorial Prize," the subject of the essay for the current year to be Antisepsis in the Treatment of Diseases.

Mr. Joseph Russell, a trustee of the college, offers for this year a second surgical prize of fifty dollars for the second best essay on Colles's Fracture.

Essays and specimens designated by a motto, and accompanied by a sealed envelope, inclosing the name and address of the author, must be sent to the secretary of the association, Dr. W. G. Tucker, by the 14th day of February, 1882.

The committee to examine the essays for this year will consist of Drs. A. Van Derveer, J. S. Mosher, and Lorenzo Hale, and they reserve the right to reject any or all essays if not deemed worthy.

All specimens are to be deposited in the new museum of the college, properly labeled.

TREATMENT OF THE INSANE.

MR. EDITOR, — Your recent editorial on *The Crime at Washington* and its Lessons, which so well reflects the opinions of specialists if not of the whole profession, reminds me that the subject of the treatment of the criminal insane was under discussion at the last meeting of superintendents at Toronto. It has often been discussed in that body, and the opinion has always been in favor of separate treatment for this class. Certain practical difficulties have, however, always presented themselves. The result of this year's discussion was the appointment of a committee of three, consisting of Dr. Gundry, of Maryland, Dr. Fauntleroy, of Virginia, and Dr. Fisher, of Massachusetts. The committee are to consider the advisability of separate provision for idiots and imbeciles, for epileptics, dipsomaniacs, and the criminal insane. As a member of that committee I would ask for contributions of pamphlets, documents, or statistics bearing on these subjects. I am yours very truly, THEO. W. FISHER.

THE INTERNATIONAL MEDICAL CONGRESS.

THE death of M. Raynaud, which we announced last week, has deprived the Congress of one of its orators, to listen to whom would have been one of the chief treats of a week which promises to be full of interest. M. Raynaud had acquired a great reputation as an orator, and the subject of his address, Skepticism in Medicine in the Past and Present, is one that in able hands must always prove attractive. M. Raynaud's death was quite sudden, and was caused by an attack of angina pectoris, from which he had suffered for some months. Fortunately, he has left the MS. of his address prepared for delivery. Under these circumstances it would be an appropriate mark of respect to have it read by one of his friends, and for this task, honorable but painful, no man is better qualified than

Dr. Guéneau de Mussy. Although it was doubtful if Professor Virchow would be able to attend the Congress, he has, as we stated last week, at length expressed his intention to be present, and, at the request of the Executive, to give an address on "The Bearing of Pathological Experiments on Medicine." The date fixed for Professor Virchow's address is Thursday, August 4th. There is no name more famous in natural science than that of Rudolph Virchow; no man has exerted a greater influence upon the scientific teaching of his day, and his presence and active participation in the work of the Congress will greatly add to the *éclat* and success of the forthcoming meeting.

While the general arrangements for the Congress are such as to command general approval, it is a matter of great regret that Sir William Jenner will not be able to take a more prominent part in the scientific work of the meeting. No one in the profession commands a more hearty, complete, and universal confidence, whether we regard him as a man of science, as a practitioner of his art, as a teacher, or as a rigid upholder of the honor and dignity of the profession. According to present arrangements Sir William Jenner will preside at the first general meeting of the Congress, and will deliver the address of welcome. He will thus take a prominent position in the formal work of the Congress, which will be gladly welcomed by all his brethren. We still, however, cherish the hope that he will be able at some one of the meetings to give a scientific address, either on the clinical study of medicine or on some kindred subject. A scientific contribution from one who without question ranks as the head of the profession in Great Britain will go far to make this great meeting of medical men from all parts of the world in our metropolis a success. A resolution formally opening the Congress will be moved by Sir Risdon Bennett and seconded by Professor Donders at the first general meeting, after Sir William Jenner's address.

A suggestion has been made that on one of the evenings a fête should be given at the Botanical Society's Gardens. Many obstacles, however, presented themselves to the successful carrying out of this plan, and the executive committee has finally abandoned the idea. Surely the programme is full enough already! Three evenings will be occupied with receptions or fêtes, and those that are not so filled up will not be too many for the exercise of private hospitality, or for the unrivaled attractions of London society. His Royal Highness the Prince of Wales takes great interest in the success of the meeting, and has not only promised to attend the opening meeting of the Congress, but has accepted an invitation to lunch afterwards with Sir James Paget, and to dine in the evening with Sir William Gull, who is asking the Vice-Presidents and Council of the Medical Section, the Presidents of the other sections, and some distinguished foreign visitors to meet His Royal Highness. The Prince has also signified his intention of being present at the reception at the South Kensington Museum the same evening, to which it is hoped the Princess will accompany him. Every member of the Congress will be entitled to take one lady to the soirée at South Kensington Museum; the members only are asked to the College of Surgeons.

The entertainment by the Corporation of the City of London will be given on Friday, August 5th, and the reception at the College of Surgeons will be postponed to Monday, August 8th. An announcement has been

made of the sum of money voted by the corporation for its soirée, but the hospitality of the city is so well known that we need no assurance of such kind that it will be on a magnificent scale. The old hall itself, and still more the museum and library, are of considerable interest, while the pageantry of the City Court is such as to excite the curiosity of more than our foreign guests. Two thousand cards of invitation have been placed at the disposal of the reception committee of the Congress, a certain number of which are for ladies, and the corporation has reserved 1000 cards for its own use. The programme of proceedings contains, in addition to these, a long list of entertainments, to which only a limited number is invited. Although a book is kept at the College of Physicians for the purpose of recording the names of those desirous of joining these parties, we would remind our readers that the ultimate nomination for invitation will rest with the reception committee. They will have a difficult duty, and it behooves every one loyally to support them in their decisions. The barest hospitality renders it absolutely essential that our foreign friends should have every facility afforded them of enjoying the entertainments provided on this occasion. It is of all occasions one specially unsuited for a display of selfishness, which, if indulged in, would leave an unfavorable impression that will take years to erase.

Nearly 1800 medical men have notified their intention of attending the Congress, and about 500 have already paid their subscriptions. Medical students will be admitted to the business meetings of the Congress on the payment of an entrance fee of 10s. 6d.

The following distinguished foreigners have accepted the position of honorary vice-presidents of the Congress: Professors Donders, Brown-Séquard, Kolliker, Ollier, Pflüger, O. Liebreich, Looen, Chauveau, Hardy, Holmgren, Tarnier, Baccelli, Verneuil, Santesson, Goltz, Pasteur, Tilanus, Virchow, Billings.

At a special general meeting of the Medical Society of London, to be held on Monday next, the following gentlemen will be proposed for election as Honorary Fellows in connection with the Congress: Professor Bamberger, Dr. G. H. Billings, Dr. Bigelow, Professor Billroth, Professor Chareot, Professor Da Costa, Dr. Emmet, Professors Haller, Nussbaum, Tarnier, Verneuil, and Volkmann. — *Lancet*.

METHOD IN MADNESS.

No psychologist has hitherto been able, and probably it is impossible, to define *madness*, or to give a clearly marked indication of the boundary line between sanity and insanity. Mental soundness is merged in unsoundness by degrees of decadence which are so small as to be practically inappreciable. It is with the mind-state which precedes the development of a recognized form of insanity the therapist and the social philosopher are chiefly interested. Although in individual cases the subject of mental derangement may, as the phrase runs, "go mad" suddenly, speaking generally, insanity is a symptom occurring in the course of disease, and commonly not until the malady of which it is the expression has made some progress. Those mental disturbances which consist in a temporary aberration of brain function, and which are the accidents of instability, rather than the effects of developed or even developing neuroses,

can scarcely be classed as insanity, although it is true, and in an important sense, that these passing storms of excitement or spells of moody depression may — acting reflexly on the cerebral and nervous centres, as all mind-states and mind-movements react — exert a morbid influence, and lay the physical bases of mental disease. The consideration most practical to the community and germane to the question of public safety is that in any and every population there must exist a dangerously large proportion of persons who are always in a condition of mind to be injuriously influenced by any force which powerfully affects them. As a matter of history, it would seem that the majority of such persons are controlled rather than morbidly excited by the opportunity of throwing themselves into any popular movement. They may suffer afterwards for the stimulation they receive at the time of public commotions, but while these are in progress they link their own consciousness with that of other minds, and the tendency to develop individual eccentricities of mental action is thereby for the moment repressed or exhausted. It is in the intervals of great public excitement the peace is disturbed by the vagaries of criminals who are more or less reasonably suspected of being "insane."

It would be premature to assume that the murderer of Mr. Gold, or the man who attempted to assassinate the President of the United States of America, was insane. There are circumstances in connection with each of these tragedies which must suggest the reflection that the assailants were possibly, or even probably, of unsound mind. We do not, however, propose to discuss these features of the respective cases at this juncture. The full facts are not, as yet, ascertained; but enough is known to warrant an endeavor to clear the way for future remark by disposing of the objection that the suspected perpetrator of the Brighton outrage and the would-be assassin of the President both showed "forethought" and "method." It is a common formula for the expression of doubt as to the irresponsibility of an alleged lunatic that there is "method in his madness." Nothing can be farther from the truth than the inference to which this observation is intended to point. It is not in the least degree necessary that a madman should be unconscious of the act he performs, or of its nature as a violation of the law of God or man; nor is it necessary that he should do the deed under an ungovernable impulse, or at the supposed bidding of God or devil, angel or fiend. The forms of mental disease to which these presumptions apply are coarse developments of insanity. Dr. Prichard was among the first of English medico-psychologists to recognize the existence of a more subtle form of disease, which he termed "moral insanity." Herbert Spencer supplied the key-note to this mystery of madness when he propounded the doctrine of "disorganization;" and Dr. Hughlings Jackson has since applied that hypothesis to the elucidation of morbid mental states and their correlated phenomena. When disorganizing — or, if we may borrow an expression from the terminology of geological science, *denuding* — disease attacks the mental organism, it, so to say, strips off, layer by layer, the successive strata of "habit," "principle," and "nature," which compose the character. First in order go the higher moral qualities of the mind, next those which are the result of partially formed habits, then the inherited principles of personal and social life. At length the polish

which civilization gives to humanity is lost, and in the process of denudation the evolutionary elements of man's nature are progressively destroyed, until he is reduced to the level of a creature inspired by purely animal passions, and obeying the lower brutish instincts. The term "moral insanity" is accurate as far as it goes, but it expresses only the first stage in a process of dissolution which is essentially the same throughout, but which has unfortunately received different designations as its several features have been recognized and studied apart. The difference between the subject of "moral insanity" and the general paralytic, who has lost all sense of decency and lives the life of a beast, is one of degree. The practical difficulty is to convince the mere observer that forms of insanity which seem to consist in the loss of moral qualities and principles *only* may be as directly the effect of brain disease as any of those grosser varieties of mental disorder which he is perfectly well able to recognize, and fully prepared to ascribe to their proper cause.

To the professional mind, at least, it will follow from what we have said that the injury to mind properties or qualities inflicted by the invasion of disease may be partial, and must in every case be determined by laws or conditions governing the progress of disease, perhaps on the lines and in the directions which have been least well guarded by educational influences. A man may lose his faculty of forming a wise judgment long before he is deprived of the power of distinguishing between right and wrong. This is so because it is a higher attainment in moral culture to do right advisedly than simply to perceive the right thing to do. The application of principle to conduct is an advance on the mere recognition of virtue in the concrete; or even the possession of virtue in the abstract. The question whether any past act of wrong-doing was an act of insanity does not so much depend upon the great question whether the person doing it was insane as a whole being, as whether the deed done was the outcome of passion or error, the direct fruit of limited or special disease. In short, the insanity of the act must be inferred from the morbid condition of the brain from which it sprang, rather than from the act itself. A partially disorganized — or, as we prefer to say, "denuded" — brain may be fully capable of sane thought, except on some one topic, and able to exercise every intellectual function except of a particular order. Or there may be mental weakness and neurotic susceptibility in regard to a special class of impressions. It would be difficult to name any form of act or submission which may not be the outcome of incipient or limited disease. The practical difficulty is to avoid, on the one hand, treating the fruits of disease as willful offenses; while, on the other, we do not allow the supposition or presumption of disease to be employed as an excuse for wrong-doing. It is of course clear that there may be perfect method in such madness as springs from partial or commencing brain disease; for every element in the mental process which culminates in a mad act may be sane except the inception of the idea in which the act took its rise. Thus, in the case of the suspected murderer of Mr. Gold, there may have been perfect sanity in respect to every stage of the process by which the crime was planned and carried out, and yet insanity, the effect of brain disease, in the idea by which the deed was suggested. For example, when a man is suffering from morbid suspicion, and, fixing his distrust on some

individual, purposes to murder him, the intellectual processes by which he lays his plans and fulfills his morbidly conceived intention are performed with perfect sanity, as by a sane will. It is important to recognize this. There is no difference in *nature* between the mental operation by which a "sane" man contrives and executes a crime and that by which a known "lunatic" will commit the like offence. There may be as much *method* in the one instance as in the other, and the faculties which exhibit this method may be as sound and effective, but in the one case the idea behind the act is sane, while in the other it is insane. The brain is not one large homogeneous organ, to be healthy or diseased, orderly or deranged, throughout at any one period. Inflammations, and diseases generally, which affect the brain as a whole do not commonly cause insanity, properly so called. The organ of the mind is a composite or aggregate of cells or molecules, any number or series of which may be affected with disease while the rest remain healthy. At present we are only on the threshold of investigation concerning the physical causes of insanity, and have scarcely done more than recognize the possibility of *molecular* disease of the brain. Hereafter science will probably succeed in unveiling the obscure facts of molecular brain pathology, and enable the medical psychologist to predicate disease of recog-

nized classes of brain elements from the special phenomena of mind disturbance. This is the line of inquiry and the result to which the progress already made distinctly tends.

For the present, the inferences we can surely draw from known facts are very few; but prominent among the number are certain which it is all-important to recognize in view of the judgment which must hereafter be formed on the two cases now engaging public attention on both sides of the Atlantic. The existence of method in madness is no marvel, and that characteristic cannot therefore be supposed, or alleged, to weigh as evidence against the "insanity" of the criminal. The perpetrators of these heinous offenses against common right and public safety may be more or less responsible for their acts, and, so far as these are concerned, more or less sane or insane. The measure of the morbid element in their individual cases will be the health or disease of the particular part or element of the brain from which the offense sprang. The ultimate judgment formed must be determined upon the basis of scientific tests to be applied to the action of the brain alleged to be the subject of partial or incipient disease. There is nothing in the facts as they stand to supply the materials for a judgment. Precise scientific inquiry can alone solve the enigma each case presents. — *Lancet*.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 16, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	990	624	52.32	37.17	6.26	6.26	3.43
Philadelphia.....	846,984	477	274	36.48	27.04	1.89	2.52	1.26
Brooklyn.....	566,689	430	292	55.35	45.12	3.49	4.19	2.56
Chicago.....	503,304	440	325	44.55	33.86	3.64	2.27	1.14
Boston.....	362,535	143	56	21.05	9.79	5.60	5.60	.70
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	257	130	38.82	32.91	1.27	2.53	.42
Cincinnati.....	255,708	583	193	18.35	17.48	1.03	.17	.69
New Orleans.....	216,140	125	45	24.00	—	.80	.80	2.40
District of Columbia.....	177,638	112	53	31.25	26.79	.89	—	—
Pittsburgh.....	156,381	134	75	43.28	21.64	4.48	3.73	2.99
Buffalo.....	155,137	108	69	42.59	27.78	7.41	2.78	4.63
Milwaukee.....	115,578	64	43	25.00	12.50	4.69	1.56	3.12
Providence.....	104,857	39	21	30.77	12.82	—	2.56	—
New Haven.....	62,882	—	—	—	—	—	—	—
Charleston.....	49,999	44	19	29.55	6.82	—	—	11.36
Nashville.....	43,461	29	9	27.59	17.24	6.89	—	—
Lowell.....	59,485	37	20	29.73	18.92	5.41	2.70	2.70
Worcester.....	58,295	16	5	25.00	25.00	12.50	—	—
Cambridge.....	52,740	16	6	31.25	25.00	6.25	6.25	—
Fall River.....	49,006	25	14	16.00	4.00	4.00	—	—
Lawrence.....	39,178	11	2	18.18	9.09	—	—	—
Lynn.....	38,284	13	5	38.46	7.69	—	23.08	—
Springfield.....	33,340	20	8	30.00	20.00	10.00	5.00	5.00
Salem.....	27,598	11	2	9.09	—	—	9.09	—
New Bedford.....	26,875	11	2	9.09	—	9.09	—	—
Somerville.....	24,985	7	3	42.86	42.86	—	—	—
Holyoke.....	21,851	17	10	35.29	35.29	—	—	—
Chelsea.....	21,785	9	2	33.33	22.22	—	11.11	—
Taunton.....	21,213	3	0	—	—	—	—	—
Gloucester.....	19,329	4	1	25.00	25.00	—	—	—
Haverhill.....	18,475	3	1	33.33	33.33	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	6	2	—	—	16.67	—	—
Fitchburg.....	12,405	1	1	—	—	—	—	—
Twenty-three Massachusetts towns.	185,727	65	27	29.23	16.92	4.62	—	7.69

Deaths reported 4230 (no return from St. Louis or New Haven); 2339 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 1646, diarrheal diseases 1209, consumption 366, lung diseases 153, diphtheria and croup 136, scarlet fever 88, small-pox 47, typhoid fever 38, malarial fevers 38, cerebro-spinal meningitis 29, whooping-cough 24, measles 15, puerperal fever 15, erysipelas four, typhus fever three. From *small-pox*, Chicago 15, Philadelphia 14, Pittsburgh 10, Brooklyn and Westfield one. From *typhoid fever*, New York eight, Pittsburgh seven, Philadelphia and Chicago four, Boston three, Baltimore, New Orleans, Buffalo, and Charleston two, Milwaukee, Nashville, Lowell, and Lawrence one. From *malarial fevers*, New York 10, Brooklyn nine, New Orleans seven, District of Columbia five, Baltimore and Charleston two, Chicago, Buffalo, and Nashville one. From *cerebro-spinal meningitis*, New York 12, Chicago eight, Philadelphia four, Fall River two, Boston, Charleston, and Marblehead one. From *whooping-cough*, Philadelphia five, New York and Providence four, Baltimore and Buffalo three, Brooklyn, Chicago, Pittsburgh, Milwaukee, and Malden one. From *measles*, New York six, Brooklyn and Providence two, Chicago, Pittsburgh, Buffalo, Milwaukee, and Nashville one. From *puerperal fever*, Boston four, Brooklyn and Chicago two, Pittsburgh, Buffalo, Milwaukee, Lowell, Fall River, Lynn, and New Bedford one. From *erysipelas*, New York three, Milwaukee one. From *typhus fever*, New York three.

Twenty-one cases of small-pox were reported in Brooklyn, 29 in Chicago, 53 in Pittsburgh, two in Milwaukee; diphtheria 32, scarlet fever three, in Boston; scarlet fever six, diphtheria three, in Milwaukee. Two hundred and sixty-four deaths from sunstroke and 150 from excessive heat were reported in Cincinnati.

In 41 cities and towns of Massachusetts, with a population of

1,086,643 (population of the State 1,783,086), the total death-rate for the week was 20.07, against 18.02 and 17.00 for the previous two weeks.

For the week ending June 25th in 149 German cities and towns, with an estimated population of 7,840,903, the death-rate was 26.4. Deaths reported 3985; 2079 under five; pulmonary consumption 503, acute diseases of the respiratory organs 296, diarrheal diseases 256, diphtheria and croup 112, scarlet fever 81, typhoid fever 57, measles and röteln 46, whooping-cough 29, puerperal fever 19, small-pox (Königsberg three, Lübeck, Berlin, Harburg, Aachen two) eight, typhus fever (Königsberg three, Bromberg) four. The death-rates ranged from 15.1 in Duisburg to 40.5 Breslau and Munich; Königsberg 32.8; Dresden 26.2; Berlin 32.3; Leipzig 16.5; Hamburg 23.6; Hanover 22; Bremen 24.1; Cologne 27.7; Frankfurt 20.1; Strasburg 39.2.

For the week ending July 2d in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 19.5. Deaths reported 2849: acute diseases of the respiratory organs (London) 181, diarrheal 130, measles 100, whooping-cough 91, scarlet fever 66, small-pox (London 52) 59, fever 28, diphtheria 24. The death-rates ranged from 13.2 in Plymouth to 25.1 in Liverpool; Sheffield 16.4; Birmingham 17.1; Manchester 18.7; Bristol 18.9; London 19.6; Leeds 21.2. In Edinburgh 19.6; Glasgow 23.7; Dublin 18.7.

In the 21 chief towns of Switzerland, for the week ending July 2d, population 479,934, there were 25 deaths from diarrheal diseases, acute diseases of the respiratory organs 18, measles seven, typhoid fever five, diphtheria and croup four, whooping-cough one. The death-rates were: Geneva 22.8; Zurich 26.4; Basle 20.1; Berne 19.9.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
July, 1881.																			
Sun., 10	30.028	76	89	62	70	55	84	70	SW	S	SW	2	10	10	C	C	C	—	—
Mon., 11	30.029	64	81	58	82	89	74	82	SW	NE	Calm.	6	8	0	F	O	R	—	.45
Tues., 12	29.998	67	77	60	79	66	78	74	Calm.	E	S	0	6	4	O	C	O	—	—
Wed., 13	29.818	77	88	63	91	62	64	72	SW	SW	W	8	8	9	H	F	C	—	—
Thurs., 14	29.953	75	83	69	59	27	61	49	NW	W	W	8	12	4	C	C	C	—	—
Fri., 15	30.096	69	77	61	53	48	63	55	Calm.	SE	S	0	5	6	H	C	C	—	—
Sat., 16	29.813	74	86	61	76	60	78	71	SW	SW	SW	10	15	13	—	O	F	—	—
Week.	29.962	72	89	58														5.35	.45

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 16, 1881, TO JULY 22, 1881.

SIMONS, JAMES, lieutenant-colonel and surgeon. Granted leave of absence for one month. S. O. 129, A. G. O., July 15, 1881.

APPOINTMENTS AT THE BOSTON DISPENSARY. — A department of diseases of women has been established at the Boston Dispensary, to be under the charge of Drs. W. H. Baker, F. H. Davenport, C. M. Green, and J. W. Elliot.

Dr. G. M. Garland has been appointed physician at the central office.

Drs. G. H. Tilden, John B. Swift, J. W. Farlow, M. H. Prince, and L. W. Kyle have been appointed district physicians.

BOOKS AND PAMPHLETS RECEIVED. — May 1881. *Practical and Rational Treatment of the Diseases of the Skin*. By I. Edmonson Atkinson, M. D. (Reprint.)

On "Kerion Celsi," a Variety of Tinea Tonsurans. By I. Edmonson Atkinson, M. D. (Reprint.)

Considerations respecting the Mechanical Treatment of Hip Disease, with Special Reference to the Value of Traction. By A. B. Judson, M. D. (Reprint.)

Atlas of Skin Diseases. By Louis A. Duhring, M. D. Part IX. (Conclusion.) Philadelphia: J. B. Lippincott & Co. 1881. (A. Williams & Co.)

Fifth Annual Report of the State Board of Health of Wisconsin. 1880.

Dengue. By J. G. Thomas, M. D., Savannah, Ga. (Reprint.)

State Medicine. What has been Accomplished and What is Needed in Indiana. By Thaddeus M. Stevens, M. D. (Reprint.)

The Forty-Second Annual Report of the Superintendent of the Boston Lunatic Hospital to the Board of Directors of Public Institutions. For the Year ending April 30, 1881.

Quarterly Report of the Medical Officers of the United States Army, with their Stations and Duties, as reported to the Surgeon-General, July 1, 1881.

Lectures.

THE REFLEXES.

NOTES FROM ONE OF PROFESSOR ERB'S LECTURES
ON THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM. LEIPZIG.

BY GEO. L. WALTON, M. D.

ALTHOUGH physiologists have busied themselves extensively with the study of reflex action in general, that branch of the subject which is of practical diagnostic value has been comparatively neglected. There is room for much valuable work even on the healthy subject, upon the reflex movements brought out by the stimulation of various parts of the body, and to the practical physician the subject is one of great importance.

The principal reflexes of diagnostic value are the skin, tendon, pupil, palate, and sphincter reflexes.

SKIN REFLEXES.

These are limited in health to certain parts of the body.

The reflex movement produced by tickling the *sole of the foot* is best seen in children and in "nervous" people. It varies greatly within normal limits, and with these variations it is necessary to become familiar before drawing diagnostic conclusions. This reflex is best tested by drawing the finger-nail or the handle of a percussion hammer quickly from toe to heel. The result, as seen on the healthy man used for illustration, is a contraction of the quadriceps extensor. A slight contraction appears also in the muscles on the front of the leg, so that the foot is flexed as well as drawn away. In the foot itself no reflex is seen. This is the only normal skin reflex about the foot, unless sometimes a slight contraction when the dorsal surface is pinched.

Cremaster reflex. On stroking the anterior and internal surface of the thigh, a contraction in the cremaster muscle is seen to follow, by which the testicle is elevated. In a similar manner the scrotal muscles contract when we pinch the skin of the scrotum. These contractions are under abnormal conditions much decreased, and are normally more marked in boys than in adults. In this boy, for instance, when the thigh is stroked the testicle is seen to ascend nearly to the inguinal ring.

The *abdominal reflex* is best tested with the patient lying down, as the abdominal muscles in the erect position are very tense. The abdomen should be unexpectedly stroked, and will immediately retract. This reflex is easily wearied by a few repetitions.

Mamillary reflex. In the normal subject, the nipple on being stroked becomes hard and elevated, that is, assumes a state of erection. At the same time the areola is drawn together.

Palpebral reflex is tested by approaching the eye quickly with the finger or by stroking the cilia. Under pathological conditions the conjunctiva may be touched to determine if palpebral reflex exist, though of course in health this stimulus is never necessary.

The foregoing are the only skin reflexes found in the normal subject. In disease they may be wanting on the one hand or increased on the other, and new skin reflexes may be developed.

TENDON REFLEX.

The value of the tendon reflex in diagnosis was discovered in 1876, since which time the literature on the subject has multiplied rapidly. This phenomenon is produced by the stimulation of certain tendons, for example, that of the quadriceps extensor femoris. That the reflex is produced by stimulation of the tendon and not of the skin is easily shown on animals by removing the skin over the tendon; on man by shoving the skin over the tendon to one side and stimulating it. This reflex appears in the healthy subject on stimulation of the tendon of the quadriceps femoris, of the triceps, and the tendo Achillis.

Patellar tendon reflex. This is by no means easy to demonstrate in all cases in which it exists. The knee of the leg to be tested is crossed over that of the other, and the leg allowed to hang down with no muscular effort on the part of the patient. This position is preferable to the recumbent, for in the latter position the tendon is relaxed, the reflex being in all cases best obtained when the tendon is slightly stretched. A short, sharp, light stroke is given with a percussion hammer on the tendon, just below the edge of the patella. The result in health is a contraction of the quadriceps muscle. The great difficulty to contend against is involuntary muscular effort on the part of the patient.

The phenomenon is in health almost constant, but as it is wanting in one and one half to two per cent. of normal subjects, its absence cannot be taken for an absolute sign of disease, which is an important fact to bear in mind.

The patellar reflex may be in disease increased to such a degree that the least touch calls out a series of clonic contractions, or it may, on the other hand, be entirely wanting. It is wanting in tabes dorsalis, for example, and in atrophic paralyses, either of peripheral or of spinal origin. It is generally increased in cases of spinal lesion in the dorsal region.

Reflex of the *tendo Achillis* is tested as follows: The foot is held at a right angle to the leg in order that the tendon may be slightly stretched. The tendon is then struck lightly about two and one half finger breadths above the apex of the heel. A slight extension of the foot results in the normal subject. About the lower extremities there are no more normal tendon reflexes, except sometimes a slight contraction of the adductors on striking the inner surface of the thigh.

Triceps reflex. This is called out by striking the tendon just above the elbow, the arm being held in a position of flexion.

A slight reflex may be sometimes found in the biceps and in the wrist flexors on striking their respective tendons. These reflexes are, however, very inconstant in health. In disease they may be very marked.

Here is a patient with an organic central lesion. He has a spastic gait, his legs are stiff, and he almost hops on his toes. In a patient with this gait we generally find exaggerated reflexes. On attempting to bend his knee we find a powerful resistance, due to involuntary muscular contraction.

We find an immense reflex following the slightest stroke on the tendon, not only below the patella but even above it, over a triangular space which represents the spreading of the tendon. This reflex is in some cases so much exaggerated that one stroke is followed by a series of clonic contractions.

In such a case as this one the reflex of the tendo Achillis is best tested by holding the foot in the hand with the thumb to the dorsum of the foot. The foot is now bent with a quick jerk towards the knee, and pressed firmly, though not too forcibly, upward. The result is a series of contractions, each relaxation being followed by a fresh stimulus as long as the foot is held firmly upwards. The fact that this stimulus is enough to keep up the reflex is in itself evidence of a pathological condition. This phenomenon is in some cases best demonstrated by holding the foot in a position of abduction, in others of adduction. The phenomenon is almost never to be produced in health, though in persons with weak nerves two or three contractions may follow. When, therefore, as in this case, a distinct series of contractions follow, a pathological state is almost surely diagnosed, probably an organic lesion in the cord or brain.

As we proceed in the examination of the case before us we find that striking the inner surface of one thigh calls out contractions in the adductors of both thighs. A reflex also follows stimulation of the tendo tibialis postici as it passes the inner malleolus, also of the peroneal tendons as they pass under the outer malleolus, also that of the tibialis anticus as it passes over the ankle. Reflexes from the biceps and from the wrist flexors are marked. In this patient the plantar, abdominal, and mamillary reflexes are well shown.

The number of muscles exhibiting the reflex phenomenon may be in pathological cases much increased, the deltoid, the scapular, and the dorsal muscles, for example, being included.

PUPIL REFLEX

is of great diagnostic value, and is exhibited in two ways: by narrowing on stimulation by light, and by widening on stimulation, for example, of the skin.

Pupil reflex to light. The patient is placed facing a window, and the hand of the observer is placed over the eye. On the sudden removal of the hand the slightest contraction of the pupil is noticed. The eyes should not be closed by the hand or its removal may be followed by a contraction of the pupil, due to the effort of accommodation which must not be confounded with the contraction due to the stimulation of the light. This accommodative effort of the pupil, which is not a reflex phenomenon, may be separately tested by directing the patient to look first at a distant then at a near object.

Pupil reflex to other stimulation than that of light. In sleep the pupils are very small. Let a person be suddenly awakened by a loud noise or other stimulus, and an extreme dilatation occurs. A similar dilatation may be brought about by a sharp stimulus to the skin. Let the patient look fixedly on a certain spot, say the observer's coat. If now, the skin at the back of the patient's neck be pinched a widening of the pupil ensues. The same reflex may be brought about by a strong faradic current, one electrode being placed at the back and the other at the side of the patient's neck.

PALATE REFLEX.

While the patient is breathing as quietly as possible, with the mouth open, the palate may be touched with the end of a pen-holder. If the part is in the normal condition a retraction follows.

For the sphincter reflexes we must depend in great measure on the history of the patient.

The reflex acts of coughing and sneezing may be tested if desirable, the former by powders blown into the larynx or by observing the patient while choking, the latter by snuff or other irritating substance.

In pathological cases a great variety of new reflexes appear, some following upon external stimuli, others upon natural acts of the patient. As an example of the latter, patients are seen in whom the passage of a stool is followed by clonic contractions in the muscles of the legs.

Among the many illustrations of reflex acts following external stimulus may be mentioned vaginismus, also micturition brought about by the pain of introducing a catheter. In one patient with decubitus washing the sore always induced an act of defecation.

An interesting example of abnormal reflex action was seen in the patient who, though paralyzed from the neck downwards, made a movement with his arm to remove the catheter on every attempt at introduction.

Original Articles.

THE RELATION OF THE STATE TO THE INSANE.¹

CHARLES F. FOLSOM, M. D.,

Lecturer on Mental Diseases, Harvard Medical School.

FROM the earliest times, society has recognized its right to protect itself from its dangerous or troublesome neighbors. When offenders were put to the rack, lepers forbidden on pain of death to enter cities, and supposed importers of pestilences were burned alive, or even long after presumed witches ceased to be hanged, the insane, when dealt with at all on the part of the state, if not treated as criminals, were simply put in secure confinement, without reference to their own comfort and happiness, or their estates were placed under guardianship for the benefit of their sovereign or their heirs. Indeed, so late as the beginning of this century medical men in some instances approved or even advised whips, chains, and all sorts of cruel punishment in the treatment of the most refractory of them; the disease had but just been discovered to be to a considerable extent curable; the law held as responsible all that were not furiously mad, or devoid of understanding, like brutes; kindness and humanity in their care and custody were hardly beginning to be observed. Pinel's great reform was only fairly started, Conolly was not born, and with occasional exceptions, asylums for the insane then existing were for the most part mere bedlams, in some of which the miserable inmates were exhibited to the rabble for a few pence each. Their keepers were not seldom convicts, usually brutal fellows, and their custodians far from always had medical training. By the public and their friends, the insane were treated with persistent brutality.

From that day to this, the advance has been simply enormous. Insanity is universally held to be a disease, and as such is studied in medical schools. Insane asylums have largely become hospitals, where pleasant associations and surroundings, the ordinary amenities of life, occupation, recreation, good food, sunlight, and pure air, are to an ever increasing extent taking the place of bolts, bars, cells, gloomy corridors, seclusion, me-

¹ A paper read at the annual meeting of the American Medical Association, in Richmond, May, 1881.

chanical restraint, enforced idleness, and drugs. In the meantime, with a greater prevalence of insanity, which probably is only quite moderate, the increase in the number of the insane known to the community has far outstripped the growth of population; estimates for asylum accommodation, even on a basis considered extravagant, are shown to be below the necessities of the case, as soon as the buildings are completed; new insane asylums are filled almost before they are finished; the most humane and liberal States have not yet been able to provide room for all the insane seeming to require care or custody; each decade the definition of insanity is so widening that persons hardly deemed irresponsible ten years previous are brought to hospitals for detention or treatment, nearly every insane asylum in the land is crowded to overflowing, and still the accumulation of the chronic insane goes on, the proportion of cures of recent cases not increasing in spite of our lavish expenditures.

In Massachusetts, with a census population of 1,783,812 in 1880, there were 4600 insane officially known, 3124 were in public or corporate asylums at the end of the year, or 175.13 to every 100,000 people. This ratio had increased from 9.55 in 1820; 11.34 in 1830; 61.99 in 1840; 84.97 in 1850; 110.55 in 1860; 130.44 in 1870. Two new hospitals just finished in that State are already crowded to accommodate 1200 patients. From all parts of our Union a similar story might be told, except that too often the overfilled asylums would be found wretchedly inadequate to care for a half or a quarter of those fairly needing their shelter. In Massachusetts one in 350 of the population is insane, and there cannot be, I think, less than 100,000 in the whole United States, of whom hardly a third are even receiving asylum care, unsatisfactory as that is in some places, while the utter wretchedness of those in jails, poorhouses, and often private dwellings, is almost beyond belief. Of the total number, probably between ten per cent and twenty per cent. are by our present methods permanently curable, and not far from seventy per cent. should be wards of the state.

At the same time the obscurer forms of mental disease are each year better detected, and under the complex and close relations of our highly civilized life the community demands louder than ever to be protected from Abrahams who murder their daughters in obedience to the voice of a delusion, mothers who drown their children, wives whose hallucinations drive them to splitting their husbands' heads open with an axe, and all persons who under the influence of their insanity expose people to great risks as regards life, comfort, or even decency. The range of insanity is ever widening without any legislation to define it, and it is not at all impossible, that in our own day, even in a government which tries to avoid being too paternal, certain forms of drunkenness, beastly licentiousness, delirium tremens, squandering one's children's all by gambling, etc., may receive the control from the state that the ancient Greeks thought necessary. However, without providing for an increase in the bounds of insanity, we are obliged to associate in our institutions, criminals, epileptics, idiots, demented, dipsomaniacs, those suffering from acute curable disease, the chronic insane, and persons whose insanity is so slightly apparent that most untrained observers would wonder why they were not following their ordinary pursuits in their customary homes, instead of being in confinement.

It is true that the numerous wards of large asylums

admit of a considerable degree of classification, and of a partial separation of the criminals from the law-abiding, the violent from the calm, the destructive from the quiet, the dangerous from the peaceful, the obscene and profane from the well-behaved, the sick and bedworn from the noisy and active, the dement or idiot from those of clear mind, the prostitute and the infanticide from the plodding day laborer and the woman of refinement whose poverty compels her when insane to become an inmate of the public asylum. There is still, however, such a similarity in the various rooms and galleries and corridors, and such a close relation between them, that there is great danger that those least ill, or in the curable stage, will be subjected to restraint not needed by them, or indeed to an amount of restriction of liberty that is not justifiable and to associations that must be at least very painful, if not absolutely injurious or fatal to recovery. Indeed, the case can hardly be otherwise, when we bear in mind the facts that the hospital for the insane of to-day is simply an outgrowth of the prison asylum for lunatics of a half century ago, without sufficient structural change to correspond with its present function, and that in each the number of physicians and attendants, too many of whom are inadequately trained for their work, is so small, that convenience of administration is an absolute necessity in its construction, to the exclusion, in a considerable degree, of considerations for the welfare of the patients and strictly medical treatment.

The problem of properly caring for so many persons in such a variety of mental and physical conditions is so intricate and difficult, that it cannot be said to be satisfactorily solved anywhere. The colony at Gheel with its pauper lunatics hired out to peasants furnishes some suggestions to us, but little real help, its chief lesson being that some of those previously deemed incurable and useless may by employment regain their apparently lost faculties and return to the duties of a restricted life; the 10,000 unhappy insane huddled together in the five enormous asylums of London warn us what to avoid; the 1500 boarded out in private families in Scotland, under the supervision of the Lunacy Commission, only make us to that extent envious of social conditions where it is possible to get so good care, and so cheap, in that way. With very few private and corporate asylums, and these chiefly for the wealthy, we must provide for a very heterogeneous mass of humanity, accustomed to very different associations and methods of life.

For those of the insane who are deprived of their liberty, as occupants of private dwellings, workhouses, almshouses, or insane asylums, society in protecting itself should at least do the justice of seeing that they have all the freedom and comfort which is compatible with safety, and not prejudicial to the recovery of those who are curable. All experience has shown that the interests of the insane are best served, and that they are surest to receive the most intelligent and humane care, where there is supervision on the part of the state, by a competent expert board, appointed solely on account of its fitness for that duty. The best form yet attained for the purpose is, beyond all question, the Scotch Lunacy Commission, whose operations will well repay a careful study, although the French and English methods have many advantages.

In our country a national lunacy commission, with the power given to similar boards in Great Britain, would be out of the question, for obvious reasons, al-

though I feel confident that the appointment of a United States Commissioner of Insanity, with chiefly advisory duties, like the Commissioner of Agriculture, is only a matter of time. A state board or commissioner is so likely to be under the influence of local politics, that one deserving the confidence of the community could be secured, if at all, only by a strong effort and constant watchfulness on the part of influential and disinterested men; but the great good that has resulted from such organized central inspection in other countries, and the need of similar state control is so clear in the United States, that it is to be hoped that we shall not be slow in treating with simple justice a large class of persons, whose infirmities expose them to so much bitter suffering that is unavoidable. It should be distinctly said, however, that a central board organized on a political basis is hardly better than none at all, and that if the commission is not of the best men, it is likely to do at least as much harm as good, or to be worse than none, especially in those states where the asylum governing trustees are men of high character, appointed by the chief executive from various sections, and not as in England and Scotland with purely local interests.

First of all a lunacy board must embrace men with a thorough medical knowledge of insanity and its treatment, and be capable of advice or action that will command respect with the community, the medical profession, and the asylum officers. Its chief duties would be:—

I. To secure proper care for the insane in private dwellings; they are very much more liable to neglect and abuse than if in well regulated public institutions. This, too, should include the right to send to asylums all that might not be receiving suitable care outside, but as insanity is not a crime it is desirable that as many of the insane as is practicable should have natural home life, at least that their liberty should be interfered with to the least possible extent for their own protection and cure, or for the safety and welfare of the community. Allied to this part of the central board's duty would be its obligation to encourage the construction of suitable asylums in the many States where they are urgently needed, and to remove the insane from any jails and almshouses where they cannot be treated in conformity to the requirements of their case.

II. The board should supervise the commitment of patients to asylums by receiving copies of the commitment papers, and also, within a month of the patient's arrival there, a certificate from the medical superintendent (1) as to their insanity, and (2) as to the propriety of their detention for care or medical treatment. This would secure greater care than is now customary, and would involve a thorough examination of all cases, especially if defective or faulty certificates were returned for correction, in default of which the persons committed might or might not be discharged, according to the circumstances of each case. I fear that this matter does not receive from the medical profession that consideration which its importance deserves. If we send a patient to Florida for the winter or to Europe for the summer, thereby involving a comparatively trifling interruption to his business, it is usually only after weeks or even months of deliberation and perhaps painstaking consultations, but if to an insane asylum, with its attendant possibilities of injuring for many years or for life, cherished plans for the future, it is too often upon a hastily formed judgment or the

statements of friends, perhaps interested, whether consciously or not.

As insanity is a disease, it is well that it should be upon the shoulders of properly qualified physicians that the tremendous responsibility should rest of saying whether or not a person is a fit subject for an insane asylum, and as that necessitates serious loss of personal liberty, it is equally clear that the actual commitment, after proper application from the nearest friend or local magistrate, should be a judicial—at least a ministerial—act by a legal officer, who, at his discretion, may dispense with the appearance before him of any insane person who may be likely to be harmed by being subjected to public examination, if there be satisfactory evidence that it is not needed.

The definition of insanity really depending upon the opinions of the signers of the medical certificates, supported by public opinion and the decisions of the courts, the patient committed should always clearly understand that he has the right of appeal for an examination of his case, immediately after his commitment, or at any time, to an impartial expert board, who should have the right of discharge whenever it were deemed best, whether the insanity be clear or not, except in criminal cases, if the detention in an asylum should be decided to be uncalled for. Nothing short of this can fairly satisfy the right of the insane to be sure that there is no error of diagnosis or judgment in their case, and that, if they are improperly confined or not insane, a fair investigation will soon set their affairs right. It has been suggested in England that a few paid experts be assigned to the duty of seeing all persons where commitment to insane asylums is demanded, but I am quite sure that, outside of the practical difficulty of having to await their convenience in getting from one part of the state to another to sign certificates of insanity, it would be unwise to limit the power of certifying to so small a number of persons.

The certificates of insanity signed by two physicians independently of one another, and certainly within a week of their examination, should bear the dates of signature and of seeing the insane person; they should include the facts indicating insanity as observed by themselves and as communicated by others. One of the medical men certifying should be unconnected with any hospital for the insane, and neither ought to be an officer in the asylum to which the commitment is made. All patients, private or otherwise, including the pauper insane sent to those exceptional almshouses or workhouses that are fit for them, should be subject to the same regulations as to commitment. It would be a better method if workhouses and almshouses receiving the insane should be required to have special wards for their use, and to admit them only after they had been, upon sufficient examination and observation, transferred by the central board from a regular hospital for the insane.

An insane person arrested away from his dwelling, or without a definite home, or so violent or dangerous as to need immediate custody, or simply requiring undelayed care, when the committing judge is not at hand, would be subjected to the needless cruelty of confinement in a "lock-up" if no special provision were made for such an exigency. Probably no better way out of the difficulty can be devised than to allow commitment upon an emergency certificate, signed by the applicant, whether relative, friend, magistrate, or

policeman, and accompanied by at least one medical certificate, proper security, a bond if need be, being given that the process of committal as required by law shall be completed within three days, in default of which the patient should be discharged, the lunacy commission being informed of all the facts of the case in any event. Naturally no officer in the asylum to which the emergency patient is sent ought to be allowed to sign the emergency certificate.

The courts, of course, should have the power to commit any insane person to an asylum upon complaint, and after inquiry, or even in case of crime before indictment, upon failure to indict, during confinement awaiting trial, or after sentence; and all persons acquitted of crime, by reason of insanity, should thereafter undergo confinement in an insane asylum. The discharge in these cases should always be a judicial act, the medical officers informing the committing authorities of restoration to sanity. In case of remote districts, away from medical men or from a judge having power to commit, and in order to provide for the insane needing immediate care, it is quite important for the local authorities to have power to bring persons of unsound mind before the proper officer, who should also be able to summon them at his pleasure. It is proper, too, that in some cases at the discretion of the asylum authorities, where a certificate of insanity is not desirable or not legal, individuals should be allowed upon their written application to become voluntary patients, to be permitted to go away within three days after signifying their desire to do so, the three days' provision being made with their consent upon entrance, and being intended to prevent a person, quiet at first but afterwards become violent or dangerous, from suddenly bursting out upon the community without warning to those whose duty it would be to secure at once a proper commitment.

The question would naturally arise what security have the insane against too long detention, the medical men who see them every day not having their attention directly drawn to that point as often as might be desirable. The difficulty may be partially met by having every commitment paper valid only for a definite period of one, two, or three years, at the end of which time the medical superintendent should be required to examine his patient carefully, and certify anew to the central board as to his insanity, and as to the propriety of further detention. The board, as expert, too, should be constantly making investigations with regard to that point, and the rule should be followed of allowing the safe patients to try outside life too often rather than not often enough.

The lunacy commission or commissioner, having the right to discharge any insane person upon inquiry, should also be empowered to transfer paupers from one institution to another without obtaining fresh commitment papers.

III. While in the asylum or elsewhere the insane should always have the right to consult the central board, and to that end must be allowed to send to the board, and to receive from it unopened letters by mail, without the delay caused by the periodical emptying of locked letter boxes. Letters sent to others than state officers should be indorsed and kept for the relatives or inspectors, as in England, or disposed of as the judgment of the superintendent dictates, according to Scotch law; the nearest relative, and as many others as is proper in each case, of course having the right of

unrestricted correspondence. The admission of friends must necessarily be under the control of the medical staff of the hospital, a list being kept of those refused entrance, and there resting with the central board power to authorize any person for sufficient reason to have permission to visit any inmate upon its written order.

IV. Especially, as it is well to encourage the greater use of private asylums in this country, the board should be required to see that means are taken to sufficiently guard the property of all the insane under confinement, and whenever one of them is not receiving the benefit of a fair proportion of his estate to report the facts in the case to the attorney-general, whose duty it might be to direct inquiry for the purpose of securing justice in the matter. As a rule, such a regulation would probably result in an agreement being made between the parties interested, with the consent of the board. Too many of the insane live without the comforts to which they have been accustomed, the property rolling up for their heirs, when the legitimate use of their income might make them incomparably less wretched.

V. The board should have authority to visit at their pleasure, and fully inspect all places in which an insane person is confined, seeing personally each patient at definite intervals of time, and with proper safeguards examine all places where one is alleged to be under detention, the overseers of the poor being required to report to it all persons in their town or city known by them to be of unsound mind. It should have such direction and regulation of all matters relating to lunacy as each State might think best to give it, a great deal being left to harmonious coöperation with it on the part of the asylums rather than to legal enactment, for it is much easier and more disastrous in its possible results, to place too much power than too little in supervisory hands. The board should be enabled to ask for any facts, to make inquiries, summon witnesses, examine on oath, require records of mechanical restraint, seclusion, and general matters of management, give and renew licenses for private asylums, receive notice of all deaths, accidents, escapes, or maltreatment by attendants, and make an annual report of all its doings. It should see that penalties are enforced for non-compliance with the laws for the protection of the insane, for neglect of duty, or abuse of patients, and should keep a list of all discharged officers to be furnished to the several institutions. The laws regarding settlement of paupers, so far as the insane are concerned, should be enforced by the board, and all questions regarding them should be decided by it under the statutes.

VI. Perhaps not the least valuable work to be done by a lunacy commission would be the proper classification of the insane, and more promising treatment, by establishing a separate asylum for criminal lunatics, another for idiots, still another for paralytics, insane epileptics, and demented, and a self-supporting institution for dipsomania and allied forms of drunkenness by removing suitable persons to those few almshouses and private dwellings which are adapted to their proper care, and, most important of all, by insisting upon well appointed hospitals, in the strict sense of the word, with all the best resources of our skill and the most approved appliances of art for treating curable mental disease. By tact and wisdom an incalculable amount of good might be done in this direction, which would finally reach out so as to embrace every ques-

tion involving the welfare of the insane and the duty of society to that unfortunate class.

Finally, every officer of the central lunacy commission should be required, as in Scotland, to take an oath to keep secret all such matters as might come to his knowledge in execution of his office, except when required to divulge the same by legal authority, or as far as he should feel called upon to do so for the better performance of his duty.

In the necessarily brief time which I have felt justified in occupying, I have endeavored to give an outline, in as concise a manner as possible, of what I conceive the simple duty of the State to the insane to be, in a most important matter, touching the direct interests of most—at least the sympathies—of all of us here. Where so much demands accomplishment, cannot our noble profession inaugurate measures to bring about the changes that are required, and help to guide a movement, which, with fewer or more mistakes as we "coöperate" or not, an enlightened public opinion must sooner or later set in motion? The superintendents of our asylums are doing a vast deal in the direction of improved methods for the treatment of the insane, for which they deserve the gratitude of the profession and of the public. They will be only too glad to coöperate in any wise way for carrying that work still further.

LITHOTRIPSY, WITH ENTIRE REMOVAL OF FRAGMENTS AT SAME SITTING BY BIGELOW'S ASPIRATOR.¹

BY NORMAN L. SNOW, M. D., OF ALBANY, N. Y.

SURGERY is constantly making rapid strides, not only in the matter of wholly new and original operations, together with many useful and happy modifications of almost classic methods, but as well also in the mechanical department. In fact, this latter must keep pace with the former, and the majority of surgeons owe to some brother operator, or mayhap ingenious inventor, much of the credit that accrues to them through brilliant results by the more ready methods. Now if this be so in a general sense it is especially true of certain departments, and in no one perhaps in a more marked degree than the genito-urinary. Of the divisions of this latter, perhaps, the bladder can justly claim an equal share, and for the present demands our attention in the consideration of stone and its removal safely by the most speedy method.

Lithotomy is probably the oldest, and litholapaxy, so called, the most recent, lithotrixy and lithotripsy occupying a more intermediate position as to advocacy. Mention of boring and crushing stone in the bladder is made in the Hippocratic writings, but seems not to have been practically carried out, and it was not until as late a day as 1813 that the operation seems really to have been undertaken with any degree of success. In 1817 Civiale's attempts first became noticed, and after more fully perfecting both method and instruments he satisfactorily demonstrated his ideas on the living subject in 1821, and thus established for the operation a permanent place in surgery. His method, however, was lithotrixy proper, the stone being drilled and crushed or ground, the detritus being partly washed

out and partly expelled by the bladder. The operation of lithotripsy, or crushing, had not up to this time been undertaken, the first instruments for which were not constructed until some months after Civiale's public demonstration. Mr. Hodgson, of Birmingham Hospital, was the first to give prominence to this latter method by a successful operation in 1825. Since this date both operations have steadily progressed in favor and nicety of accomplishment under the leadership of such master spirits as Civiale, Baron Heurteloup, Brodie, Aston, Key, Ferguson, Hawkins, Coulson, and Sir Henry Thompson, until it seemed very little more could be desired. But the end was not yet, for with all their skill and ingenuity, and notwithstanding the evacuating apparatus of Sir Philip Crampton and Mr. Clover, with Thompson's modification of the latter, more than one sitting was usually found necessary to fully complete the operation, and it fell to the lot of our distinguished countryman, Professor Bigelow, to so perfect the mechanical part as to render unnecessary but one attempt at the complete removal of any stone capable of expulsion in this way. This was brought about more by fearlessness on the part of the operator than by any marked improvement in appliance, as in his procedure time is a factor of no importance, a directly opposite conclusion from that of all prominent authorities, and the key-note to all future successes in this direction.

Formerly, when lithotomy was much practiced, the small and brittle stone was operated on with more anxiety than the hard and larger; now, on its first detection the surgeon feels he can relieve the bladder of its enemy without endangering his patient but little more than if he were simply to introduce a large bougie.

CASE. Robert A., American by birth, age fifty-three, average weight one hundred and sixty-five pounds, height five and a half feet, habits regular, temperament sanguine nervous. No family history of any moment; neither rheumatism or gout had been inherited; father died at age of fifty-six from lung trouble, resulting from exposure. His early life and manhood had been passed in the West, where the water-supply was from the turbid Mississippi and vicinity. A cigar maker by trade, he worked for a number of years at "damming tobacco." In this the operator is obliged to stand at a bench, moistening the tobacco with a spray of water ejected from the mouth. In this way swallowed a quantity of water, in addition to which he drank a great deal of same fluid. Of English descent, he inherited a fondness for hearty living, and was in the habit of indulging in hot meat suppers, drinking at times a moderate quantity of ale or lager. Did not take much out-door exercise, and was not very cautious of exposure. Often when fatigued would take large draughts of ice-water and sit in currents of air. Was always well, so paid little regard to preservation of his health. Contracted gonorrhoea when a young man, and this became a long-continued gleet. Has had several slight attacks of rheumatism, but general health good. First noticed trouble in micturition in spring of 1879, symptoms being pains in back, loins, and thighs, with frequent desire. For this I was consulted in June, 1879, his weight at that time being one hundred and sixty-seven pounds. So frequent was the desire to urinate that he had constructed at his place of business a urinal handy by his work, and thus saved a great amount of running up and down stairs.

At no time had there been any evidence of renal cal-

¹ Read at a meeting of the New York State Medical Society, February, 1881.

culus or kidney disturbance. During the summer of same year received a severe fall striking lumbar region on back of a chair; the pain was very severe but yielded to simple treatment. Consulted me in November, 1879, for a feeling of weariness about back, loins, and thighs, accompanied by frequent urination with pain and tenesmus, also burning in perineum and end of penis. Urine contained pus, mucus, oxalate of lime, uric acid, and bladder epithelium. Put him on the alkali anodyne treatment with strict injunction as to hygienic details, dieting, etc. Diagnosed chronic cystitis and symptoms continued during following winter with remission and exacerbation.

Examined for calculi at different times but could detect none. The bladder was washed out several times during the winter and spring, with different medical solutions, the walls each time being well distended.

An analysis of urine in June, 1880, gave 1022, neutral, trace of albumen, blood, mucus abundant, uric acid crystals and epithelium. Was advised a change during heated term and accordingly went to the Canadas. Was greatly benefited thereby and remained very well until the cooler months, when a relapse of the old trouble came on. Could now retain his water but a very short time, and had a pain along urethra, stream often double, stopping at times then recommencing. Voided it best in recumbent position. Pain in glans penis was described like tingling of a nerve in end of finger. Examined him in October with Thompson's short curved sound and detected a roughened gritty feel in left posterior fundus of bladder.

One month later, at my suggestion, he was seen and examined by Dr. Van Derveer, who felt quite positive he detected a small stone. In December it could be distinctly felt, and for a few weeks seemed to increase rapidly in size so that a very satisfactory click could be obtained. Advised an operation, to which he readily assented; accordingly on December 27th, assisted by Drs. Van Derveer, Shanks, Perry, and Mr. Furbeck, student, the operation of lithotripsy was undertaken. The bowels had been moved the night before and a light breakfast had been taken; ether was administered by Dr. Perry, the patient coming under its influence nicely.

The bladder was injected, and a lithotrite having been introduced, the blade was pressed well back against the posterior fundus, the stone being seized quite readily. It proved quite brittle, all portions being crushed in a short time. Experienced but little difficulty in the introduction of Bigelow's large sized evacuating tube, and a moderate suction force with the exhausting bulb soon gave evidence in the glass receiver that the work had been satisfactorily accomplished. Was obliged to re crush a fragment too large for the tube, but this was soon disposed of. An introduction of sound failing to detect the slightest remaining portion the operation was completed.

Entire time occupied was thirty minutes, weight of fragments eighty grains. No vomiting or unpleasant effects from ether, an unusual circumstance. The patient was placed in bed between woolen covers and given ten grains of sulphate of quinine with slight anodyne. Found him on evening of same day quite comfortable, had no chill, passed water quite freely, there being but a slight tinge of blood. Some pain in iliac region, but on the whole comfortable.

December 28th. Passed a good night, perspiration free, some uneasiness and smarting in passing water,

but no severe pain. Blood continues to be present in small quantity, temperature and pulse good.

On the second day introduced a soft catheter easily, and washed out the bladder. Continued quinine in two-grain doses four times daily, with instructions to use diluents freely and exercise care in diet.

By the fifth day temperature and pulse were normal, bowels open, and water passing nicely, patient able to be up and about the house, and on January 6th, ten days from date of operation, although the weather was extremely cold, he was able to attend to business.

THE TREATMENT OF SINUSES BY TENTS.

BY EDWARD T. WILLIAMS, M. D.

THE knife, in modern surgery, seems to be regarded as the panacea for every ill. It was otherwise among the ancients, who, though behind us in knowledge, often showed themselves before us in common sense. They always viewed the cutting instrument in its true light, as the surgeon's last and worst resort. The popular method of treating sinuses is a good illustration of this backward progress of surgery. We hardly hear nowadays of any way of treating a sinus except by laying it open. This leads me to speak of a simpler method which I have tried successfully a number of times,—the use of tents. I speak only of simple sinuses, such as are usually treated by cutting. Take a narrow strip of sticking plaster and fold it or roll it lengthwise between the fingers, as one rolls a slip of paper to light a lamp or cigar. Push it to the bottom of the sinus, and leave it three or four days, till it excites a healthy suppuration. Then remove the tent, bring the walls of the sinus together if necessary by a bandage or adhesive strips, and let it heal from the bottom like a fresh wound. This acts on exactly the same principle as the knife or caustic, namely, by exciting an active and reparative inflammation in the place of a chronic and stationary one. I do not say that it will take the place of the knife in all cases, but it certainly will in many. It is an old plan, but one that ought not to be dropped altogether out of mind. It is beyond doubt that *fistule in ano* have often been cured by this method, or by the seton, which acts in the same way, and that this is the real secret of the success obtained by certain empirics in the treatment of that disease.

Two special applications which I have made of the same essential principle I would like particularly to notice.

The first is the application of a *bougie à demeure* as a substitute for cauterizing or curetting the uterus in chronic endometritis. Pass in a common urethral bougie and let it remain a short time in the womb. I have never ventured to exceed five or ten minutes, but have seen it followed by a decided relief of symptoms.

The second is the same thing applied to the urethra (male) in cases of gleet and seminal emissions. Both these conditions, as it seems to me, are most frequently kept up by a kind of chronic prostatic urethritis, with probably a granular condition of the mucous membrane. The prostatic portion is supersensitive, and sometimes bleeds a little on the passage of an instrument. The *sonde à demeure* is admirably adapted for these cases, and though perhaps less effective in a bad

case than cauterization, has neither the risk nor the painfulness of that method. The principle, in all cases, is exactly the same, the substitution of an acute inflammation, with a tendency to heal, for a chronic one with a tendency to persist.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

TOXICOLOGY.

Ptomaines. T. Husemann¹ gives a summary of the observations already published on this class of bodies, and considers the very important bearing they have on the study of poisons and on forensic medicine. These substances resemble the vegetable alkaloids closely in their chemical reactions and physiological effects, and it is important to discover, if possible, reactions which will distinguish between these poisonous bodies, which are the result of putrefactive processes, and those similar vegetable principles which, when administered, may produce death. "Ptomaines" seem to have different physiological actions. Some appear to act as poisons, others are inactive; whilst others counteract the effects of poisonous substances.

The study of these bodies embraces also the poisonous effects produced by food in certain conditions of putrefaction or fermentation. Panum showed that albuminous substances by putrefaction yielded a poisonous body, acting like a ferment, soluble in water, insoluble in alcohol, and capable of withstanding a temperature of 100° F. This has been confirmed by Bergmann, who describes a compound called *sepsin*, generated by putrefaction. It appears from the researches of Panum and Schwenger that compounds having different physiological actions are produced at different stages of decay.

Sonnenschein and Fuzler found in an anatomical maceration fluid an alkaloid which resembled atropia in its action, and poisonous sausages produced a similar effect; the existence of a product of decay which caused tetanic symptoms was also noticed. Aebi and Schwazzenbach detected a compound allied to an ethereal salt in the extract from dead bodies. Substances derived from putrefaction of maize certainly produce tetanic symptoms, as was first proved by Lombroso and Erba, and this action has been traced to the presence of basic substances. Frequently the tetanizing principle in the maize extract has its action masked by a narcotic substance; just as Ranke showed that the physiological action of strychnia in bodies long buried may be masked by ptomaines.

The relation of these products of putrefaction to certain diseases is evident from the fact that Sonnenschein's alkaloid is found in the bodies of patients dying from typhus fever, and many individuals poisoned by decomposing food show marked typhus symptoms.

In many cases of poisoning by cheese it was found that the bad effect was not due to vegetable growths or to microscopic organisms, and the cheese was frequently fresh.

It appears from the study of the literature concerning ptomaines that they are usually produced in bodies which, after brief exposure, have been excluded from air, as in buried bodies, sausages, and tinned foods;

and further, in these cases, the production chiefly occurs in the internal portions. Cases, however, are known where similar principles have been present in comparatively fresh substances which have been constantly exposed to the air; hence under the name "ptomaines" must be included all alkaloidal products of decay, whether formed in the presence or absence of air.

P. Spica² obtained, by Dragendorff's process, four of these bases from the liquid taken *during life* from a case of peritonitis, which had taken on a suppurative form. Their chemical reactions and physiological effects are described in the original communication. All were poisons; three, however, only in a trifling degree. The fourth was poisonous in minute doses, and resembled curare in its physiological effects.

Jansen³ has described at length the chemical and physical properties of ptomaines. The original article, which is of interest to toxicologists especially, must be consulted by those who desire information concerning this part of the subject. According to Jansen, the symptoms produced by poisonous ptomaines are the following: immediate contraction, rapidly followed by dilatation of the pupil, immediate diminution and irregularity of the heart-beat, convulsive movements.

Brouardel and Bontmy⁴ have detected several of these ptomaines; in one case in the organs of a person who had died from the effects of carbonic oxide; in a second case in the organs of a person who had died from the effects of white arsenic. This latter alkaloid had been previously detected twice by Selmi under similar conditions. According to the authors, each case of putrefaction does not give rise to a distinct ptomaine. For example, they found the same ptomaine in the organs of two persons, one of whom died from carbonic oxide, the other from prussic-acid poisoning. Brouardel and Bontmy met with an alkaloid resembling veratria in a body which had lain eighteen months in the Seine, and another in a goose which had been subjected to the heat necessary to cook it. They consider many of these ptomaines poisonous to man, and ascribe to them the poisonous effects which are sometimes produced by food of various kinds. They mention a case in which twelve persons were attacked with all the symptoms of acute poisoning after eating a tainted goose, which was found upon analysis to contain a liquid ptomaine analogous to codeia; of these twelve persons one died after some hours. The symptoms were nausea and repeated vomiting.

Ptomaines presenting in general the more important chemical and physical properties of the vegetable alkaloids may readily be confounded with the latter. The proper method of distinguishing the two consists in determining *all* the chemical and physical properties of the toxic base isolated and comparing them with those of the vegetable alkaloid whose presence is suggested. This method can, however, be employed only in cases where the quantity of the poison isolated is tolerably large. Brouardel and Bontmy⁵ have endeavored to find a reagent which is sufficient in all cases to disclose the character of the alkaloid extracted, and think they have discovered such a reagent in potassium ferri-cyanide. If the latter is instantly

² Ber. d. deutsch. chem. Gesellsch., xiv. p. 274, from Gazz. Chem.

³ Journal de Pharm. et de Chimie, January, 1881, page 41, from Pharmaceutische Zeitschr. für Russland.

⁴ Journal de Pharm. et de Chimie, November, 1880, page 392.

⁵ Compt. Rend., xcii. p. 1056.

¹ Trans. of the Chemical Society, London, February, 1881, page 57, from Abstr. der Pharm.

changed to potassium ferrocyanide (determined by neutral ferric chloride), and at the same time the base is precipitated by iodo-mercurate of potassium, the base in question is a ptomaine; if the ferrocyanide is unchanged and the substance behaves with the iodo-mercurate of potassium as do the vegetable alkaloids, the base is a vegetable alkaloid. In applying the test the base is converted to a sulphate, and a few drops of the solution of this salt are placed in a watch-glass containing a little ferrocyanide in solution; a drop of neutral ferric chloride is then added. According to the authors, morphia and veratria, of the vegetable alkaloids, are the only exception to the above.

Ch. Tanret¹ has repeated the experiments of Brouardel and Boutmy, and although he finds that ptomaines produce the change above described, they do so only slowly. He also finds that a similar slow change is produced by crystalline ergotinine and aconitine, and by amorphous and crystalline digitaline; while the change is produced instantaneously by morphia, eserine, liquid hyo-cyania, and amorphous aconitine and ergotinine. Great caution should therefore be taken in employing the test, the more so as the list of vegetable alkaloids is probably far from complete.

Arsenic. A case of poisoning having occurred in which food containing arsenious sulphide was suspected, Ossikovsky² was led to make experiments to determine whether it is possible that, during the process of putrefaction of organic bodies, arsenious sulphide may be converted into oxide. It is generally supposed that *pure* arsenious sulphide, however prepared, has no poisonous action on the living organism. The author therefore considers that in the case in question the arsenious oxide must have been present as an original impurity (as is sometimes the case), or as a product by chemical change of the sulphide.

Experiments were made by exposing a mixture of arsenious sulphide, water, and pieces of decomposing pancreas to a temperature of 35 to 40° F. for a period of seven days. Samples for analysis were removed at intervals and filtered; the filtrate, on being acidified, yielded a precipitate of arsenious sulphide, and the acid filtrate was tested for arsenious and arsenic acids. It was found that precipitated arsenious sulphide was much more rapidly oxidized under these circumstances than the more compact crystalline orpiment, but the result obtained from both kinds of sulphide was similar. The albuminoid bodies present, on decomposition, yielded ammonia, which dissolved a portion of the sulphide as such; this was precipitated on acidifying the liquid with hydrochloric acid; the arsenious sulphide was also oxidized to arsenious acid and to a smaller extent to arsenic acid; the quantities of these oxidation products formed increasing in proportion to the time.

Further experiments proved that in the absence of the pancreas the presence of water at a moderate heat was sufficient to convert the precipitated arsenious sulphide into arsenious but not into arsenic acid. The author further tried the effect of making the liquid in which the arsenious sulphide and decomposing organic matter were present alkaline with sodium carbonate, so as to imitate the conditions existing in the large intestine where alkaline secretions would mingle with the food. It was found that the quantity of oxidized

arsenic compounds formed was quite sufficient to produce poisoning.

F. Selmi³ is undertaking experiments to ascertain in what state arsenic occurs in the urine of subjects poisoned with this substance. Arsenic was administered to a large dog in doses too small to produce fatal effects, and the urine examined over a considerable period. It was found that during the first period of three days the urine contained an acid of arsenic, precipitable by baryta, and another arsenical compound which was not precipitated by baryta; the same substances were found in the second period of five days, besides a volatile arsenical compound which gave a crystalline hydrochloride; subsequent to this the arsenical base gradually disappeared.

According to E. Reichardt⁴ it is unnecessary, in testing the urine for arsenic in cases of chronic arsenical poisoning, to destroy the organic matter. The urine (one or two liters), acidified and gently heated, may without further treatment be saturated with hydrogen sulphide. It is then allowed to stand, covered, for twenty-four hours, after which it is filtered, and the precipitate examined for arsenic by appropriate methods. The same is true in case lead, bismuth, copper, antimony, or mercury are to be sought for.

Ch. Brame⁵ employs baryta instead of potassium cyanide or black flux for the reduction of arsenious acid. The reaction manifested by the mixture of arsenious acid and baryta heated to redness is instantaneous, and is not accompanied by any disengagement of moisture. The ring formed has a perfect metallic appearance. There is formed, besides metallic arsenic, barium arseniate, which may be dissolved in nitric acid and tested with silver nitrate. Analogous but less marked results are obtained with lime, potassa, and soda. Arsenic sulphides also yield metallic arsenic with baryta, though less easily than arsenious acid does. In the case of orpiment there is deslagation.

Investigations on the localization of arsenic in cases of poisoning have been previously noticed.⁶ E. Ludwig⁷ has further studied this question, and gives the following *résumé* of the results obtained by him from experiments made upon animals as well as from cases of poisoning in man:—

In cases of acute as well as chronic arsenical poisoning arsenic is taken up by the bones in small yet distinctly recognizable quantities. If the case is non-fatal arsenic may be found in the bones a long time after the last administration. In one case arsenic was found in the bones on the twenty-seventh day after the last dose; in one case, examined forty days after the last administration of the poison, the bones contained none. It is worthy of note that the liver in both these cases still contained arsenic.

In the brain, in cases of poisoning, both acute and chronic, only a small amount of arsenic is to be found, while the liver and kidneys contain a comparatively large quantity.

The kidneys in acute cases may contain a larger proportion of arsenic than the liver. The muscular tissue contains only a small quantity, but always more than the brain.

Arsenic is found in the liver for a longer period than

³ Journal of the Chemical Society, London, May, 1881, page 311, from Gazz. Chim., x. 431.

⁴ Archiv der Pharm., October, 1880, page 291.

⁵ Compt. Rend., xcii. p. 188.

⁶ Vide this Journal, February 5, 1880, page 129.

⁷ Chemisches Centralblatt, 1881, pages 90, 110, 121.

¹ Compt. Rend., xcii. p. 1163.

² Journal of the Chemical Society, London, March, 1881, page 123, from J. pr. Chem.

in any other organ. Ludwig's paper is a long one, and contains in full the results of his investigations.

Ludwig's conclusions are confirmed, in a case of poisoning from Paris green, reported by Bergeron, Delens, and L'Hôte,¹ who found seven times as much arsenic in the liver as in the brain. The kidneys and muscular tissue also contained more than the brain.

S. W. Johnson and R. H. Chittenden,² in a case of arsenical poisoning reported by them, also found the amount of arsenic in the brain to be less than in any other organ.

In another case reported by Johnson, — a case of acute poisoning, — 83.23 grains of arsenious oxide were found in the stomach, liver, and other internal organs, while the brain contained a hardly perceptible trace of arsenic.

Johnson and Chittenden also report the results of an experiment conducted on a large dog, to which was given 6.5 grammes solid arsenious oxide, mixed with meat, during a period of eight days, in doses increasing from 0.1 gramme to 2.5 grammes per day. The dog was killed twenty-four hours after the last dose. The intestines, liver, kidneys, muscular tissue, urine, brain, and blood were examined. Of all these the brain contained the least arsenic.

It appears, therefore, from the cases which have been reported, that the amount of arsenic absorbed by the brain is very small compared with the amount absorbed by the other organs and tissues.

R. H. Chittenden and H. H. Donaldson³ have contributed an article On the Detection and Determination of Arsenic in Organic Matters, which is of interest to toxicologists, but unsuitable for a detailed notice here. The process which they recommend for the destruction of organic matter is Gantier's,⁴ somewhat modified; and for the quantitative testing of arsenic they recommend the decomposition of arseniuretted hydrogen by heat. They describe a form of Marsh's apparatus so modified as to furnish a slow and even evolution of gas, so that all loss may be avoided; and to still further prevent loss they employ the process recently described by Gantier,⁵ in which he controls the evolution of gas by slowly introducing the arsenic mixed with a definite quantity of dilute sulphuric acid of known strength, later adding the same quantity of a stronger acid, and lastly a still stronger acid; the increasing strength of acid added counteracting the diluting effect of the reaction, so that the strength of the acid remains about the same during the entire process of two and one half to three hours. The strength of the acids employed is given. They decompose the gas by passing it through a tube heated for a distance of six inches. Under these circumstances no trace of arsenic passes by. The arsenic is weighed as metallic arsenic. The whole method is recommended as being accurate, delicate, and requiring the use of but three chemicals, — sulphuric acid, nitric acid, and zinc.

The authors state that, contrary to the prevailing opinion, the presence of organic matter, even in considerable quantity, does not interfere with the detection and determination of arsenic by Marsh's test. Frothing, due to organic matter, may be prevented by

introducing fifteen drops of sweet oil, which floats on top. The only other things to be guarded against are, first, the too rapid introduction of the acids, whereby loss as well as frothing of the mixture may ensue; and secondly, the heating of the flask by the chemical reaction. The latter may be prevented by keeping the flask surrounded by cold water. The paper contains the results of numerous experiments.

(To be concluded.)

Hospital Practice and Clinical Memoranda.

THREE CASES OF UNILATERAL CEREBRAL HYPERÆMIA.

BY GEORGE JEWETT, M. D., FITCHBURG.

CASE I. The subject of this history is a stout, robust woman of thirty-six years, and at the time of the attack of which I am about to speak was the mother of four children. She has borne one since. All are remarkably well and strong.

December 18, 1875, Mrs. D. was busily sewing near a furnace register, and did not notice the continued increase of heat until she observed herself in a profuse perspiration. She was dizzy, her head was hot, and felt badly. These sensations but partially left her during the following night and day. The second night, while in the act of lying down, she suddenly became violently dizzy and unconscious. Consciousness returning, she began to vomit. Passing an unknown time in vertigo and nausea, she finally observed that when lying on the right side all her distress quickly left her, and she soon felt in her usual health. It, however, instantly returned when she rotated her head to the left of the median line or lay flat upon her back. She could nurse her babe, then about a month old, only when lying well on her right side, and partly on her face and chest. She slept but little during the night, and I was called the next morning. She was sitting up; her face was flushed, apparently from mental anxiety, and she was a good deal frightened on account of the anomalous symptoms from which she suffered. The pulse was a little quickened, temperature and respiration normal; she had some appetite, and the bowels were regular. There was no disturbance of tactile sense nor paresis. She stated she was comfortable every way provided she kept her head well to the right and forward of the vertical line, and was able to attend to her ordinary family duties provided they did not interfere with the prescribed position of her head. She could not, however, lie flat upon her back without an instant return of the vertigo and nausea. She continued in this condition, with only a slight amelioration of symptoms, for about two months. When in the act of sportively tossing her baby, she lost consciousness, dropped her child, and fell. There was no epileptic cry or convulsions, and return of consciousness was immediate and complete. She now observed she could not drain a drinking cup, as the tipping the head backward immediately brought a return of the dreaded vertigo and nausea. Sometimes on rising from a stooping position she would stagger backward, unable to recover herself until arrested by the wall of her room.

On lying down, she often experienced a sensation in

¹ *Annales d'Hygiène*.

² *American Chemical Journal*, n. p. 342.

³ *American Chemical Journal*, n. No. 4.

⁴ *Vol. of this Journal*, January 14, 1876, page 49.

⁵ *Bull. de la Soc. Chim.*, xxiv, p. 258.

the vertex, as if the blood rushed with a crash or splash. About three months from this date, she discovered by experiment that she could turn to the left in bed, provided the whole body was turned at the same time. A year elapsed before she could tip her head backward to rest it upon the back of a high chair, unless it was well rotated to the right. Previous to the attack her eyesight was unusually strong, but a year afterwards she was obliged to wear glasses about her ordinary work. She could not read on account of a "small black spot" always present, which seemed to follow the outline of the letters, so she could not make them out. In sewing, the ever present "little black spot" always came to play its mischievous pranks and annoyed her much. If she attempted to sew on black cloth, her sight was impaired for several days afterwards. The defect in sight, she thought, was mainly in the left eye. The flitting black spot seemed in the left eye only when she began to look continuously at any object, but after a little time there was confusion in both eyes alike. The defect in vision was confined to near objects. She could easily tell the time on a church clock three eighths of a mile away. As time wore on many of her disagreeable sensations disappeared after a night's rest, and reappeared the following day after fatigue. More than five years have elapsed since the attack, during which time the return of health has been gradual, and is not yet complete.

Bromide of potash seemed to give more relief than any other medicine. Rest and a careful avoidance of excitement, with favorable positions of the body, constitutes the plan of treatment.

CASE II. In the early part of September, 1879, I was called to attend Mr. E. D., aged fifty-seven years, temperate, healthy, and of more than average intellectual force and activity, a manufacturer of edged tools. He was lying upon his right side on a sofa, and seemed in his ordinary robust health. He gave the following medical history: The day previous he went fishing upon a small lake; the day was hot, and he suffered a good deal both from reflected sunlight and heat. On his return he felt he had somehow been injured by the unusual exposure. He had, however, a fairly comfortable night's sleep, but on attempting to rise in the morning he fell from an attack of vertigo. "He felt as though he was flying all to pieces," but soon learned that so long as he kept his face to the right of the median line he had no return of his dizziness, but the moment he turned his face to the left the vertigo and unconsciousness returned. He could rise from his bed, walk about, stoop, and perform a variety of motions provided he never rotated his head to the left. There was but slight disturbance of his intellect. He could plan his business, but memory did not bring him the details quite as quickly as usual.

He complained of a continued and disagreeable sensation in the left side of his head, which he could not describe. It commenced in the centre of his forehead, and extended across the left parietal region to the centre of the occiput about on a line with the top of his ear. The affected side seemed heavy, "as though filled with lead," and a continued exertion of the will was required to keep the head erect. There was no paralysis, acute pain, or tactual perversion. I could not compare his pupils, as the right one had been injured by an accident. Eyes sensitive to light, sunlight or lamplight was painful; pulse, temperature,

and respiration not far from normal; appetite diminished. No marked change in the symptoms occurred during the two following days. Two or three days after the attack, while lying on a sofa on his right side, as he was wont, he felt as if lifted into the air, then dashed to the earth. What did happen is not known, as he was alone at the time, but when consciousness returned he found himself upon the floor. At times he felt death impending, material things seemed fading away. These distressing sensations gradually decreased during the next ten or twelve weeks. His appetite returned, sleep was restful and undisturbed provided he slept with his head well elevated. At no time was there acute pain, nor were the scalp or other soft parts of the head abnormally sensitive to touch. At the present time, June 28, 1881, he states he has a disagreeable sensation in the left parietal region, which does not interfere with ordinary mental labor. Since his attack in 1879 he has suffered from conjunctivitis of the left eye, and once from iritis, with cerebral symptoms of a mild type. The sight of the left eye has failed a good deal during the past year.

Treatment, as in all cases not based upon well ascertained pathological conditions, was mainly empirical. Bromide of potash appeared to give the most relief in the early stage of the disease. Quinine and other remedies were tried without satisfactory results. A careful avoidance of circumstances which tended to increase the vertigo or disturb the functions of the brain and nervous system was advised, with rest and quiet.

CASE III. The subject of the following medical history is a stout, robust man, weighing two hundred pounds, fifty years of age, a manufacturer, who was struck by a moving railroad train, thrown into the air, and fell vertex downward upon a pile of railroad iron. The blow was received upon the left parietal and vertical region, the scalp was torn downward from the left side of his head, the periosteum was separated from the greatest convexity of left parietal bone and lay in a fold on a line with the attachment of the ear. The anterior margin of left parietal was slightly depressed, although no linear fracture was observed. There were other and severe injuries, as fracture and displacement of sternum, fracture of ribs, also of spinous process of vertebra, of which I do not now propose to speak, which required a fixed dorsal position for several weeks. There was frequent vomiting, complete paralysis of bladder, partial paralysis of lower limbs, and other symptoms of injury to the brain of a severe character. During the first three weeks pulse and temperature ranged a little above a hundred. His consciousness of passing events was unimpaired, and all the faculties of the mind seemed in normal activity and force, yet he had a duality of perception of all persons and other material things. Two trains of thought were present, each struggling for precedence. One consciousness perceived in a clear and normal manner, and processes of reasoning could be carried on correctly by a firm exercise of the will. There seemed a second consciousness which was continually perverting the truth and leading him to realms of fancy, inconsistencies, and trouble. He had dual vision. Two doctors attended him, both of the same name but different in character. One was pleasant and attentive, the other cross and disagreeable. Both came and went at the same time, but there was no other agreement between the two. He had two throats, one well, the other sore. The sore throat was continually complain-

ing that the well one did not do all the swallowing. This duality haunted him for several weeks and then gradually disappeared. At this period of his illness he first began to move his head, and now discovered that any rotation of the head to the left of the median line was instantly followed by intense vertigo, and loss of consciousness. Careful and oft repeated experiment taught him that a movement of the head to the left of the median line brought unconsciousness so quickly it was impossible to avert it by a counter movement. Nausea and vomiting were frequent concomitants, with a sensation of approaching dissolution. It was impossible to know exactly how much his convalescence was affected by the cerebral trouble. It was certainly much retarded by an abundant effusion of bloody serum into the right chest. In seven months from the accident he began to take some charge of his business affairs; but any mental activity, especially in the line of mechanics, was sure to be followed by an increase both in the frequency and severity of the attacks of vertigo. A hypodermic of one fourth gramme of morphia, immediately after mental work, would ward off an attack as well as give refreshing sleep. The effects of this hypodermic would last for two days, when it was repeated. As this peculiar form of vertigo gradually disappeared, new and troublesome disturbances in memory took its place, of a similar type, namely, if he was conversing with a person upon his right, and a second person should approach him on his right, for conversation, on attempting to renew conversation with the first party all memory of events while the head was turned to the left would be lost; it might recur in an hour, or never. But should the converse happen no difficulty in renewing the train of thought would occur. Another prominent symptom was sleeplessness. The longer it was protracted the more frequent and violent were the attacks of vertigo. His eyesight, previously very strong, is now much impaired. It is proper to add that after the acute stage had passed the temperature was uniformly from half to a whole degree below normal.

A satisfactory explanation of the symptoms in the cases reported above is a difficult problem to solve. I find nothing parallel to them in the books, and it is with some hesitation that I offer the following as the only rational solution which occurs to me, from present reading and personal observation. In the case of Mr. Leonard I think we have a key to the problem. Let us recapitulate. In his fall Mr. R. received the whole weight of his body, (two hundred pounds) on the left vertex and parietal region of the skull. If the skull were very brittle we should probably have fracture with concussion, if elastic, the force of the blow would fall more directly upon the brain, and contusion and concussion would both be present. There was depression of the anterior parietal bone, but no linear fracture observed. It is, however, probable that some atomic separation of the inner table occurs in all cases of depression. In concussion we have for its pathology "intense redness of the pia mater with flaxion or dilatation of the brain capillaries." In contusion we have the same condition, with perhaps other and more serious pathological changes. We should thus have traumatic cerebral hyperæmia mainly confined to the injured hemisphere. Gray states "that the walls of the cerebral veins are remarkably thin, and muscular fibres are entirely wanting." They are also without valves. "The internal jugular vein drains the blood

from the interior of the cranium, and is itself without valves except at its outlet. As it emerges from the brain at the base of the skull, it soon passes under the platysma and sterno-cleido mastoid muscles, passing downward, and, unlike its fellow, crosses over the internal carotid, which acts as a bar across the internal jugular. Thus, when the head was rotated to the left it would temporarily dam up the jugular, checking the flow of venous blood through all its ramifications, giving us *unilateral cerebral hyperæmia* of the left hemisphere in a system already in a condition of fluxion. Nothnagel states that venous hyperæmia of the brain will always attend any interference with the passage of the blood through the jugular veins. In Ménière's disease, or labyrinthine vertigo, from lesions of the semi-circular canals of the middle ear, Woakes says the vertigo is caused by hyperæmia of the ampulla and the extremely delicate membrane lining the canals. Nothnagel, Hammond, and others give "vertigo" as the symptom common to all cases of marked cerebral hyperæmia.

The consideration of *unilateral hyperæmia* of the brain naturally leads to the question, Are the two hemispheres alike in functions, the one being a duplicate of the other? From all the facts bearing upon this interesting question which have come to my notice, I am led to believe that so far as the falx cerebri separates the brain into two distinct parts, each hemisphere above the corpus callosum is the duplicate of its fellow, each carrying on the functions peculiar to its structure; in health acting in perfect harmony, in disease, under some circumstances, either one performing the work of both while the functions of its fellow are held in abeyance. In proof of this, Cruveilhier cites a case of hemiplegia of long standing, in which the whole of one hemisphere was atrophied, yet none of the functions of the brain were wanting. One hemisphere has been wounded by a pistol ball, and no disturbance of the intellect has been observed. In disease, I believe the functions of one hemisphere may be perverted, as in the case of Mr. L., by the sequel to traumatism, and the diseased hemisphere give rise to vagaries, which the hemisphere in health may, or may not, be able to control.

Since the above notes were written Mr. L. has experimented upon turning the head to the left, with the following results, namely: if he takes a position of ease, in a reclining chair, rests his head upon the back and slowly rotates it one eighth of a circle to the left, he quickly feels an uncomfortable fullness and pressure at the left of the vertical region, the functions of the brain become gradually arrested or perverted in the following order: inability to formulate sentences; inability to express any idea in words; soon complete unconsciousness. A repetition of the experiment produces distress and vertigo, and a sense of impending danger deters from further observation, the effects of which are continued for many hours.

In the last two cases the sun's rays greatly aggravated all the uncomfortable sensations, confusion of ideas supervened, and all business transactions required to be suspended.

In closing, I will say that all the parties named above are living and may be consulted at pleasure.

— We are glad to learn that the National Board of Health is taking steps to secure the vaccination of all emigrants before their embarkation for this country.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAYEN, M. D., SECRETARY.

MAY 28, 1881. Ninety-four members present. Dr. R. M. HODGES in the chair. The following communication from the committee of supervision was received.

"The committee of supervision unanimously recommend to the Society that the number of general meetings be less frequent; they believe this to be necessary in order that there may be a better opportunity given for sectional work. They therefore present the following resolution:—

"*Resolved*, that in addition to the stated and annual meetings there be held annually but two meetings for medical improvement, namely, on the last Saturday of December and the last Saturday of February."

On motion of Dr. G. C. SHATTUCK, seconded by Dr. J. J. PUTNAM, the report of the committee was adopted.

MUSCULAR ATROPHY.

Dr. J. J. PUTNAM showed an unusual case of muscular atrophy, affecting a young man of seventeen years, of healthy parentage, and otherwise himself in good health. The muscles principally involved were the *senatus*, the *biceps* and *forceps*, the *deltoid* (in its anterior portion), and the *latissimus dorsi*, all symmetrically. The muscles of the face, especially on the right side, were also somewhat affected, giving a peculiar stiffness to the motions of the lips, and impairing the closure of the right eye. The straight muscles of the back and some of the muscles of the legs were also slightly atrophied. On the other hand, the muscles of the forearms and hands and the *infraspinatus* scapulae were immensely developed and strong, suggesting true hypertrophy. The progression of the disease had been very slow; there was no fibrillary twitching, and the faradic reactions were everywhere fairly good. The patient stated that so far back as he could remember he had been slow and awkward in all his movements, but the marked atrophy was of about four years' date. Dr. Putnam stated that the case probably belonged in the group of hereditary progressive muscular atrophies, though differing from the typical forms. There was no hereditary taint, nor were other members of the family similarly diseased.

Dr. H. I. BOWDITCH read a paper entitled,

THE MEDICAL EDUCATION OF WOMEN.

In conclusion he offered the following resolutions:—

Resolved, That this society recommend that licenses to practice physic in Massachusetts be hereafter given by the censors of the Massachusetts Medical Society to those women, who, upon an examination similar to that given to men, are found equally proficient.

Resolved, That with such licenses should be given all the rights and privileges granted to men except those of attending the meetings and of voting upon questions involving the organic laws of the society.

Resolved, That to each district society and to the general society should be left the question of extending an invitation to female licentiates to attend their respective meetings.

Resolved, That in the opinion of the Suffolk District Medical Society it is desirable for Harvard University to give medical instruction to women.

Resolved, that the secretary of this society be directed to send copies of these resolutions to the councilors of the Massachusetts Medical Society, and to the Society itself at their next meeting, and likewise to the president and corporation of Harvard University.

In the discussion which followed Dr. G. C. SHATTUCK said that he had listened attentively to the remarks of his friend, Dr. Bowditch, as he always did to whatever his friend had to say. As Dr. Bowditch had invited those differing from him to try to look at the matter from his point of view, he would ask reciprocity from Dr. Bowditch, who had accused Harvard University and the Massachusetts Medical Society of being guilty of gross dereliction of duty in declining to instruct and admit women as Fellows. Dr. Shattuck was the dean of the medical faculty some thirteen years ago, when two women applied for admission to the university. He had seen these women repeatedly in reference to their application, and was present when it was made to the medical faculty. He had also been present at meetings of the Massachusetts Medical Society, and at those of the councilors when the admission of women was proposed and discussed. The result of careful consideration and investigation was to confirm him in the opinion that the university and the society had acted in strict conformity with righteousness and justice when the one had declined educating women, and the other had refused admitting them as Fellows of the Massachusetts Medical Society. Surely right and duty go together, especially in matters concerning our fellow creatures. Each one of us is responsible to God who made us for employing wisely the faculties and talents given us. It was said in derision of a distinguished English statesman that such was his conceit that he would undertake at an hour's notice the duties of a prime minister, an archbishop, a field-marshal, an admiral, or a surgeon, or a councilor at law. Now, have I a right to command a line-of-battle ship, or to argue a question of law and jurisprudence, when nature has denied me the faculties which with training and education only might be sufficient for the discharge of the duties? There are those who esteem women very highly, and admire them very much, who do not think that the God who made them has given them an organization as well adapted to the practice of medicine as is that of the other sex. They know of no reason why, since the creation, this profession and art should not have been given up to or shared with women except their organization be less adapted to the discharge of the duties. There have always been exceptional cases—women with peculiar faculties and structure, who have practiced the art of healing in some or all of its branches—these are not numerous enough to make it worth while for the university to construct lecture-rooms and laboratories for their peculiar use. It is not considered consistent with good morals for young men and young women to dissect naked bodies together, or to discuss matters pertaining to the physiology and pathology of the reproductive organs. An idea prevails with many in the community that women mentally, morally, and physically are as well fitted to practice medicine as men. There are many members of the Massachusetts Medical Society who regard this idea as a dishonor, inseparably connected with harm and mischief, and that it

is emphatically our duty to oppose and correct such erroneous ideas.

The precise question before us is, shall we recommend examining and giving certificates to women by the censors. By the act of incorporation, the holder of such a certificate must be admitted to the society. By our act of incorporation our duties of examination and admission are restricted to men.

There are those of us who think our predecessors knew what they were about and acted wisely in this matter, and that now men are men, and women are women, as they were a hundred years ago. It is admitted on all hands that a great many imperfectly educated and incompetent women are practicing medicine in this community, and shall we improve our Society by admitting many of these into it. Many of us who have studied this matter are convinced that other State societies have suffered very much in this way.

But, Mr. President, I do not intend arguing this matter; in conclusion I will only express the conviction that those who this evening say no to the measure proposed by Dr. Bowditch, do so after careful study and investigation, and with a high appreciation of their duties as members of this society, and to the community in which we live.

DR. BOWDITCH said that he did not agree with Dr. Shattuck in his interpretation of the laws regarding the admission of licentiates, but in order to remove any possible objection he would substitute the words "certificates of due qualifications" for the word license in Resolution I.

DR. CHADWICK spoke of the attitude of other State societies in regard to the question of admitting women. These remarks were reserved for separate publication as a paper.

DR. MARCY, in discussion of the question, advocated the admission of women to the membership of the society and the full privileges of education at Harvard.

It is a fact that over one hundred women are in the practice of the calling of the medical art in the city of Boston alone, more than one eighth of the entire number of all the various professors of medicine. Thus it will be seen that it is not a question of inviting or encouraging women to become a practitioner of medicine, but the rather since she has determined to assume this position of great responsibility, that we do not refuse to her the best possible opportunities to prepare herself for this vocation. The question ceases to be one of sentiment or preference, but of fact. It cannot be believed that female practitioners are to be so large an element in the society as to cause the controlling interest of a great profession to be delegated to the female sex.

Woman has shown herself so eminently fitted for the vocation of teaching, that it is probably true that nine tenths of the present generation have been in great measure trained by her. The problem does not hold good in medicine, where the devotee to science must be a life member. The fundamental law controlling the sexes, marriage, maternity, home, is as immutable as that of sexuality itself, the present age to the contrary notwithstanding, and the successful female practitioner will be the exception and not the rule. The human mind is so constituted that much is developed by opposition itself. History declares this to be true in reference to religious intolerance. "The blood of the martyrs is the seed of the Church." Homœopathy has grown under the fostering care of the opposition of the Massachusetts Medical Society, until, stimulated by the cry

of intolerance, ostracism, martyrdom, this most delusive of all delusions has now its head centre of power and influence in Boston itself.

We owe it to this same undue conservatism that the medical department of Boston University is homœopathic, and most of us are aware that upon the Continent, where homœopathy has been allowed to rise or fall upon its simple merit, it has no place in university teaching and is already nearly obsolete. The parallelism here holds good. The practical difficulties of teaching woman medicine are more imaginary than real. Nearly all the universities of Europe have opened to her their doors upon equal privileges. The few women who have entered the lists and are determined to pay the price of success in a self-sacrificing life of devotion and labor, should be granted every privilege, and then without flattery or favoritism be tested in qualifications as men. At present we are practically driving every woman who would be a physician into quackery. A large number of the students of the Boston University are women, not because they desire to be homœopaths, but because it is the one place where woman is welcome to a free rivalry in medical study.

We all, as true sons of Harvard, welcomed the change and aided in her support, when she led the van in the movement for a higher medical education. Guided by grand conservatism of learning and wisdom which would recognize any change which meant true progress, let her open her doors to medical students regardless of sex, and the good sense of the profession will not be wanting in giving her cordial support. Governed by simple justice and judicial wisdom this society will adopt these resolutions by a large majority.

DR. G. H. LYMAN wished to protest against forcing upon the society an element which was obnoxious to at least one half its members, and for no other reason than to assert a mere abstract right, as its advocates chose to consider it, and the unnecessary assertion of which, unless by an overwhelming majority, would only bring discord into a society where it was essential harmony should prevail, in view of the quackery which was awaiting us from all sides.

After some further discussion, the previous question was moved and carried. The main question being put as to the adoption of the resolutions, it was decided in the negative.

REPORT OF THE MIDDLESEX SOUTH DISTRICT SOCIETY TO MASSACHUSETTS MEDICAL SOCIETY.

BY HORACE C. WHITE, M. D., REPORTER.

ARTICLE XII. of the by-laws of the Middlesex South District Medical Society reads: "The reporter shall prepare and present at the annual meeting of the State Society a report on cases of importance in the district, the public health thereof, or any subject of local interest connected with practice of medicine or surgery."

Under the date of April 22, 1881, the secretary sent to each member of the society a postal card which read as follows: To facilitate the work assigned to the reporter by by-law XII, fellows are requested to make their annual returns of important cases, prevalent diseases, etc., on or before May 10th, to Dr. Horace C. White, Somerville, Mass.

Up to May 18th, in compliance with that request, I had the honor to receive only one communication, that

from the president of the society. I then made a personal appeal to some fifteen or twenty physicians in different parts of the district, and received quite a number of excuses and apologies, and a *few very short* reports. This scanty material and the little time I have been able to give is my apology for a hasty report; my faith in the benefits that would accrue from a proper report from each district is my apology for any report under the circumstances.

So far as I have been able to learn, there has been no severe epidemic during the past year, and the life of the physician, although it may have been busy, has not been unusually eventful. The sickness rate generally has been high in proportion to the death rate, or in other words, diseases have generally been of a mild type.

I have no cases of importance to report; I will mention, however, what Dr. Hosmer is pleased to call "leg vaccination." It has been his custom for nearly ten years, on the eighth day of a successful, ordinary arm vaccination with a single insertion to puncture the vesicle and insert some of its contents into the child's leg. This practice is a compromise between the method of multiple insertion advocated by many modern vaccinators, and the practice of repeated vaccination recommended in the early days of the discovery. He has succeeded in a percentage higher than he has ever before known. He says, "I believe in it, and when the secondary insertion counts so many 'takes' as it has this winter, I am glad to have done it." With regard to prevailing diseases my reports are not full.

The fact that they have generally been in mild form is a reason why less attention has been given to the details of cases. In many instances physicians have seen so little of the majority of the cases that they cannot note the whole course of the epidemic.

Scarlet fever has prevailed in mild form. The number of cases reported to the Board of Health of the city of Cambridge, for the year 1880, was ninety-two; number of deaths five. In the city of Somerville for the same time, the number of cases reported was forty-three, and number of deaths six.

Diphtheria has generally been of mild type, and although constantly present in the early part of the winter, the whole number of cases was not large, and they were mostly confined to children. Dr. Hosmer reports a case of recovery in a boy sixteen (16) months old who was afflicted with the laryngeal form of the disease. Tracheotomy was *not* performed. In Malden, however, the disease has been universally prevalent. Dr. Shute reports, "Diphtheria caused nearly twenty-three per cent. of the deaths of the year. Since January, there has been a decided abatement of the ravages of the disease. The majority of cases can easily be referred to defective drainage, foul cess-pools, etc., as a cause." Number of cases reported during 1880 in Cambridge was one hundred and ninety, deaths thirty-eight; in Somerville, cases one hundred and eight, deaths nineteen.

Pneumonia has prevailed to an unusual degree in Everett, Arlington, and Somerville. Dr. Wakefield, of Everett, has never seen so many cases in any six months for the past twenty-eight years. Dr. Hodgdon, of Arlington, has seen more cases than ever before in the same time, while in Watertown and other places but few cases are reported.

Measles, genuine and German (rubeola and röteln), have prevailed quite generally in a mild form,

but have failed in an unusual way to conform to a constant type. There has been much variety both in regard to the duration and intensity of the symptoms belonging to the first stage and also to the amount and rapidity of the march of the eruption. Dr. Morris, of Charlestown, has observed quite a number of second attacks of rubeola in the same individual. One child had the disease *well marked* twice inside of three months. Dr. Wakefield, of Everett, says: "Rubeola has prevailed as epidemic; our public schools were thinly attended in February and March." Dr. Hodgdon, of Arlington, says: "Röteln was very prevalent in January, February, and March, and in April and May we had a good deal of measles." Dr. Hosmer, of Watertown, says: "Measles, both genuine and German, have prevailed to an extent unknown in many previous years. Genuine measles first appeared in December, 1879, and obtained their greatest prevalence in the latter part of the winter and even now new cases are cropping out. Röteln did not come to my observation earlier than midwinter, and the cases have not been numerous. Repeatedly rubeola and röteln have shown themselves in the same individual in a short interval but without a constant order of succession."

In Somerville, during the past winter, we have had a large number of cases of both diseases. In quite a number of cases there were second attacks; or one disease followed the other with considerable regularity with an intervening period of six weeks or two months. Several of these cases have seemed to be typical cases of rubeola in both attacks.

The question which naturally arises is, Have these two diseases a pathological identity? Or what relation do they bear to each other? In looking over the literature of measles I find the following items bearing upon the subject:—

Rubeola, measles, derived from rubeo, to be red. This word appears to be of Spanish origin and probably emanated from the School of Cordova; it was formerly written rubiola. Another term by which this affection has been designated is Morbilli, or minor plague, being the diminutive of *il morbo*, as the Italians called the plague. The restrictions now adopted in the application of the term rubeola are of rather modern date and owe their establishment to Sanvages, before whose time great confusion prevailed in the naming of several of the exanthemata; rubeola in particular was used to signify equally scarlet fever and measles. A similar inaccuracy was to be found among French writers also, for the word "rougeole," their common name for measles, meant at one time scarlatina, and that so decidedly that it was thought necessary to apply distinct names to the two diseases in consequence of the difference between them becoming fully understood. Chevenau informs us that the Marsellais used the word rougeole to signify scarlatina, and distinguished measles by the name of senapion.

In our country Morton maintained the identity of these exanthemata, and considered the relation existing between them the same as between distinct and confluent small-pox. Even so recently as 1769, Sir William Watson confounded the two diseases. The correct diagnosis between them ought probably to be referred to the time of publishing the second edition of Dr. Withering's Essay on Scarlet Fever, in 1793.

Sennertus in the middle of the seventeenth century discussed the question, "Why the Disease in some

constitutions assumed the form of small-pox and in others of measles."

Drembrock, in 1687, says: "Small-pox and measles are only different degrees of the same affection." The same doctrine was still more recently maintained by Lange, a professor of Leipzig. The general law of measles, in common with other of the exanthemata, is that they affect the system but once. Dr. Thomas, in his works, published in 1813, says: "Like the small-pox, when genuine, the measles never affect persons but once, their contagion appearing to be of a specific nature." By some of the older authors its occasional recurrence was admitted, but of late years the fact has been most satisfactorily established. Dr. Baillie has described eight instances of the kind, and it is a singular circumstance that they occurred in individuals of the same family.

In Dr. Willan's cases, which occurred in his own family, the disease was taken a second time in two individuals. Bursorius and Morton also relate instances of its appearance a second time. Dr. Willan has thrown out the suggestion that *when there are no catarrhal symptoms the susceptibility of the disease is not removed*. He states that the disease occurs sometimes in another spurious form, which is *also insufficient to protect the system from future attacks*, as many persons thus affected, who had the febrile, catarrhal, and eruptive symptoms, took the disease a second time.

Dr. Thomas, in speaking of an epidemic in New York in 1812, when the measles were very prevalent there, says: "It appears, however, that spurious forms of the disease, insufficient to protect the system from subsequent attacks, occur in a manner analogous to the spurious appearance of small-pox and variola vaccinae."

In Dr. Good's work, published in 1823, he divides measles into three varieties: vulgaris (common measles), incoeta (imperfect measles), and nigra (black measles). He describes the second variety as follows: "Rash running its course with little fever or catarrhal affection, *affording no certain security against the common or regular disease*. This has been called usually, and especially by German writers, spurious measles, but as it occurs most frequently when genuine measles are epidemic, and is *doubtless a result of their contagion*, it is less properly a spurious than an imperfect or immature rubella. I have hence exchanged the term spuria for incoeta."

Dr. Willan denominates it "rubeola sine catarrho," but as the genuine measles themselves, capable of affording emancipation, have sometimes appeared with *very slight* catarrhal symptoms, incoeta seems preferable. "Some," says Dr. Heberden, "have been so fortunate as to have the measles appear, often suffering so very little from fever or any of the preparatory symptoms that they could hardly say that they had been ill. In this case the constitution is protected by a natural insusceptibility of the disease, which is the best protection we can possess. In the case of imperfect measles it is only operated upon by some temporary influence, and hence as soon as this influence ceases the common susceptibility returns. For many persons, who on former occasions of the measles prevailing, and after exposure to their contagion, have exhibited certain *irregular appearances* of febrile, catarrhal, and eruptive symptoms mistaken for the true disease, were afterwards attacked with measles in an exquisitely genuine form."

Dr. Willan later mentions having seen other cases where the efflorescence without fever or catarrhal symptoms having declined, there appeared on the fourth day from its commencement a new efflorescence and violent disorder of the constitution.

From these items and a large number of others of similar nature running through the medical literature of the past, and from as careful a canvass of the symptoms of the so-called r  theln or German measles, as it has shown itself during the past year, as its trifling nature will allow, I have been unable to distinguish it as a new disease, but rather as an irregular or imperfect form of rubeola, occurring while that disease was epidemic or at the invasion of an epidemic, following the rule of all exanthemata that during the prevalence of an epidemic, and particularly at its beginning, the prominent characteristic of the disease shows itself in modifying even minor diseases.

At least it will require more careful attention before we shall be able to speak of it as anything but the *so-called* German measles.

— *London Truth* says: "The figures of Dr. Buchanan, the medical officer of the local government board, in regard to small-pox are remarkable. He estimates that during the last twelve months 1532 persons have died of small-pox in London. Of these, 325 had been vaccinated, and 637 had not, while it was not known whether the remainder had been vaccinated or not. It would appear, therefore, that vaccination reduces the chance of dying of small-pox by one half. Against this, however, is to be reckoned the very considerable number of persons whose health is seriously injured by impure lymph. That the present law, obliging all children to be vaccinated, requires modification is shown by the fact that the parents of rich persons never allow their children to be vaccinated with the lymph which is considered good enough for those of poor persons. Every one knows that when a child of wealthy parents is to be vaccinated some medical man is chosen who either has obtained the lymph direct from a cow or from a very healthy child."

The child of poor parents in Boston is on an equality in this particular with all others.

— The following communication to a daily contemporary is a pretty fair sample of one of the consequences of the crime at Washington:—

"During the Mexican war I was an Ohio volunteer, and during a skirmish near the city of Vera Cruz was shot between the eleventh and twelfth ribs, and half of my liver carried away. After my recovery from the wound I enjoyed better health than previous to the disaster. During the war of the rebellion, while a member of an Ohio regiment, and at the battle of Arkansas Post, I was shot between the tenth and eleventh ribs, and the remaining half of my liver disappeared. After recovery I was a better man than ever; in fact, I never knew what perfect health was till I lost my liver. My case would seem to prove, and I believe such to be the case, that the liver is a mistake of nature. The most singular part of my case is that neither the balls nor the liver have ever been found."

Medical and Surgical Journal.

THURSDAY, AUGUST 4, 1881. 2

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THE INDEX CATALOGUE, VOLUME TWO.

THE continued contemplation of the first volume of the Index Catalogue of the Library of the Surgeon-General's Office, United States Army, in its honored place among our books of reference, has perhaps somewhat diminished the feelings akin to awe with which we greeted its appearance. The respect for the stupendous work and its compilers has by no means decreased, however; familiarity has brought increased regard rather than contempt, and we welcome the second volume as an earnest of the continuance of the good work so nobly begun.

If our army is not impressive by its numbers it is certainly foremost in the arts that pertain to peace, and its medical department deserves and receives the thanks of the whole medical world for its various publications, of which the Index Catalogue is but one.

The notices of the first volume in foreign journals have been particularly cordial and appreciative, and serve to show that the pride with which we speak of the matter is not due to blind love for things American.

The present volume contains in round numbers a thousand pages and carries the index to the middle of the letter C. As Dr. Billings tells us in his short note to the Surgeon-General, which serves as preface, the volume contains 12,459 author-titles, representing 4,934 volumes and 9,810 pamphlets. It also includes 11,550 subject-titles of separate books and pamphlets, beside — and this is the feature which deserves especial mention and is the peculiar characteristic of the *Index Catalogue* — 37,310 titles of articles in periodicals. At least one of the many notices of the first volume leads us to fear that the full scope of the work is not as yet everywhere appreciated, and leads us to feel that it may not be improper to again say that the Index Catalogue is not merely a catalogue of the very large medical library of the Surgeon-General's office, but is also an index to the various articles in the very complete files of the numerous periodicals and reports which belong to the library, so that under the head of Chlorosis, for instance, we have first a catalogue of the various books and pamphlets on the subject, and afterwards an index to the various articles on the same subject scattered through the various journals. Twelve pages are filled with additions to the long list of medical periodicals and the abbreviations of titles em-

ployed in indexing, which was given in the first volume.

Catalogues cannot be considered interesting reading, but to one who loves the objects catalogued there is enjoyment to be found in contemplating the long array of names, and every one who loves and uses medical books, and especially those poor souls who find something of a miser's pleasure in their possession, will look through these crowded pages with delight. A careless turning of the leaves brings out a few interesting items which might perhaps be classed as curiosities of medical literature. The Brain fills eighty-two pages, the Body fills three and a half pages, while the Cadaver extends to fifteen, and the Bones to twenty-four pages. The different editions of the various publications of Sir Benjamin Brodie cover nearly a column, or half a page.

Under the name of Richard Bright occur but five short sub-titles, while Bright's Disease follows after, dragging its slow length through eight and a half long pages; "if a doctor has the luck to find out a new malady it is tied to his name like a tin kettle to a dog's tail, and he goes clattering down the highway of fame to posterity with his æolian attachment following at his heels," ever growing as it follows.

Under the list of works of William Cheselden, which includes his *Osteographia* and *Treatise on the High Operation for Stone*, reference is made to Douglas (John), *Animadversions on a late pompous book, intitled Osteographia*, and to Houstoun R. "Lithotomus Castratus; or Mr. Cheselden's treatise on the high operation for stone, thoroughly examined and plainly found to be Lithotomia Douglassiana (etc.), under another title; in a letter to Dr. John Arbuthnot, in an appendix, wherein both authors are fairly compared; to which is added a word of advice to surgeons." Mine enemy's book and my bitter review are here in one "red burial blent."

Of course the usefulness of the index will increase with each succeeding volume, and we can only repeat the wish that Congress will continue its liberality that the volumes may follow each other in rapid succession. We feel assured the great work, so long in preparation and so eagerly looked for by medical scholars, will in due course of time be completed.

THE INTERNATIONAL MEDICAL CONGRESS AT LONDON.

THE International Congress at London is, as we write, already in actual operation, and the plans and preparations of many past months are being tried by the test of a week's professional conference and social entertainment of more than two thousand delegates from various parts of the world. The United States is numerous and well represented. A distinguished delegate from this country, Dr. Billings, of Washington, is one of the vice-presidents, and he is also expected to deliver the address at the third general meeting, the subject being Our Medical Literature.

Elsewhere will be found the regular programme

for the different days of the week's session, the whole concluding with a dinner at the Crystal Palace. In addition to the regular programme the secretary-general furnishes a list of the various places of interest which may be visited by members of the congress under especially favorable conditions, of the clubs offering their hospitality to foreign members, and of excursions open to limited numbers.

The whole offers a striking example of the marvelous resources of such a place as London, and of the great variety of interests with which she tempts the stranger on such an occasion. What is lost thereby, and somewhat probably will be, in devotion to scientific discussion, will doubtless be gained in other ways, if not more profitable, at least no less refreshing. The congress will be immediately followed by the annual meeting of the British Medical Association. Many of the foreign visitors, it is expected, will remain for the second medical feast, but a thorough and profitable enjoyment of both will require a strong professional digestion with a rapid assimilation, and it can scarcely be otherwise than that the *éclat* of the first week should obscure to some extent that of the second.

THE NEW YORK FOOD AND DRUGS ADULTERATION LAWS.

We publish in another column the text of the new law in New York to prevent adulteration of food and drugs. Attention was called to it in our New York notes last June, when it received the governor's approval, but a want of space has hitherto prevented our giving the provisions of the act in full, which the importance and difficulty of the subject and the apparent merits of the act itself induce us to do. The same law goes into operation in the State of New Jersey also. Its passage was largely secured through the persistent and energetic activity of the *Sanitary Engineer*, the provisions of the act being drawn up by the experts who were appointed by the National Board of Trade to award the prizes offered by the *Engineer* for the best essays on the general subject of the adulteration of food.

It will be seen that the efficiency and enforcement of the law will depend very greatly upon the State Board of Health, the composition and organization of which is at present supposed to be equal to these new duties. Should politics or a distribution of places at any time lead to new experiments with the organization of the Board of Health the operation of the law to prevent adulteration might not be found to respond to the wishes of its framers.

MEDICAL NOTES.

—Thirty-two thousand three hundred and ninety-two patients were treated by the Marine Hospital Service during the fiscal year ending June 30, 1881.

—We are pleased to see that a pathologist has

been appointed at the Boston Lunatic Hospital. This is a step in the right direction. Dr. W. W. Gannett, the appointee, is well qualified for the work, upon which he has already entered.

—The thirty-second annual session of the Medical Association of Georgia was held in Thomasville on April 20 and 21, 1881. The following are the officers for the ensuing year: president, William F. Holt, Macon; first vice-president, Eugene Foster, Augusta; second vice-president, T. M. McIntosh, Thomasville; secretary, A. Sibley Campbell, Augusta; treasurer, K. P. Moore, Forsyth. The next session will be held in Atlanta, on the third Wednesday in April (19th) 1882.

—There was a very large attendance at the fourteenth annual meeting of the American Otological Society held at Newport, R. I., July 26th. Morning and afternoon sessions were held. Papers were read as follows: Suggestions Regarding the Treatment of Suppurative Otitis, by Dr. S. Theobald, of Baltimore; On the Value of Operations in which the Tympanic Membrane is Incised, by Dr. D. B. St. John Roosa, of New York; On the Tuning Fork in Diagnosis, by Dr. D. B. St. John Roosa; Removal of a Foreign Body by Disarticulation of the Auricle, by Dr. J. Orne Green, of Boston; On Malignant Growth in the Posterior Nerves, with Early Aural Symptoms, by Dr. C. H. Burnett, of Philadelphia; A Case of Epithelioma of the Middle Ear, by Dr. C. J. Kipp, of Newark; Selections of Test Words according to their Logographic Value, by Dr. C. J. Blake; Sudden and Complete Loss of Hearing in One Ear During an Attack of Mumps, by Dr. A. H. Buck, of New York; Small Vascular Tumors in the Membrane Tympano, by Dr. A. H. Buck. Dr. Samuel Sexton, of New York, and Dr. R. C. Brandegee, of New York, were not able to present the papers which they intended, and they were exchanged. The following officers were elected for the ensuing year: president, Dr. J. Orne Green, Boston; vice-president, Dr. J. S. Prout, Brooklyn; secretary and treasurer, Dr. J. J. B. Vermyne, of New Bedford, Drs. C. J. Blake, and J. Orne Green, of Boston; committee on membership, Dr. John Greene, of St. Louis, Dr. H. G. Miller, of Providence, Dr. C. H. Burnett, of Philadelphia.

—A medical paper at Leipsic has been fined one hundred marks and costs at the suit of seventy-five homeopathic doctors, for publishing a lecture delivered to a Berlin medical society, in which homeopathy was denounced as quackery and swindling.

—Messrs. Wm. Wood & Co. have availed themselves of the excuse of the daily provisional programme of the International Medical Congress at London to present to its delegates a list of their numerous medical publications. The pages are elegantly bound in red silk covers, and the whole presents an appearance very creditable to the enterprising firm from which it emanates. We are glad to be able to recognize and appreciate enterprise and skill wherever shown.

—Under authority conferred by the sundry civil appropriation bill, the secretary of the treasury has

appointed James Law, of Ithaca, N. Y., James H. Sanders, of Chicago, and E. T. Thayer, of West Newton, Mass., a commission to be known as "the treasury cattle commission." The duties of the commission will be to investigate all cases of the disease known as pleuro-pneumonia in neat cattle which shall be reported to it, especially along the dividing line between the United States and Dominion of Canada, and along the line of transportation from all parts of the United States to ports from which cattle are exported, and to perform such other duties as may from time to time be prescribed by the secretary with reference to the disease, in order that cattle shipped from ports of the United States to foreign ports may be known and certified to be free therefrom. The commission has been instructed to meet as soon as convenient, for the purpose of adopting such regulations as may be deemed proper. The compensation of the members of the commission when actually engaged will be ten dollars each per day and actual necessary expenses.

NEW YORK.

—There has probably never been a season when so many New York physicians have gone abroad as the present, and most of them are to be delegates or visitors to the International Medical Congress in London. The New York Academy of Medicine will be represented at the congress by its president, Dr. For-dyce Barker, its corresponding secretary, Dr. John Adams, and its treasurer, Dr. Horace P. Farnham, besides a large number of other Fellows.

—A committee of the State Board of Health have just made an official report on the methods and results of the system of sewerage of the Oriental and Manhattan hotels on Coney Island, at the request of the secretary of the Manhattan Beach Improvement Company, in which the following are the principal points: The sewerage of the two hotels is very complete and effectual, extending from the Manhattan eastward more than a mile, and from the Oriental for more than forty-five hundred feet, and the discharge at the eastern terminus of the sewer being fixed at so low a grade below the basements of the hotels that back-water and obstructions in the main sewers are not liable to occur. The mains are so ventilated by special shafts at various points that the hotels and premises are protected against regurgitant gases, while copious supplies of water serve to dilute and adequately force onward the sewage matters. As the sewage gates are raised twice daily at mean ebb tide, the mains are adequately flushed and scoured, and the sewage itself is inevitably swept outward to the sea. In reply to a question whether the hotel sewage as it flows with the ebb seaward may pollute the shores of the mainland of Long Island, and whether it would be destructive to fish or otherwise injurious, or be unpleasant to sight or smell, the committee state that such evils are not probable, and the report concludes as follows: "It would be difficult to devise a more complete and sanitarily safe delivery of the sewage. There can hardly be any cause for criticism or complaint of the system and its practical operation. The

outfall sewer is sufficiently capacious for the daily requirements of a population of many thousands; the entire construction and plan seem to be adequate and thorough, and the work and its results present a model of excellence in a most important kind of sanitary engineering."

—The officers and trustees of St. John's Guild, with a number of invited guests, made a visit of inspection to the new seaside nursery and sanitarium of the guild at Cedar Grove, on Staten Island, on the 28th of July. The trips of the floating hospital are now made regularly three times a week, and each time about twelve hundred mothers and sick children are taken out, at a cost of two hundred and fifty dollars for the excursion.

—Dr. Alouzo G. Chadney, of Spring Street, recently died from the effects of an overdose of chloral, which it is said he took in the dark. The quantity swallowed was about half an ounce.

—The death of a patient in Charity Hospital, an Irish woman, from trichinosis, was reported at the Bureau of Vital Statistics on the 25th of July.

—Small-pox and typhus fever are still somewhat prevalent, though to a much less extent than during the spring. According to the latest accounts there were forty-three typhus fever and forty-eight small-pox patients in the Riverside Hospital on Blackwell's Island.

DISCUSSION.

PSEUDO-SCIENCE AND INSANITY.

MR. EDITOR,—Permit me a few remarks on the very pretentious article entitled *Method in Madness*, which you reproduce from the *Lancet*. I am no psychologist, and have nothing to say on the definition of insanity or on the responsibility of any of the popular murderers of the day. My object is merely to dispute your praise of this article, because it seems to me obscure, founded on vague theories, and contradictory. I cannot admit it as embodying "the best thought" you refer to. So much parade of learning is not needed to show that an insane man may act with method. The article is obscure because there is a confusion, which grows worse as we try to solve it, between a wicked intention and a degenerating brain. The writer says very truly that "the practical difficulty is to avoid, on the one hand, treating the fruits of disease as willful offenses, while on the other we do not allow the supposition or presumption of disease to be employed as an excuse for wrong doing," but the whole tendency of the argument is towards the latter alternative. The "dissolution" or "denuding" theory, on which so much stress is laid, is a very ingenious idea, by which the order of evolution is reversed, the qualities said to be acquired latest going first, but evolution, as applied to man, is so unsatisfactory that it is utterly unscientific to deduce from it a theory from which practical consequences of such moment depend. Evolution has not gained one particle of strength since two years ago Virchow exposed its weakness. Without disputing the correctness of the *clinical* picture that is given of a case of so-called "denuding" disease, we may remark that any definite corresponding pathological sequence

is still to be found, but this is passed over very lightly. The confusion which the writer makes between mind and brain and moral and intellectual faculties is utterly bewildering. Let us pass to some instances.

"A man may lose his faculty of forming a wise judgment long before he is deprived of the power of distinguishing between right and wrong. This is so because it is a higher attainment in moral culture to do right advisedly than simply to perceive the right thing to do." Now we may wonder what connection there is between doing right and forming a wise judgment. The former is a moral, the latter an intellectual, act. They are utterly distinct. Are we to understand that if a merchant of failing mind begins to make foolish speculations, while his knowledge of right and wrong is intact, that business ability has gone before conscience because it is a higher moral faculty? The passage immediately following the preceding one caps the climax of absurdity. "The application of principle to conduct is an advance on the mere recognition of virtue in the concrete, or even the possession of virtue in the abstract." The first clause of this sentence merely states in stilted language the truism that it is easier to preach than to practice, and is intelligible; but what may virtue be that is not applied to conduct? According to this luminous passage a man may get drunk while possessing abstract temperance, and the thief may be one who neglects to "apply to practice" the honesty with which he overflows. This is not caricaturing the passage; it means this if it means anything.

I have endeavored to limit my criticisms to points which the general student may be competent to discuss, avoiding the deeper questions and those demanding special knowledge, but that anything very valuable could rest on so shaky a basis is not to be imagined. My only purpose in writing is to protest against this counterfeit science being palmed off on us as the real thing and the work of the "best minds." T. D.

BOSTON CITY HOSPITAL.

FROM the seventeenth annual report of the Boston City Hospital, which has just been given to the public, we take the following items:—

The whole number of patients in the hospital during the year was 4707, and they were under treatment an average of 21.18 days each, making a total of 99,703 days or 14,243 2-7 weeks.

The number of patients remaining in the hospital April 30, 1880, 289. Admitted during the year—Medical, 2649; surgical, 1685; ophthalmic, 81; total, 4415. Treated during the year, 4707; discharged, 4011; died, 421; total, 4432. Remaining in hospital April 30, 1881, 275; largest number in hospital at any time, 365; smallest number in hospital at any time, 225; daily average number of patients, 273 1-6; average length of stay of each patient, 22 1-5 days. Number of patients treated in the out-patient department, classified according to their diseases:—Medical diseases, 2249; surgical diseases, 1850; diseases of the eye, 1507; diseases of the ear, 303; diseases of the skin, 735; diseases of women, 249; diseases of the nervous system, 274; diseases of the throat, 377; total, 4949.

The entire cost of maintaining the hospital during the year, including every expenditure, excepting the cost of additions and reconstruction of buildings, was at

the rate of \$8.74 1-10 per week, \$125,039.35; but of the patients enumerated above, 403 paid for 1176 1-7 weeks' board \$10,571.83; leaving therefore the sum of \$114,467.52 as the cost to the city of treating 4304 non-paying patients for a total of 13,067 1-7 weeks, which is at a rate of \$8.76 1-20 per week. But after deducting money received from pay patients, stock on hand, etc., and averaging the net cost of maintaining the hospital for the year among all the patients treated, the average cost to the city of board for each patient was \$7.97 5-6 per week.

During the past year the largest number of patients in the hospital at any one time was thirty-seven more than last year; the smallest number at any one time was two more; the daily average was one more, and the average length of stay of each patient was 2 2-10 days less; the net cost of maintaining the hospital has been \$6993.68 more than last year. This increase has been, in a large measure, due to the advance in the cost of nearly all articles of consumption. While the increase in expenditure has been about six per cent., the increase in the number of weeks' board has been a small fraction of one per cent. In other words, the number of patients remaining the same, the expense of maintaining them has been increased. During the year much has been done in renewing and adding to the stock of wards and buildings, in order to complete the furnishing and increase the working stock in the hospital. This expense could not well be deducted, as being a part of the working materials of the house.

It has been apparent to every one familiar with the history of the hospital during the past year that the cases have taxed the resources of the hospital to a much greater extent than usual. The large number of severe injuries and acute medical diseases has at times taxed the working force to its utmost. This is the only hospital in the city admitting contagious and infectious diseases. This fact has brought large numbers of this class, for which, in number and severity, the hospital has never before been called upon to provide. They demanded treatment which was expensive, laborious, and extremely exacting. The demand for treatment of this class far exceeds the accommodations. If the hospital continues to receive contagious diseases to the same extent as during the past year, it must speedily have larger and better accommodations.

The training school for nurses continues to exercise its important part in the running of the hospital, and, during the past year more than previously, has shown its good work in the improved method of caring for the sick. It has rendered the staff aid in utilizing various methods of treatment which could not have been carried out under untrained nurses. The fact of the nurses in the hospital suffering much sickness from their constant attendance on the sick is strongly urged as a reason for the establishment of a home away from the hospital wards, where they could find rest and recuperation when off duty, which would greatly add to their health, happiness, and efficiency, and the trustees believe such a home should be at once established, while the land recently placed in their hands is well adapted as the site for such a building.

The trustees compliment Dr. G. H. M. Rowe, the resident physician and superintendent, as well as the hospital staff, for the great interest manifested by them and the good work they have performed during the year, and they also return thanks to very many friends of the hospital for various donations of useful articles.

THE COST OF HOSPITAL PATIENTS.

MR. CHARLES HAWKINS writes an interesting letter to the *Daily News* on the cost of hospital patients in St. George's Hospital in 1830 and 1880 respectively. The cost is in favor of the year 1880, being less than in 1830 by 1s. 1d. The differences in some of the items are striking. Bread and flour per patient in 1830 cost 10s. 7d.; in 1880, 4s. 1d. Tea and groceries cost in 1830, 5s. 10d.; in 1880, 3s. 4d. Coals and wood in 1830, 10s. 6d.; in 1880, 3s. 10d. Drugs, including leeches, 16s. 5d. and 7s. 11d. in the two years respectively; wine and spirits, 6s. 10d.; and 5s. 11d.; porter and ale, 5s. 3d. and 3s. 1d.; milk, 6s. 2d. and 3s. 3d.; laundry, 2s. 10d. and 4s. 10d.; instruments and surgical appliances, 1s. 9d. and 5s. 2d.; staff £1 0s. 3d. and £1 14s. 3d.; meat, 18s. 4d. and £1 2s. 2d. The difference in the cost of leeches is significant. In 1845 14,800 were used at a cost of £143; in 1880, 425 at a cost of £1 16s. In these estimates the cost of out-patients is disregarded, and the whole expenditure of the hospital debited to in-patients. Mr. Hawkins thinks that not more than £300 or £400 could be subtracted for out-patients, which in 1830 numbered 3000, and in 1880 15,000, many having, he says, very trifling ailments. We fear there is a tendency in hospitals generally to underrate the ailments of out-patients, though they often involve a great deal of suffering. — *Lancet*.

THE NEW YORK LAW TO PREVENT ADULTERATION OF FOOD AND DRUGS.

THE following is the text of the law to prevent adulteration of food and drugs in the State of New York, approved by the Governor, June 2:—

SECTION 1. No person shall, within this State, manufacture, have, offer for sale, or sell any article of food or drugs which is adulterated within the meaning of this Act, and any person violating this provision shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by fine not exceeding fifty dollars for the first offense, and not exceeding one hundred dollars for each subsequent offense.

SECTION 2. The term "food," as used in this Act, shall include every article used for food or drink by man. The term "drug," as used in this Act, shall include all medicines for internal or external use.

SECTION 3. An article shall be deemed to be adulterated within the meaning of this Act:—

[In the case of drugs. (1.) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein. (2.) If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work. (3.) If its strength or purity fall below the professed standard under which it is sold.]

[In the case of food or drink. (1.) If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength. (2.) If any inferior or cheaper substance or substances have been substituted wholly or in part for the article. (3.) If any valuable constituent of the article has been wholly or in part abstracted. (4.) If it be an imitation of or be sold under the name of another article. (5.) If it consists wholly or in part of a deceased or decomposed, or putrid or rotten, animal or vegetable substance, whether manufactured or not, or in the case of milk, if it is the produce of a diseased animal. (6.) If it be colored, or coated, or polished, or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value. (7.) If it contain any added poisonous ingredient, or any ingredient which may render such article injurious to the health of a person consuming it: Provided, that the State Board of Health may, with the approval of the Governor, from time to time declare certain articles or preparations to be exempt from the provisions of this Act; and provided further, that the provisions of this Act shall not ap-

ply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health and that the articles are distinctly labelled as a mixture, stating the components of the mixture.]

SECTION 4. It shall be the duty of the State Board of Health to prepare and publish, from time to time, lists of the articles, mixtures, or compounds declared to be exempt from the provisions of this Act in accordance with the preceding section. The State Board of Health shall also from time to time fix the limits of variability permissible in any article of food, or drug or compound, the standard of which is not established by any national pharmacopœia.

SECTION 5. The State Board of Health shall take cognizance of the interests of the public health as it relates to the sale of food and drugs and the adulteration of the same, and make all necessary investigations and inquiries relating thereto. It shall also have the supervision of the appointment of public analysts and chemists, and upon its recommendation, whenever it shall deem any such officer incompetent, the appointment of any and every such officer shall be revoked and be held to be void and of no effect. Within thirty days after the passage of this Act the State Board of Health shall meet and adopt such measures as may seem necessary to facilitate the enforcement of this Act, and prepare rules and regulations with regard to the proper methods of collecting and examining articles of food or drugs, and for the appointment of the necessary inspectors and analysts; and the State Board of Health shall be authorized to expend, in addition to all sums already appropriated for said Board, an amount not exceeding ten thousand dollars, for the purpose of carrying out the provisions of this Act, and the sum of ten thousand dollars is hereby appropriated out of any money in the treasury not otherwise appropriated, for the purposes in this section provided.

SECTION 6. Every person selling or offering or exposing any article of food or drugs for sale, or delivering any article to purchasers, shall be bound to serve or supply any public analyst or other agent of the State or local board of health appointed under this Act, who shall apply to him for that purpose, and on his tendering the value of the same, with a sample sufficient for the purpose of analysis of any article which is included in this Act, and which is in the possession of the person selling, under a penalty not exceeding fifty dollars for a first offense, and one hundred dollars for a second and subsequent offenses.

SECTION 7. Any violation of the provisions of this Act shall be treated and punished as a misdemeanor; and whoever shall impede, obstruct, hinder, or otherwise prevent any analyst, inspector, or prosecuting officer in the performance of his duty, shall be guilty of a misdemeanor, and shall be liable to indictment and punishment therefor.

SECTION 8. Any Act or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

SECTION 9. All the regulations and declarations of the State Board of Health made under this Act, from time to time, and promulgated, shall be printed in the statutes at large.

SECTION 10. This Act shall take effect at the expiration of ninety days after it shall become a law.

PROGRAMME OF THE INTERNATIONAL MEDICAL CONGRESS OF 1881.

THE following is the revised programme of arrangements for the International Congress at London as issued by the Honorary Secretary-General. The numerous social attractions we omit:—

SECTIONS.

The Sections will meet in the following places from 10 A. M. to 1 P. M. and from 2 P. M. to 3.30 P. M.:—

1. Anatomy — Linnean Society's Council Room, Burlington House.
2. Physiology — Royal Institution, Albemarle Street.
3. Pathology — Chemical Society's Meeting Room, Burlington House.
4. Medicine — The Theater, University of London, Burlington Gardens.
4. Diseases of the Throat (Sub-section) — Astronomical Society's Meeting Room, Burlington House.
5. Surgery — The Library, University of London, Burlington Gardens.
6. Obstetric Medicine and Surgery — South-East Examination Hall, University of London.
7. Diseases of Children — Antiquaries' Society's Meeting Room, Burlington House.

8. Mental Diseases — The Asiatic Society's Meeting Rooms, Albemarle Street.

9. Ophthalmology — Royal Society's Meeting Rooms, Burlington House.

10. Diseases of the Ear — The Assembly Room, Royal Academy of Arts, Burlington House.

11. Diseases of the Skin — Linnean Society's Secretary's Room, Burlington House.

12. Diseases of the Teeth — Linnean Society's Meeting Room, Burlington House.

13. State Medicine — Royal School of Mines, Jermyn Street.

14. Military Surgery and Medicine — The Graduates' Meeting Room, University of London.

15. Materia Medica and Pharmacology — Geological Society's Meeting Room, Burlington House.

Museum — Geological Society's Museum, Burlington House.

DAILY PROGRAMME.

Tuesday, August 2. — 10 A. M. to 6 P. M.: Registration of members and issue of tickets at the office of the Reception Committee in the Royal College of Physicians, Pall-mall East. 8 to 6 P. M.: Reception of the members of the Congress by the Committees at the Royal College of Physicians.

Wednesday, August 3. — 8 A. M. to 6 P. M.: Registration of members and issue of tickets at the Royal College of Physicians. 11 A. M.: First General Meeting, St. James's Great Hall. The chair will be taken by the President of the Royal College of Physicians, Chairman, *ex officio*, of the General Committee, in the presence of H. R. H. the prince of Wales. Presentation of the report of the Executive Committee by the Honorary Secretary-General. The constitution of the Congress and the election of officers will be proposed by the Chairman of the Executive Committee, and seconded by the President of the Congress of 1879. 3 P. M.: Meeting of the Sections. Constitution of the Sections, and other business. 4.30 P. M.: Second General Meeting. Address by Professor Virchow, of Berlin, on 'The Value of Pathological Experiment.' 5 to 6.30 P. M.: Musical Promenade at the Royal Botanic Society's Gardens, Regent's Park. 9.30 P. M.: Conversation at South Kensington Museum (entrance Exhibition Road), given by the English members of the Congress to the foreign members. Every member of the Congress may on this occasion be accompanied by one lady.

Thursday, August 4. — 10 A. M. to 1 P. M.: Sectional Meetings. 1.30 to 3.30 P. M.: Visits to hospitals (Guy's Hospital, London Hospital, St. George's Hospital, St. Mary's Hospital, St. Thomas's Hospital, Westminster Hospital). The medical officers and lecturers will be prepared to receive such members of the Congress as may desire to visit these hospitals and to inspect their schools and museums. 2 to 3.30 P. M.: Additional meeting time for the Sections. 4 to 5.30 P. M.: Third General Meeting, St. James's Great Hall. The address by the late Professor Maurice Raynaud, Paris, *Le Scepticisme en Médecine, au temps passé et au temps présent*, will be read by Dr. Féréol. 6.30 P. M.: Banquet given to a certain number of the members of the Congress by the Lord Mayor of London, at the Mansion House.

Friday, August 5. — 10 A. M. to 1 P. M.: Sectional Meetings. 1.30 to 3.30 P. M.: Visit to Hospitals (Bethlem Hospital, Charing-cross Hospital, King's College Hospital, Middlesex Hospital, St. Bartholomew's Hospital, University College Hospital). The medical officers and lecturers will be prepared to receive such members of the Congress as may desire to visit these hospitals and to inspect their schools and museums. 2 to 3.30 P. M.: Additional meeting time for the Sections. 4 to 5.30 P. M.: Fourth General Meeting, St. James's Great Hall. Address by Dr. Billings, Washington, U. S., on 'Our Medical Literature.' Visit to Messrs. Peart's Works. 8 to 11 P. M.: Conversation at the Guildhall, given to members of the Congress by the Lord Mayor and Corporation of the City of London.

Saturday, August 6. — 10 A. M. to 1 P. M.: Sectional Meetings. 12.15 P. M.: Excursion to Croydon Sewage Farm. 1.45 P. M.: Excursion to Folkestone. 2 P. M.: Excursion to Hampton Court. 4 to 7 P. M.: Reception of a certain number of the members at Kew Gardens, by Sir J. D. Hooker. 4 to 7 P. M.: A Garden Party will be given by Mr. and Mrs. Spencer Wells, at Gledes's Hall, Hampton. 4 to 7 P. M.: A Garden Party will be given by Mr. and Mrs. Saunders, at Fawcett, Wimbledon. 6.30 P. M.: The United Hospitals' Club will entertain a party of the members of the Congress at dinner at the "Star and Garter," Richmond Hill.

Sunday, August 7. — 10 A. M.: A Full Choral Service will be held in Westminster Abbey, sermon by the Very Rev. Dean Stanley, D. D., F. R. S. 3.15 P. M.: A Full Choral Service will be held in St. Paul's Cathedral, sermon by the Rev. Canon Liddell, D. D., D. C. L. 1.30 P. M.: Excursion to Bexhill. Visit to Sir Trevor Lawrence. 2 P. M.: The Royal Botanic

Society's Gardens, and the Gardens of the Zoological Society in the Regent's Park, will be open free to members on this and on every day of the week, on presentation of their tickets. The Royal Gardens at Kew may be visited on Sunday, from 9 A. M. till sunset, and Hampton Court Palace and Gardens from 2 P. M. till sunset.

Monday, August 8. — 10 A. M. to 1 P. M.: Sectional Meetings. 2 to 3.30 P. M.: Additional Meeting time for Sections. 4 to 5.30 P. M.: Fifth General Meeting, St. James's Great Hall. Address by Professor Volkmann, Halle, *Ueber moderne Chirurgie*. Visit to the Docks. 6.30 P. M.: Dinner given to a certain number of the foreign members of the Congress by the Worshipful Master and Wardens of the Society of Apothecaries in their Hall in Blackfriars. 9.30 P. M.: Conversation given by the Royal College of Surgeons to the members of the Congress.

Tuesday, August 9. — 10 A. M. to 1 P. M.: Sectional Meetings. 2 to 3 P. M.: Sixth General Meeting, St. James's Great Hall. Address by Professor Huxley, F. R. S., D. C. L. London, 'The Connection of the Biological Sciences with Medicine.' 3 P. M.: Concluding Meeting of the Congress.

INFORMAL DINNER AT THE CRYSTAL PALACE.

After the concluding meeting, the members, accompanied by their friends, including ladies, will proceed to Victoria Station, for High Level Station (London, Chatham, and Dover Railway), where special trains will be in waiting at four o'clock to convey them to the Crystal Palace. After a visit to the Palace and grounds, an Informal Dinner will take place in the Concert-Room, about seven o'clock. At dusk the fountains will play during a display of fireworks, which may be viewed by members of the Congress from the Queen's Corridor.

BRITISH MEDICAL ASSOCIATION: FORTY-NINTH ANNUAL MEETING.

THE forty-ninth annual meeting of the British Medical Association will be held at Ryde, Isle of Wight, on Tuesday, Wednesday, Thursday, and Friday, August 9, 10, 11, and 12, 1881. President, G. M. Humphry, M. D., F. R. S., Professor of Anatomy in the University of Cambridge. President elect, Benjamin Barrow, F. R. C. S., Consulting Surgeon to the Royal Isle of Wight Infirmary. An Address in Medicine will be delivered by John Syer Bristowe, M. D., F. R. S., F. R. C. P., Senior Physician to St. Thomas's Hospital. An Address on Surgery will be delivered by Jonathan Hutchinson, F. R. C. S., Senior Surgeon to the London Hospital. An Address in Obstetric Medicine will be delivered by John G. Sinclair Coghill, M. D., F. R. C. P. Edin., Visiting Physician to the National Hospital for Consumption, Ventnor. The business of the Association will be transacted in four sections and one subsection, namely: Section A, Medicine; Section B, Surgery; Section C, Obstetric Medicine; Section D, Public Medicine; Subsection, Otolaryngology.

Tuesday, August 9, 1881. — Two P. M. Meeting of Committee of Council. 2.30 P. M. Meeting of the Council of 1880-81. Four P. M. Short service, with sermon by Bishop McDougall. Eight P. M. General meeting in the Town Hall. President's Address; Annual Report of Council and other business.

Wednesday, August 10th. — 9.30 A. M. Meeting of Council of 1880-81. Eleven A. M. Second general meeting in the Town Hall. Address in Medicine. Two to five P. M. Sectional meetings. Nine P. M. Soirée in the Town Hall by the Mayor and the inhabitants of Ryde and neighborhood.

Thursday, August 11th. — Nine A. M. Meeting of the Committee of Council. Ten A. M. Third general meeting in the Town Hall. Reports of Committees. Eleven A. M. Address in Surgery. Two to five P. M. Sectional meetings. 6.30 P. M. Public dinner in the Town Hall.

Friday, August 12th. — Ten A. M. Address in Obstetric Medicine in the Town Hall. Eleven A. M. Sectional Meetings. 1.30 P. M. Concluding general meeting in the Town Hall. Reports of Committees and other business. Four P. M. Garden party in the grounds of the Isle of Wight College, by the President elect and Mrs. Barrow.

The following subjects have been arranged for discussion in the various sections: Section A, Medicine. (1.) Dr. Wade will open a discussion on Dilatation of the Stomach. (2.) Dr. Gowers on Acute Spinal Paralysis. (3.) Dr. Lauder Brunton, F. R. S., on Jaundice. Professor Rosenstein, of Leyden, and Professor Ewald, of Berlin, will take part in the discussions. The following papers have been promised: Barlow, W. H., M. D., Regressive Paralysis in the Infant. Dowse, T. S., M. D., On the Differential Diagnosis of Intracranial Tumor, General Paralysis of the Insane, and Locomotor Ataxy. Drysdale, C., M. D., On Syphilis of the Spinal Cord. Eales, H., Esq., and

Saundby, R., M. D., On the Ophthalmoscopic Appearances of the Fundus Oculi in Chlorosis. Finny, J. Mager, M. D., Notes on a Case of Acute Ascending Spinal Paralysis. Groves, J., M. D., The Treatment of Insanity. Hassall, Arthur Hill, M. D., The Winter Climate of San Remo. Kerr, Norman, M. D., Three Successful Experiments in the Treatment of Dipomania. Skeritt, E. Markham, M. D., A Case of Subcutaneous Emphysema from Spontaneous Rupture of Lung. Tibbits, E. T., M. D., On the Modern Theory of the Action of Digitalis. Tysen, W. J., M. B., Rectal Alimentation.

Section B, Surgery. (1.) A discussion will be opened by Mr. Stokes, of Dublin, on Resection of the Knee in Early Life. (2.) Mr. Edmund Owen will open a discussion on the Early Recognition and Treatment of Spinal Caries. The following papers have been promised. Cross, F. Richardson, M. B., Antiseptic Incision and Drainage in Empyema. Gould, A. Pearce, M. B., M. S., Varicocele. Grattan, Nicholas, Esq., On the Treatment of Spinal Curvature by means of the Cuirass. Greenway, H., Esq., The Value of Suspension in Surgery. Harrison, Reginald, Esq., Treatment of Stricture by Stutching. James, Presser, M. D., Stricture of the Oesophagus. Leardiard, H. A., M. D., On the Treatment of Fracture of the Lower End of the Fibula. Macnamara, C., Esq., Two Cases of Charcot's Joint-Disease. Martin, H., M. D. (Boston, U. S.), A Novel Treatment of Synovitis. McMahon, J. T., Esq., A Case of Psoas Abscess. Norton, A. T., Esq., A new and reliable Operation for the Cure of Web-Fingers. Pyc, Walter, Esq., Spina Bifida. Spanton, W. Dunnett, Esq., A further Series of Cases of Immediate Cure of Inguinal Hernia. Tait, Lawson, Esq., Some Recent Advances in Pelvic Surgery. Teevan, W. F. Esq., Twenty-Five Cases of Lithotripsy at one Sitting. Mr. Coates, President of the Section, in his opening address, will make some observations on the Treatment of Hemorrhoids. Professor Annandale will give a demonstration on Suspension as an Aid in Operative Surgery.

Section C, Obstetric Medicine. (1.) A discussion will be opened by Dr. Malins on the Removal of the Ovaries: *a*, for Dysmenorrhoea; *b*, for Fibroid Tumors. (2.) Dr. Sinclair Coghill will open a discussion on the Mechanical Treatment of Uterine Flexions and Displacements. Dr. Bantock will take part in the discussion. Papers have been promised by Drs. Barnes, Hicks, Murphy, and others.

Section D, Public Medicine. (1.) Mr. Ernest Hart will open a discussion on Vaccination with Calf-Lymph, in which it is expected that Dr. Warlomont, of Brussels, and Dr. Marton, of Boston, will take part. (2.) Dr. Strange will open a discussion on the Origin and Diffusion of Enteric Fever and Diphtheria. (3.) Infectious Diseases, and how to deal with them under the Public Health Act in the best interests of the patients and of the public. (4.) Considerations with regard to Infectious Hospitals: changes in their character, size, site, management, etc. (5.) Cremation. The following papers have been promised: Beveridge, Robert, M. B., On a Peculiar Outbreak of Disease in connection with the Supply of Milk. Davey, A. G., M. D., Prevention of Enteric Fever. Drysdale, C. R., M. D., London Local Death-Rates. Evatt, Surgeon-Major G. J. H., M. D., The New Medical Organization of the Army. Groves, J., M. B., The Isle of Wight as a Health Resort. Hodgson, G. F., Esq., On the Relations of Variola and Vaccina. Palmer, J. Foster, Esq., Cremation. Warlomont, E., M. D. (Brussels), Is it desirable that Vaccination by means of Calf-Lymph should be encouraged in England?

Subsection, Otology. Discussions on the following subjects will take place: (1.) The Relation of Diseases of the Nasal Passages and Naso-Pharynx to Aural Affections. (2.) The Treatment of Acute Suppurative Inflammation of the Middle Ear, with especial reference to Perforation of the Mastoid.

The annual museum of the British Medical Association will be held at the School of Art on August 9th, 10th, 11th, and 12th, and will be open daily from ten A. M. until six P. M.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 23, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.
New York.....	1,206,590	965	—	—	—	—	5.60	3.63
Philadelphia.....	846,984	475	267	42.11	29.47	1.05	2.32	2.95
Brooklyn.....	566,689	394	250	46.70	39.34	4.57	3.30	1.27
Chicago.....	503,304	394	287	48.98	39.59	5.84	1.02	.76
Boston.....	362,535	182	88	32.42	22.53	4.95	7.69	—
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	198	111	41.41	32.31	1.52	6.06	.51
Cincinnati.....	255,708	127	67	11.02	9.45	3.15	—	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	108	62	33.33	28.70	2.78	.93	—
Pittsburgh.....	156,381	123	78	64.23	34.96	3.25	1.62	7.31
Buffalo.....	155,137	123	72	53.66	34.15	4.07	3.25	7.31
Milwaukee.....	115,578	77	58	35.06	23.38	3.90	1.30	3.90
Providence.....	104,857	40	21	42.50	27.50	—	5.00	2.50
New Haven.....	62,882	28	10	32.14	21.43	3.57	—	—
Charleston.....	49,999	45	22	35.56	20.00	4.44	—	2.22
Nashville.....	43,461	24	13	37.50	29.17	4.16	—	—
Lowell.....	59,485	41	22	46.34	41.46	7.32	2.44	—
Worcester.....	58,295	20	—	50.00	40.00	5.00	—	5.00
Cambridge.....	52,740	—	—	—	—	—	—	—
Fall River.....	49,006	35	26	20.00	11.43	—	2.86	—
Lawrence.....	39,178	23	10	30.43	26.09	4.35	4.35	—
Lynn.....	38,284	8	3	—	—	—	—	—
Springfield.....	33,340	17	12	47.06	47.06	5.88	—	—
Salem.....	27,598	6	0	—	—	—	—	—
New Bedford.....	26,875	5	1	20.00	—	—	—	—
Somerville.....	24,985	11	4	27.27	27.27	18.13	—	—
Holyoke.....	21,851	9	6	66.67	44.44	—	—	—
Chelsea.....	21,785	14	12	78.57	71.43	—	—	—
Taunton.....	21,213	8	—	25.00	12.50	—	—	—
Gloucester.....	19,329	3	1	33.33	33.33	—	—	—
Haverhill.....	18,475	4	1	25.00	25.00	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	—	—	—	—	—	—	—
Fitchburg.....	12,405	5	1	20.00	20.00	20.00	—	—
Twenty-three Massachusetts towns.....	194,078	54	18	25.93	25.93	5.56	—	—

Deaths reported 3566 (no return from St. Louis or New Orleans); 1523 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1082, diarrhoeal diseases 813, consumption 230, diphtheria and croup 121, lung diseases 93, scarlet fever 82, typhoid fever 57, small-pox 42, cerebro-spinal meningitis 26, malarial fevers 24, whooping-cough 23, measles 21, typhus fever nine, erysipelas eight, puerperal fever seven. From *typhoid fever*, Philadelphia 17, New York 10, Pittsburgh and Charleston six, Chicago, District of Columbia, and Buffalo three, Boston, Baltimore, and Cincinnati two, Milwaukee, New Haven, and Nashville one. From *small-pox*, Pittsburgh 12, Philadelphia 10, New York nine, Chicago eight, Brooklyn two, Milwaukee one. From *cerebro-spinal meningitis*, Chicago seven, New York six, Buffalo, Milwaukee, and Fall River two, Philadelphia, Pittsburgh, New Haven, Worcester, Holyoke, Chelsea, and Taunton one. From *malarial fevers*, New York 16, Brooklyn three, Buffalo two, Chicago, District of Columbia, and Holyoke one. From *whooping-cough*, Philadelphia five, Chicago and Buffalo four, Brooklyn three, New York and Baltimore two, Boston, Pittsburgh, and Providence one. From *measles*, New York 10, Chicago and Pittsburgh four, Providence two, Brooklyn one. From *typhus fever*, New York nine. From *erysipelas*, Brooklyn and Chicago two, Philadelphia, Baltimore, Pittsburgh, and New Haven one. From *puerperal fever*, Philadelphia, Chicago, Boston, Milwaukee, Nashville, Lowell, and New Bedford one. Cincinnati reports six deaths from sunstroke and 22 from excessive heat.

Six cases of small-pox were reported in Brooklyn, 26 in Chicago, and 20 in Pittsburgh; diphtheria 29, scarlet fever four, in Boston; scarlet fever 10, diphtheria three, in Milwaukee.

In 39 cities and towns of Massachusetts, with a population of 1,028,717 (population of the State 1,783,086), the total death-rate

for the week was 22.56, against 20.07 and 18.02 for the previous two weeks.

For the week ending July 2d in 149 German cities and towns, with an estimated population of 7,819,277, the death-rate was 26.6. Deaths reported 3999; under five 2182; pulmonary consumption 492, diarrhoeal diseases 283, acute diseases of the respiratory organs 265, diphtheria and croup 127, scarlet fever 65, typhoid fever 49, measles and röteln 41, whooping-cough 34, puerperal fever 13, small-pox (Königsberg two, Münster, Harburg, Aachen two) six, typhus fever (Königsberg four, Posen, Erfurt) six. The death-rates ranged from 9.3 in Wiesbaden to 42.6 in Chemnitz; Königsberg 36.9; Breslau 29.8; Munich 27.8; Dresden 24.1; Berlin 37.2; Leipzig 20.6; Hamburg 22.6; Hanover 18.2; Bremen 15; Cologne 31.6; Frankfurt 22.8; Strasburg 40.8.

For the week ending July 9th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 20.7. Deaths reported 3022; acute diseases of the respiratory organs (London) 195, diarrhoea 180, measles 102, whooping-cough 91, scarlet fever 87, small-pox (London 73) 80, fever 27, diphtheria 12. The death-rates ranged from 11.4 in Portsmouth to 24.3 in Liverpool; Bristol 15.6; Leeds 19.2; Sheffield 19.5; Birmingham 21; London 21.6; Manchester 21.9. In Edinburgh 19.6; Glasgow 22.9; Dublin 20.6.

In the 21 chief towns of Switzerland, for the week ending July 9th, population 479,934, there were 46 deaths from diarrhoeal diseases, acute diseases of the respiratory organs 17, diphtheria and croup eight, typhoid fever eight, measles six, whooping-cough two, scarlet fever one. The death-rates were: Geneva 26.6; Zurich 25.7; Basle 22.6; Berne 22.2.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.	Thermometer.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Mean.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 17	29.595	69	82	61	67	35	65	56	W	NW	W	W	5	20	7	F	F	C	—	—
Mon., 18	29.537	61	73	54	57	58	78	64	W	W	W	W	13	10	12	C	R	O	3.05	.03
Tues., 19	29.669	67	79	54	68	42	69	60	W	Calm.	W	W	7	0	6	F	F	C	—	—
Wed., 20	29.753	72	82	61	63	58	72	64	W	SW	SW	SW	7	6	4	H	F	H	—	—
Thurs., 21	29.649	67	80	65	88	63	81	85	S	Calm.	W	W	4	0	4	R	F	C	6.00	.63
Fri., 22	29.653	70	80	60	70	48	77	65	NW	Calm.	N	N	9	0	1	C	F	F	—	—
Sat., 23	29.761	64	69	61	75	72	88	78	NE	E	W	W	3	5	1	O	O	C	.30	—
Week.	29.660	67	82	54															9.35	.66

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 23, 1881, TO JULY 29, 1881.

HERRARD, VAN BUREN, captain and assistant surgeon. Granted leave of absence for four months. S. O. 169, A. G. O., July 26, 1881.

AINSWORTH, F. C., captain and assistant surgeon. Relieved from duty at Fort Clark and assigned to duty as post surgeon at Fort McIntosh, Texas, relieving Assistant Surgeon Gorgas. S. O. 90, Department of Arizona, July 14, 1881.

TORNEY, GEORGE H., captain and assistant surgeon. The leave of absence granted him from headquarters, Department of the Missouri, June 21, 1881, extended one month. S. O. 76, Military Division of the Missouri, July 25, 1881.

GORDON, W. C., first lieutenant and assistant surgeon. When relieved at Fort McIntosh, Texas, to report to commanding officer, Fort Duncan, Texas, as post surgeon. S. O. 90, C. S., Department of Texas.

Dr. THOMAS WATERMAN has been appointed assistant medical examiner for the Board of Directors of Public Institutions.

The fifth annual meeting of the American Dermatological Association will be held in Newport, R. I., on August 30th and 31st and September 1st.

BOOKS AND PAMPHLETS RECEIVED.—A Medical Formulae based on the United States and British Pharmacopœias. Together with numerous French, German, and Unofficial Preparations. By Lawrence Johnson, M. D. New York: William Wood & Co. 1881.

A Treatise on the Continued Fevers. By James C. Wilson, M. D. With an Introduction by J. M. Da Costa, M. D. New York: William Wood & Co. 1881.

Supplement to Ziemssen's Cyclopædia of the Practice of Medicine. Edited by George L. Peabody, M. D. New York: William Wood & Co. 1881.

A Treatise on Diseases of the Joints. By Richard Barwell, F. R. C. S. Illustrated by numerous Engravings on Wood. Second Edition, revised and much enlarged. New York: William Wood & Co. 1881.

Circulars of Information of the Bureau of Education. No. 6. 1880. A Report on the Teaching of Chemistry and Physics in the United States. By Frank Wigglesworth Clarke, S. B., Professor of Chemistry and Physics in the University of Cincinnati.

Original Articles.

SUBINVOLUTION OF THE UTERUS AND NEURASTHENIA.

BY J. S. GREENE, M. D., DORCHESTER.

THE chief purpose of this paper is to invite attention to the importance of neurasthenia as a factor in the production of subinvolution of the uterus, with a view to promoting, on the part of the obstetrician, an increased sense of responsibility for the remoter welfare of certain of his puerperal patients.

I shall present brief notes of a group of cases wherein neurasthenia was manifestly the sole or principal cause of subinvolution, and where, in return, the presence of subinvolution was the sufficient cause of a wearisome persistence or recurrence of neurasthenia. If the fact of this intimate relation between the two conditions be admitted or established the conclusion is obvious that, since each condition is insidious, and often fails to announce its presence by positive symptoms during the puerperal period, each should be watched for with an attentive eye and purpose, to prevent what may well be likened to a malign conjunction of unlucky stars. In entering upon a brief examination of this subject, some remarks of a prefatory nature are needful.

As to the importance of subinvolution as a factor in the production of disease, I believe a fair statement of the present advanced position of authorities upon the subject to be this: that as a general rule it is the cause of areolar hyperplasia, the so-called chronic metritis,¹ and that by itself it is seldom a disease, but to become apparent it needs to be associated with some other pathological condition.² To these statements certain qualifications are necessary. Enlargement of the virgin uterus without the presence of heteroplastic growth is not very rare, and this fact alone is conclusive in favor of the assumption that morbid processes attended by enlargement may arise in the wombs of women who have borne children independently of influences having their origin in the puerperal state. My belief is that subinvolution among pluriparous women is frequent, and increasingly frequent, and is the cause of a very large proportion of the cases of chronic metritis in women who have borne two or more children. I also believe that subinvolution of itself and independently of any attendant or consequent morbid state, such as displacement or catarrh of the endometrium, does harm to the health of the woman. Venous engorgement and stasis naturally attend the condition in question. Increased weight of the passive uterus heavily taxes the supporting tissues. From these conditions arise not only menstrual irregularities, but disordered innervation and blood distribution throughout the body. These most natural inferences are verified by the results of treatment. Cure and correct all the resulting complications, and leave only enlargement, even then aid in the support of the womb at its proper elevation by a perfectly adjusted pessary, and though the patient's condition is immensely alleviated and rendered tolerable she is yet not *cured*. Restoration to something near the normal size and texture of the unimpregnated uterus alone signalizes full recovery of health.

If subinvolution be an evil, *per se*, and if it be in

addition responsible for but a tithe of the ills that follow in the train of chronic metritis, and if it be further, as it is universally admitted to be, a condition very unsatisfactory to treat for cure, if the beginning of treatment be long delayed, then, surely, it takes rank as a subject of prime importance in the department of preventive medicine.

The literature of the subject is especially unsatisfactory in the department of aetiology. One author sees no cases of subinvolution apart from laceration of the cervix; with another inflammation or congestion hold the leading place as causes; while a third has reached the conviction that malnutrition is always at the bottom of the disorder. When faulty innervation or general debility has been somewhat vaguely admitted as a factor, it has been, with barely an exception, as a remote or predisposing condition, local or general, rather than an immediate and all-sufficient influence. I have no controversy to maintain with the advocates of either of these views, but in following my present purpose I pass them by with only one or two remarks.

While malnutrition is often associated with neurasthenia, so that the two conditions are to each other as both cause and effect, I think that the priority of causative influence belongs to neurasthenia. Neurasthenia and subinvolution are often seen together without any evidence of malnutrition, but never are malnutrition and subinvolution combined without very manifest tokens of neurasthenia. If, as is doubtless true, instances of enlarged womb are found associated with laceration or inflammation, it by no means follows that the enlargement is due to the presence of either of these lesions, nor, indeed, that the enlargement is subinvolution at all. In order that cases shall indubitably support the affirmative of such proposition, they must have been observed from the time of confinement, and from the inception of the lesions, and the agency of another possible cause eliminated. The advocates of the theory of laceration will also be asked to prove that subinvolution occurs most frequently after first labors, as lacerations confessedly do. I believe the contrary is susceptible of proof. There is certainly a considerable proportion of cases wherein inflammatory or congestive features appear to predominate. There are others, however, where these features are singularly wanting, and although many cases occupy a middle ground, where traits merge, and become scarcely distinctive, yet it may be convenient for practical uses to admit two types of subinvolution, and to name them respectively the congestive and the neurasthenic varieties.

A characteristic example of the congestive type will most easily be found among those whose circumstances are unfavorable to ease, the laboring poor, or the women, naturally strong, who do their own household work, and are physically overworked. It is characterized by a marked predominance of local over general and reflex symptoms, that is, by pelvic aches and pains, menorrhagia, and leucorrhoea.

The other variety oftener occurs in delicately organized ladies of great nervous susceptibility, who have encountered overstrain from care and anxiety, such influences as especially depress the energies of those possessed of high nervous mobility. The distinctive traits of this variety are the reverse of those named above. Menstrual flow and leucorrhoeal discharge scanty, oftener than profuse; little pelvic pain unless as the result of complications; passive engorge-

¹ Thomas. Diseases of Women, page 285.

² Tilt. Lancet, July, 1876, page 6.

ment rather than active congestion; but a great variety and intensity of reflex nervous disturbance. It is to the examination of this latter type that the remainder of this article is limited.

It is needless to enumerate here the more remote and underlying conditions, so increasingly active and potent in this day and generation, which lead to neurasthenia. They are all comprised in the influences of heredity and those of education. These influences combine to form a being of mobile, susceptible organization, keenly alive to enjoyment and as keenly sensitive to sorrow; one with high capabilities and wakeful activities, and these probably already overwrought, even before marriage comes, with its certain domestic trial of patience and fortitude, its possible bereavements and reverses of fortune. She makes earnest efforts to maintain the accustomed round of social intercourse and domestic responsibility, while the physical functions of matrimony and maternity, either natural or perverted, asserted or unnaturally suppressed, are imperiously demanding and appropriating their moiety of vital force. A nervous system thus overburdened needs but a feather's weight to be overborne. The higher the tension and the more delicate the poise, so much the greater is the strain of the natural power of accommodation of the nerve centres to maintain the just equilibrium of organs and functions. Let now the last feather's weight be applied in the puerperal state, and let this power of accommodation then waver and yield, and the needful nerve influence is wanting which should conduct the process of involution. Unless this failure be recognized and remedied promptly, the womb thenceforward becomes a centre of baneful influence capable of perpetuating weakness and creating innumerable reflex disorders, manifested throughout the system, which may cause every organ and function of the body to become a separate woe. The patient is for a time unconscious of her plight. She rises from childbed and resumes her customary life. The nerve forces may suffice for a period to keep a show of maintaining digestion, nutrition, and muscular power; but the woman is tired, tearful, fearful, and irritable.

Two chances there are for reprieve, and perhaps complete escape, from the doom of chronic invalidism. One lies in the possibility of another, and more fortunately issuing, pregnancy, occurring before inflammation shall have shut the door; the other is held by the physician who, recognizing the dual character of the trouble, shall be able so to deal with its two elements, the local and the general, as to cause each step of improvement on either part to facilitate and confirm a corresponding step on the other, and so lead towards ultimate cure.

The cases I have chosen in illustration of the subject are typical. They all belong to the best class of our countrywomen in respect of mental endowments and strength of character. All have the brunette complexion, with dark eyes and hair, and present the traits usually associated with the nervous temperament. All had had a plurality of children, and were not far from thirty years of age when they came under treatment. All sought professional aid, not for pelvic distresses nor for any suspected uterine ailment, but for persistent debility, symptoms of physical or mental exhaustion, or both, associated with a variety of nervous disturbances, against which combination they had found themselves unable to maintain a struggle. All

were alike wholly free from any trace of laceration of cervix or perinaeum, and from any marked atony or relaxation of the walls of the vagina, bladder, or rectum, a fact important as evidence against the idea that excessive or premature bodily exertion had any direct or mechanical influence on the pelvic organs.

CASE I. Mrs. A., mother of three children, from early girlhood had suffered from a variety of nervous pains. These, in part affecting the stomach, had simulated dyspepsia, and she had never dared to be otherwise than very abstemious in eating. Sometimes she went almost without food for two or three days. Her pregnancies were exceptions to this rule, for then she always ate heartily.

Nothing unusual marked her experience at or immediately after her last confinement, but for many months, both before and after, she shared with her husband the burden of financial anxieties. After unavailing attempts to eat well and nurse the infant, at the end of three weeks from its birth she was carried to her carriage, and drove several miles in search of a wet-nurse. It was not until a year later, and after much watching over serious sickness in the family, and eating less than ever, that a convulsive fit occurred; violent and distressing palpitation of the heart followed, with feelings as of impending suffocation, and her strength suddenly and totally collapsed. Four or five months of extreme nervous exhaustion followed, during which time she was intolerant of noise, of food, incapable of any excitement or effort, obtaining sleep chiefly by the aid of chloral. She then placed herself under my charge. At this time her weight was less than one hundred pounds, its former average being about one hundred and fifteen.

The diagnosis, made complete in due time, was chronic neurasthenia as the primary trouble, with malnutrition (starvation, in fact), present as one result, subinvolution as another. The uterine cavity measured at least nine centimetres.

The first necessity was to inspire the patient with a proper confidence in the powers of her stomach. Having taught her to gratify the cravings of appetite for wholesome, generous food, it was not many weeks before a weight of one hundred and thirty pounds testified to the absence of malnutrition. Restoration of muscular tone and strength followed in due order; but nerve power, steadiness and trustworthiness of nerve function were withheld.

This is the point to take note of, for this is what happens again and again in subinvolution arising from neurasthenia. Either subinvolution reacts, and from being a consequence becomes a cause of neurasthenia; or subinvolution, as a uterine ailment, by virtue of its power to perturb the nerves and simulate other disorders, gives rise to a pseudo-neurasthenia, differing from the real in being not constant, but capricious and variable. Perhaps both forms occur, and combine in different individuals in varying proportions. Certainly a very attentive study of the individual patient is often needed to secure the solution of doubts, and the removal of perplexities having important bearings upon treatment, and one's judgment upon the requirements of a case is liable to frequent need of revision.

What is certain from more than five years' observation of the case of Mrs. A., is this: That after good nutrition and fair muscular strength had been restored, an appearance of chronic neurasthenia continued, varying in degree of severity, however, very nearly in

proportion to the degree of intensity of the uterine engorgement and catarrh. According as the local condition improved under local treatment, the patient's power to do became more continuous, and her perturbations of nerve force became less trying. And further, when all appreciable endometritis had been removed, the engorgement very much lessened, and the uterus comfortably sustained at its natural elevation, by the aid of a high-reaching pessary, there still remained, on the one hand, a liability to depressions and disturbances of nerve influence, — such, for example, as several successive nights of utter sleeplessness, or sudden invasions of general nervous weakness, — and, on the other hand, recurrences or exacerbations of uterine catarrh and engorgement; and the tide of general nerve untrustworthiness was always tolerably synchronous with ebb and flow of local disorder. Only as the basic lesion, the uterine enlargement, at last and radically diminished under a more vigorous and persistent local treatment, has normal, uniform, and continuous capability of energy and tranquillity been possible.

It is several months since Mrs. A. has been released from professional care, and she remains in thoroughly good health. Her uterine cavity now has a depth of sixty-nine millimetres, a measurement which represents a cure of the subinvolution.

CASE II. Mrs. B. had no previous history of neurasthenia, and of uterine disorder only an inconsiderable experience, following a miscarriage which occurred between the two completed pregnancies. When two months advanced in her latest pregnancy, she experienced the shock and grief of a sudden and great bereavement, but maintained throughout the remainder of her term her accustomed cheerfulness and calm. She may have been aided to do this with comparative ease by a certain exaltation of mind associated with her sense of duty towards the unborn child; but the prolonged exercise of will to control or put aside natural emotion doubtless involved a heavy strain upon her nerve power. No unusual experience attended, or immediately followed, her lying in. The usual period of quiet was observed, and all was presumed to be well with her. After a few weeks, however, feelings of mental depression began to grow upon her; and these would alternate with an excited state of feeling impelling her to go. She sought every opportunity for diversion, and got more and more into a state of unrest. A year and a half after confinement she underwent more domestic experiences of a very trying nature, and also suffered some shock from a fall, by the breaking of the cord of a hammock in which she was swinging. Finally she began to show a disposition to faint; and the occurrence of a fainting attack in a theatre was the immediate cause of her placing herself under my professional care, two years after confinement.

The womb was found to be retroverted; and its replacement removed the only pelvic discomforts which she had experienced. It was also deeply congested, tender, and harder than normal to the touch. Its cavity measured ten centimetres in depth, and was filled with very tenacious, transparent mucus, and was easily made to bleed. The vagina was deeply injected and the hemorrhoidal vessels swollen with blood. Accompanying this local condition were symptoms of disordered, one might almost say, collapsed, innervation, affecting almost every important organ and function. The emotions were not always under control of the will; sleep was uncertain; paroxysms of dyspnoea

sometimes occurred. The circulatory system was disturbed; the heart's action weak and frequent. There was total disrelish for food, and constipation. She was unable to apply her mind to reading, or her hands to any employment. Attempts at these, or at walking, were followed by increased prostration. Notwithstanding this extreme state of neurasthenia, there were no visible signs of impaired nutrition. Face and figure remained full, and weight was probably undiminished.

Treatment was begun sixteen months ago. During the last six months the patient has resumed much of her former activity. The only recognizable deviation from the normal state of the uterus is its size, for the subinvolution is not cured. Associated with this, and, as I believe, now chiefly dependent upon it, is a liability to occasional nervous perturbations, and an uncertainty and capriciousness in the display of nerve power, of which power I think she has now regained a moderate reserve supply.

CASE III. Mrs. C. is introduced because it is an example of subinvolution arising solely from neurasthenia of constitutional origin. The lady had always been delicate, and during her first two pregnancies had been greatly restricted in her capacity of effort, but during the whole course of her third and latest pregnancy debility was so profound as to excite anxiety for her safety. All possible means were used for invigoration, including frequent feedings, massage, and the withdrawal of all care, yet she remained a nine months' prisoner to her bed, totally unable to exercise either mental or bodily power. So extreme was the nervous exhaustion that she could not bear the prolonged presence in her room of her dearest friends without harmful effects. Normal labor of two hours' duration took place in September, 1879, terminating in the birth of a healthy female child. The utmost care was used to guide the patient safely through her puerperal convalescence, to reinvigorate her, and at the same time to restrain her from any premature exertion. Trusting to these precautions and to the absence of all suspicious symptoms, no uterine examination was made for nine months after confinement. It was proposed because it was found that with every advantage the patient still remained weaker than was reasonably to be expected, and that she began to experience nervous feelings, which she could scarcely control. The uterus was found inclined towards retroversion, somewhat engorged, patulous, and catarrhal, and with a depth of eight centimetres, indicating a grade of subinvolution, when the patient's natural delicacy of organization is considered, quite sufficient to produce and perpetuate debility and nervousness.

Eighteen months have now elapsed since her confinement, and she has at last regained a near approximation to her earlier standard of strength and efficiency, and is not nervous except for reasonable cause. The uterus is very nearly healthy, and has a depth of seven centimetres.

CASE IV. Mrs. D. is the last which I shall mention. In October, 1876, when her fifth child was three weeks old, she arose from bed, and began a long and devoted attendance upon a member of her family, whose illness resulted fatally four months later. This double strain upon mind and body was attended by menstrual derangements and pelvic sufferings, and was followed by profound prostration of all her energies. The presence of subinvolution was recognized by her physician. Eight weeks of repose was succeeded by

six months of active, congenial, out-of-door life in the parks of Colorado, and she returned home, to appearance, wholly reinvigorated, with pelvic symptoms gone. Soon she began to be annoyed by persistent general pruritus, later, by distressingly severe headaches, and by a sense of returning debility. The uterine cavity measured eight and a half centimetres. The use of the probe caused pain and bleeding. The form and position of the uterus were normal. There was some sensitiveness of the body of the womb and of the left broad ligament, which latter was somewhat thickened. This tenderness was subsequently increased by too violent horseback exercise, and by imprudence in lifting. Local treatment was entered upon in July, 1878, and continued over a period of rather more than a year, with an interruption in the spring, occasioned by a brief absence of the patient in a trip to Europe. About the middle of August, 1879, the menstrual flow came on with unusual and startling copiousness. After this occurrence treatment was discontinued, the womb having regained a sufficiently healthy condition, and a calibre of scarcely more than seven centimetres. Another very abundant catamenial flow occurred in September, and thence dated her sixth pregnancy.

Especial solicitude was felt for the progress of involution after confinement. There was some adhesion of the membranes, and the lochia were not quite normal. Quinine and ergot and hot vaginal lavements were used, the stay in bed was prolonged, and the first effort permitted was carriage exercise. Progress was delayed by an attack of severe abdominal colic, from indigestion, on the thirteenth day after delivery. At the end of five weeks the uterine cavity still measured eighty-one and a half millimetres. At the end of nine weeks the second measurement was made, and indicated the very satisfactory result of sixty-nine millimetres. The patient supplied her infant in part from the breast, and has since remained in good health.

I have reported the foregoing selected cases to emphasize the importance of watching closely all the symptoms in puerperal patients which may be connected with checked involution; of watching these with peculiar solicitude in those patients who may be constitutionally inclined towards neurasthenia, or in those who, not being especially so inclined, have undergone any unusual mental trial or nervous shock; the importance, further, of determining the question by actual measurements, when the *general condition* of the patient presents room for a reasonable doubt, even though the usually accepted local indications, derived from the course of the lochial discharge, etc., be wholly reassuring; the importance, finally, of retaining the full responsibility of *accoucheur* until the vitally important process of involution in each case committed to the physician's charge shall be, in his enlightened judgment, success-fully completed.

A CONTRIBUTION TO THE ETIOLOGY OF CYSTITIS.

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"To know the natural progress of diseases is to know more than the half of medicine" said Froussac, and few of us would be loth to admit that nothing would advance the science of rational therapeutics more than our increasing knowledge of the natural course of

diseases and their self limitations in many instances. But the very nature of medical practice, as a human art bent quite as much on the alleviation of human suffering as on the cure of disease, has prevented the rapid growth of a knowledge of the natural course which many maladies would take were it not interfered with by the laudable attempt of the physician to relieve painful symptoms and so, in many instances, to modify, for better or worse, the natural progress of the affection.

In this paper I wish to draw attention to one form of cystitis and to its natural history; or rather as much of it as could be learned from a case of long standing occurring in an intimate friend, and offering every facility for close investigation.

M. B. had the following history: From birth until manhood he was in good health; when at twenty years of age he was kicked by a horse, the blow falling on the side of head near one temple. No fracture was found, but he lay insensible for nearly three days. He recovered perfectly except that ever afterward he had frequent and severe headaches accompanied by slight dizziness, and an inability to fix his mind long upon any one subject, yet he was a very active man and carried on a large business. As years passed on his memory became so defective as to seriously annoy himself and others.

When about forty years of age he began to have attacks of sub-acute rheumatism several times a year, but never confining him to bed. He suffered at intervals from spasmodic asthma and accompanying bronchitis; this was a disease of many years' duration. From forty to fifty he was seized from time to time with sudden diarrhoea of a watery character, not connected with any error in diet, but due apparently to nervous exhaustion. When forty-eight years of age he complained of coldness and numbness of the legs from just above the knee to the foot, and walked with a stiff and somewhat staggering gait, especially when he had previously been seated for some time. Locomotor ataxia was feared, but he failed to reveal the proper symptoms, and the trouble with his lower limbs was not progressive. He still considered himself in fair health and pursued his ordinary labors. In this condition, and when fifty years of age, he was seized with a dragging sensation in the region of the bladder and frequent calls to urinate, the water being passed slowly and with difficulty. Soon a thick glairy mucus appeared which adhered firmly to the bottom of the vessel; this continued for several weeks, then mucus mixed with pus was voided, and later, greenish pus in large quantities; no blood was seen at any time. The existence of stone being suspected, Dr. T. B. Curtis kindly explored the bladder several times but discovered nothing. The urethra, which was healthy, allowed a No. 20 (French) bougie to pass freely but would not admit a larger one, owing to the naturally small size of the meatus. The prostatic gland was moderately enlarged but not enough to sensibly occlude the urethra or make it difficult to pass a fair-sized catheter. The urine was acid at all times when examined, and was passed in fair quantity except at one time when the patient had an almost complete suppression of urine for two days. The cause of this anuria was not ascertained and the trouble never reappeared. Roberts¹ says "Disturbance of the innervation of the organs is probably the primary cause and, possibly also in many cases, the direct cause of the suspension of the secretion." The patient drank freely for a

¹ A Treatise on Urinary and Renal Diseases, 2d ed., page 41.

time of an infusion of *tritium repens*, but it had no apparent effect on the cystitis. I then washed out the bladder every other day with warm water followed by the injection of a weak infusion of *buchu*. This was repeated a few times when the discharges suddenly ceased, the symptoms subsided, and the urine became clear and wholly free from mucus. The patient was apparently well so far as his cystitis was concerned. This was about one year from its beginning. The disease ceased as suddenly as it began, and I had reason to believe that the cure was effected by the treatment employed. Three months afterward the disease broke out anew without any known exciting cause; no treatment was instituted for the cystitis this time. It continued with more or less intensity for several months, when it again ceased and never returned.

Its cessation was immediately followed by an intense neuralgia of the brachial plexus. This continued, in spite of treatment, for nearly two years, during which time the patient gradually emaciated and sank into a state of profound nervous prostration; his long-standing bronchitis assumed a purulent character, the bronchial tubes became enlarged and softened, and the lung was rapidly invaded. He soon died of exhaustion, having been confined to his room but three weeks.

Let us inquire into the probable cause of the cystitis detailed above. I think that the existence of stone as a cause can be fairly set aside, considering the peculiar history of the case and the fact that most careful sounding was practiced with a negative result. There was no appreciable disease of the urinary organs, other than the bladder, nor of the neighboring viscera. It was clearly a case of what was formerly called "idiopathic cystitis," which term was hardly more than a cloak for ignorance. During the patient's last attack of bladder trouble I felt convinced that the cystitis was but one link in a long chain of nervous symptoms dating back many years, and that it must have had a centric origin, the disturbance in the central nervous system giving rise to impaired nervous supply and a faulty nutrition of the walls of the bladder, resulting in the subsequent mucous and purulent discharges. A rapid survey of the patient's maladies from early youth will show that they were all apparently of nervous origin. The severe headaches and attacks of dizziness following the blow on the temple, disturbance of memory, muscular (nervous) rheumatism, asthma, sudden watery diarrhoea, numbness and coldness of legs, with staggering gait, non-obstructive suppression of urine (nervous anuria), and intense and long-continuing brachial neuralgia. The fact that the cystitis suddenly ceased when at its height, and was replaced by the neuralgia, is at least suggestive. His ataxic symptoms were not progressive, and at times were hardly noticeable. There was irritability of the neck of the bladder, but no paralysis of the organ or real incontinence of urine. As no autopsy was had I do not pretend to know the exact nature of the centric trouble, but trust that this paper may draw attention to the fact that even purulent cystitis may be but a symptom of some obscure lesion in the central nervous system, and that reputed success by means of local treatment in this disease should be carefully scrutinized with reference to the probable aetiology of the affection.

—The twenty-fifth anniversary of Professor Virchow's appointment as Professor in the University of Berlin is to be celebrated October 13th next.

RECENT PROGRESS IN MEDICAL CHEMISTRY.¹

BY WILLIAM B. HILLS, M. D.

TOXICOLOGY.

Lead. M. Malherbe² has reported a case of chronic lead poisoning from the use of matches containing chromate of lead to light a pipe. The possibility of this mode of poisoning has been previously pointed out, but this is the first recorded case. The lead salt is probably absorbed, for the most part, through the pulmonary mucous membrane; to some slight extent, perhaps, through the skin, owing to the frequent contact of the hands with the matches.

M. Pouchet³ has examined quantitatively the urine of persons suffering from lead poisoning, in order to estimate the effect of potassium iodide on the elimination of lead. During the period of aggravated symptoms the urine contained on an average one milligramme of metallic lead to the litre. Under the influence of potassium iodide, in doses of four to six grammes daily, the elimination of lead increased greatly, but again decreased at the end of from six to ten days, when it became less marked than before the treatment was instituted. But when, after withdrawing the remedy, the patient was allowed to rest for some days prior to the readministration of the iodide, small quantities of lead were again eliminated with the urine. Hence arises the therapeutic indication of employing the iodide for a long time, instituting, however, intervals of repose, during which the remedy is not to be administered. Pouchet also analyzed the urine of patients treated exclusively with potassium bromide without detecting any increase in the amount of lead eliminated. Hence he deduces the inefficiency of the bromide in the treatment of lead poisoning.

Hydrocyanic Acid. Ch. Brame⁴ has detected hydrocyanic acid, *one month* after burial, in the bodies of a cat and rabbit which had been poisoned by the administration of about one gramme of the pure acid.

Morphia. To determine whether, after the administration of morphia, the alkaloid must necessarily be found in the urine, Bornträger⁵ has examined the urine of a number of persons to whom one half to one gramme (grain?) of morphia was given daily subcutaneously. In only rare instances could morphia be detected in the urine.

Landsberg⁶ has investigated the same subject. Having proved that morphia when *mixed* with urine could be recovered, he next turned his attention to cases of poisoning. Animals were poisoned with morphia, administered in some cases by the mouth, in others by subcutaneous injection. The various organs, the blood, urine, and feces were examined for morphia. The latter could be detected in the urine, blood, and organs only after the administration of very large doses. It was detected in the feces whenever the whole quantity administered had not been absorbed.

Bergeron and L'Hôte⁷ call attention to a possible error arising from the employment of the physiological test for morphia in cases where amyl alcohol has been employed to extract the alkaloid, since amyl alcohol, even in very minute quantities, produces true narcotic

¹ Concluded from page 104.

² Journal de Pharm. et de Chimie, March, 1880, page 240.

³ The London Medical Record, November 15, 1880, page 444.

⁴ Compt. Rend., xcii. p. 426.

⁵ Arch. der Pharmacie, xiv. p. 119.

⁶ Pilüger's Archiv, xxiii. p. 413.

⁷ Compt. Rend., xcii. p. 390.

symptoms. With reference to this Spica,¹ however, very properly states that the crude amyl alcohol extract should not be employed for the physiological test. The extract should first be treated with acidulated water, and the morphia removed from this and obtained in a pure condition by other solvents.

A. Jorissen² describes a new color reaction for morphia, obtained by the action of concentrated sulphuric acid and ferrous sulphate. A solution of pure morphia is evaporated to dryness, and the residue heated on a water bath with a few drops of concentrated sulphuric acid. A small crystal of ferrous sulphate is then added, the mixture is heated for a moment, and poured into a white porcelain dish containing two or three cubic centimetres of concentrated ammonia solution. The morphia solution sinks by reason of its greater specific gravity, and there is formed at the point of contact of the two liquids a red color, passing into a violet on the borders, while the ammonia assumes a pure blue color. If the two fluids are mixed the blue color only remains. The original article must be consulted for details. The test is recommended as very characteristic and delicate. Jorissen also describes another characteristic test for morphia, in which the morphia is probably first converted to apomorphia by the action of concentrated sulphuric acid at 190–200° F. A dark-green mass is obtained. If this is poured, drop by drop, into a large volume of water, the mixture assumes a bluish color. This is then shaken with ether or chloroform, which assumes first a purple color, finally a very stable blue color. This latter test may be utilized as an exhibit in legal cases.³

Phosphorus. For the detection of phosphorus in cases of poisoning, Selmi⁴ proposes, instead of Mitscherlich's process, to distill the suspended substance with water in a current of carbon dioxide, agitate the aqueous distillate with carbon bisulphide to take up the phosphorus, add a little absolute alcohol to the separated bisulphide, and allow the latter to evaporate. In this way an alcoholic solution of phosphorus is obtained which may be further tested. According to Selmi, if the urine, in cases of phosphorus poisoning, is rendered alkaline with baryta water and precipitated with absolute alcohol, the precipitate gives the reactions of the lower acids of phosphorus with nascent hydrogen. On distilling the alcoholic filtrate, a volatile neutral principle containing phosphorus passes over, also a phosphorus base. The examination of the brain and liver of a person poisoned with phosphorus gave similar results. The brain contained lower acids of phosphorus, whose barium salts were precipitated by alcohol; the alcoholic filtrate contained a volatile body containing phosphorus, also volatile bases containing phosphorus, one of which had an odor resembling that of ammonia and was poisonous. From the liver the lower acids of phosphorus were not obtained, though the other phosphorus compounds were.

Fraenkel and Rohmann⁵ have observed, as did Storch and Bauer⁶ previously, that, in animals poisoned with phosphorus, there is an enormously increased decomposition of the nitrogenous tissues of the body.

The products formed by this decomposition are intermediate products of oxidation between albumen and urea.

URINARY CHEMISTRY.

Urea. Urea by the action of an alkaline solution of sodium hypobromite is resolved into carbon dioxide, water, and nitrogen. This reaction has been proposed for the determination of the amount of urea in urine. Theoretically all the nitrogen of the urea should be evolved. Practically this is not, as a rule, the case; ninety-two to ninety-four per cent. only of the total nitrogen being evolved in the free state. Mehu⁷ proposed mixing either glucose or cane sugar with the urine, before adding the hypobromite, when the whole of the nitrogen would be set free. Subsequently Esbach⁸ and also Jay⁹ stated that a solution of glucose alone evolves some gas under the action of sodium hypobromite. Fauconnier⁹ obtained in the presence of glucose the theoretical amount of nitrogen; but in the presence of cane sugar he obtained only ninety-four per cent. of the total nitrogen.

Professor Wormley¹⁰ states that, according to his experiments, when a solution of cane sugar or of glucose is mixed, in certain proportions at least, with the hypobromite without the presence of urea, the temperature of the mixture increases and its yellow color is discharged gradually, but no gas is evolved. The increase of temperature is more marked and sudden with solutions of grape sugar than with cane sugar. He also observes that the presence of a large excess of glucose entirely prevents the decomposition of urea by the hypobromite. Wormley has made some experiments for the purpose of examining the accuracy of this test for urea without the presence of cane sugar or glucose. The form of apparatus employed was essentially that advised by R. Apjohn¹¹; the hypobromite reagent was made by dissolving one hundred grammes caustic soda in two hundred and fifty c. c. of water and adding twenty-five c. c. bromine to the cooled mixture. In applying the reagent it was diluted with one and one half volumes of water.

A series of experiments was performed, employing one c. c. of a standard solution of pure urea, varying in strength from one to six per cent., variously diluted and added to varying quantities of the reagent. These experiments gave different results; in some only about ninety per cent., or even less, of the nitrogen being evolved, while in others a larger proportion was obtained, and in still others the whole of the nitrogen was set free. It was finally observed that under certain conditions the whole of the nitrogen is uniformly eliminated. These conditions are:—

- (1.) The reagent should be freshly prepared.
- (2.) The urea solution should be wholly added to the reagent, none of the latter being allowed to mix with the urea solution in the containing tube.
- (3.) The amount of urea operated upon should not exceed one part to about twelve hundred parts of the diluted reagent.

Moreover, the diluted urea solution should be added in small portions at a time to the reagent, thoroughly mixed, and the effervescence allowed to cease before

¹ *Zeitschr. f. analyt. Chem.*, xx, p. 422.

² *Ber. d. deutsch. Chem. Gesellsch.*, xiv, p. 274, from *Gazz.*

³ *Trans. of the Chem. Soc. London*, May, 1881, page 103.

⁴ *Zeitschr. f. analyt. Chem.*, p. 449.

⁵ *Zeitschr. f. analyt. Chem.*

⁶ *Compt. Rend.*, 1879, page 175.

⁷ *Compt. Rend.*, 1879, page 117.

⁸ *Bull. Soc. Chim.*, 1880, page 105.

⁹ *Bull. Soc. Chim.*, 1880, page 103.

¹⁰ *Am. Journal Med. Sciences*, July, 1881, page 128.

¹¹ *Chemical News*, January 1875, page 37.

any further addition of urea. When comparatively large amounts of urea are present, it would appear that the surrounding temperature should not be less than about 20°C . (68°F .). In the practical application of the test, if a two per cent. solution of urea is under examination, one c. c. of this solution diluted with five to ten c. c. of water, is placed in the containing tube, and the mixing bottle charged with ten c. c. of the reagent diluted with fifteen c. c. of water; whereas for one c. c. of a four per cent. solution of urea similarly diluted, not less than about fifty c. c. of the diluted reagent should be employed.

During his investigations it was observed, in cases in which the whole nitrogen was not evolved, that so long as the conditions remained the same, the relative proportion of the nitrogen eliminated was pretty uniform. Hence, if the volume of nitrogen evolved from a known quantity of urea under certain conditions, or by a given form of apparatus, be determined, the result may be taken as the basis for the determination of the urea in the urine with sufficient accuracy for clinical purposes.

M. Bretet states, as a result of some experiments lately made by him,¹ that albumen in urines recently passed is not decomposed in the cold by sodium hypobromite; that such decomposition is not appreciable, in decomposing urines, for fifteen days after they are passed, and that it is very slight even after one month, when the increase in the volume of nitrogen evolved is only about two one hundredths. Hence it is not necessary to separate albumen from the urine before determining the urea by means of sodic hypobromite; to do so is often a source of error, for reasons stated in the original communication.

E. Pflüger² states that he has found a possibility of error to the extent of fourteen per cent., in the estimation of urea by Liebig's method, but believes that the method gives good results if Liebig's directions, with certain modifications, are carefully carried out. He then gives directions for making the necessary reagents, and explains his own method of performing the test. The article is however unsuited for abstraction.

Indican. H. N. Heinemann³ has arranged a table which includes three hundred and ninety-six cases investigated by Hoppe-Seyler, Senator, Hemmige, and himself. The following are his conclusions:—

Indican is only exceptionally absent in health. It may vary in quantity in the healthy individual, generally being small in amount, but occasionally as marked as in disease. The most marked increase is obtained in those diseases which affect the alimentary canal, and more especially the small intestines, whether local diseases or general diseases with local lesion. Among these are dyspepsia, gastro-duodenitis, chronic constipation, intussusception, diarrhoea, peritonitis, cholera, lead poisoning, and typhoid fever. In diseases causing inanition, as phthisis, and other prolonged suppurative diseases, as caries and necrosis, a marked increase is found.

Among the diseases producing altered blood-states, some, such as malaria, syphilis, rheumatism, and alcoholism, progressive anæmia, and chlorosis, although always causing the most profound blood-changes, do not always effect a decided increase. This is a singu-

lar exception, to which Senator has called attention, but the investigations are not yet sufficiently numerous to draw conclusions.

Certain nervous disorders, as insanity, epilepsy, Addison's disease, progressive muscular atrophy and paraplegia cause a marked increase. Disordered functions of the kidneys, as in chronic Bright's disease, cause a marked increase. Internal malignant tumors, as carcinomata and sarcomata, cause the most marked and constant increase of all.

*Estimation of Chlorides in Urine.*⁴ In estimating chlorides in the urine, by adding to a measured amount of urine, potassium nitrate, evaporating to dryness and igniting the residue till the organic matter is destroyed as a preliminary step to titrating with nitrate of silver, there is always a loss of chlorine, if the urine contains ammonium salts, on account of the volatility of ammonium chloride. This loss can be avoided by adding sodium carbonate in addition to potassium nitrate. Feder and Voit,⁵ in order to avoid all loss, employ for each ten c. c. of urine three grammes sodic carbonate, and two grammes potassium nitrate.

Habel and Fernholz⁶ recommend the following process: To the urine add one half its volume of baryta mixture and filter; measure off fifteen c. c. of the filtrate, make it acid, after neutralization, with ten drops dilute nitric acid (Sp. Gr. = 1.119), and add the ordinary standard solution of silver nitrate as long as a precipitate of silver chloride is formed. This process is rather tedious and inconvenient, since it is necessary to filter and test the filtrate with the silver solution and with a solution of sodium chloride in order to determine when the silver nitrate ceases to produce a precipitate. The results obtained agree closely, however, with those obtained by titration after ignition with sodium carbonate and potassium nitrate.

Salkowski⁷ has for some time employed Volhard's method for estimating the chlorides and considers it the most satisfactory of all the methods. He performs it in the following manner: Ten c. c. of urine are diluted to sixty c. c., acidulated with two c. c. pure nitric acid, (Sp. Gr. = 1.2) and decomposed with fifteen c. c. of the silver solution usually employed for the estimation of chlorides. The mixture is vigorously shaken until the fluid is clear, diluted with distilled water to one hundred c. c. and filtered through a dry filter paper. To eighty c. c. of this filtrate, five c. c. of a cold saturated solution of ammonio-ferric alum are added, and the silver determined by titration with the standard solution of ammonium sulphocyanide. The calculation is simple. Salkowski considers the method by titration after ignition with sodium carbonate and potassium nitrate especially inaccurate, since Steinauer has recently shown that part of the chlorine excreted in the urine is in combination with organic substances.

C. Arnold⁸ also recommends Volhard's method, although the working details of the process, as performed by him, differ somewhat from those employed by Salkowski.

— M. Pasteur is a candidate for the chair at the French Academy made vacant by the death of M. Littré.

⁴ Zeitschr. f. analyt. chem., xx., page 310.

⁵ Zeitschr. f. Biol., xvi., page 193.

⁶ Pflüger's Archiv, xxiii., page 85.

⁷ Centralbl. f. d. Med. Wiss., 1881, page 177.

⁸ Zeitschr. f. phys. Chem., vi., page 81.

¹ Journal de Pharm. et de Chim., February, 1881, page 144.

² Pflüger's Archiv, xxi., page 248.

³ Archives of Medicine, August, 1880, page 24.

Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

TWO CASES OF CYSTITIS IN THE FEMALE, UNDER THE CARE OF DR. J. COLLINS WARREN.

REPORTED BY C. P. STRONG.

CYSTOTOMY FOR CYSTITIS.

CASE I. May 9, 1878. K. C., aged forty-three, married, no children. Patient states that following a severe cold ten years ago she first noticed some pain when passing water, but this was not severe. Shortly afterwards she was married, and within a year micturition grew very painful as well as frequent. When the urine was retained any length of time the pain became intense, if voided at once she suffered from burning, throbbing sensations in the urethra and bladder. She had undergone thorough treatment by vesical douches, dilatation, and cauterization of the urethra, and internal medication, not only without relief, but her condition had grown steadily worse.

The urine was full of pus, blood, and bladder epithelium.

The patient was sent to Dr. Warren by Dr. W. Symington Brown, of Stoneham, that cystotomy might be done as a last resort. This was performed by making an incision of little more than an inch in length through the vaginal wall upon a probe passed into the bladder, and stitching the edges of the vesical and vaginal mucous membranes together with an uninterrupted suture of carbolized catgut. Two days after the operation the urine flowed almost continuously through the fistula, and she was much relieved from the pain in the bladder. In one week she was entirely free from pain. After being taught to wash the bladder per urethram once daily with warm water, she was discharged with instructions to report from time to time for examination of urine.

October, 1878. The patient reporting at the hospital stated that until recently she had been entirely relieved from her former symptoms, but that now a small amount of urine remained in the bladder, and caused her severe pain. As on examination the opening was found contracted, so that it admitted only the tip of the little finger, it was enlarged at each end along the median line of the vagina, and, as before, the vesical and vaginal mucous membranes united by uninterrupted carbolized catgut sutures, leaving a fistula about two and a half inches long. Following this operation there was a slight secondary hemorrhage; with this exception convalescence was uninterrupted, and the patient was discharged in two weeks entirely relieved.

July, 1880. The urine having been normal for some time, and the patient being in good condition, the operation for closing the opening was performed. The edges of the fistula, which had contracted very little, were refreshed and brought together by seventeen silver sutures; these did not include the vesical mucous membrane. A soft rubber catheter was fastened in the bladder. Up to the fifth day of convalescence there had been no leakage into the vagina, then, for several days, the patient had severe diarrhoea with tenesmus, which probably interfered with union, as immediately after the urine escaped in considerable quantities through the fistula. When the stitches were re-

moved on the tenth day a small part of the wound was not united. The patient was sent into the country to build up her strength, and September 23d she reported for operation again. This was performed in the same manner as before, seven stitches being required. Nothing retarded convalescence, and on removal of the stitches the opening was found firmly closed. For several days there was urgent desire to pass water very frequently, and severe pain if the urine were retained, so that it was feared the operation had been premature, but as the intervals between the acts grew longer until they extended over several hours, the pain was attributed to dilatation of the bladder, which had become contracted from disuse.

The patient reported at the hospital nearly five months after the last operation. She stated that she was entirely free from any pain or discomfort in the bladder, and that she could retain her urine the normal length of time.

From its influence on her general condition it is worth noting that the patient reduced her weight sixty-five pounds by "banting" during one year, having previously grown very stout under a largely milk diet.

CYSTITIS WITH GRANULATIONS AND FORMATION OF CALCULI.

CASE II. L. M., thirty-eight. The patient stated that for more than four years she had suffered from frequent and painful micturition, so that she had been a constant invalid. During this time she had been subjected to various constitutional and local medication without any benefit. Very severe hemorrhages had followed vesical douches. At times she had noticed small calculi passing out in the urine. The urine contained blood, pus, and crystals of triple phosphate. She was examined for stone without ether; none was found, but there was very great tenderness noticed all over the mucous membrane of the bladder. Under ether the urethra was rapidly dilated, the finger introduced and swept around the bladder. The mucous membrane was studded with fungous granulations, each having on its crest a concretion of phosphates. This condition was much worse in the immediate vicinity of the neck. The granulations were destroyed by the finger-nail with very little bleeding. The next day the patient was more comfortable than for some time before the operation. There was an appreciably longer interval between the acts of micturition, and no incontinence. The bladder was washed out daily with a saturated solution of boracic acid, and the urine kept well diluted. The patient's condition steadily improved, so that at the expiration of three weeks there was no trace of blood or pus in the urine, and it could be retained as long as in health. Being instructed to wash out the bladder herself for a month longer, and to return should any of the former symptoms recur, she was discharged. A letter received about six weeks after the operation stated that she was entirely free from any bladder trouble. Since then there has been no report, so that probably there has been no relapse.

—Madame Paul Broca, the widow of the distinguished anthropologist, has expressed her intention of founding a prize of the value of fifteen hundred francs, to be awarded every two years for the best essay on some subject in human anatomy, comparative anatomy or physiology.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. BLAKE.

REPORTED BY DR. JOHNSON, HOUSE OFFICER.

VESICAL CALCULUS IN A WOMAN; DILATATION OF THE URETHRA AND REMOVAL OF THE STONE BY FORCEPS.

CASE I. B. H., single, aged eighteen, entered the hospital March 28th with the following history. Sick three weeks; complains of pain, referred to region of bladder; painful micturition and sudden stopping of the stream; has not menstruated for four months. On examination the uterus was found enlarged, occupying the median portion of the lower part of the abdomen, and reaching to about three fingers' breadth above the symphysis pubis; cervix soft and of a velvety feel; vagina moist and soft; no other symptoms of pregnancy were found except a slight darkening of the areolæ of the breasts, and occasional morning sickness.

Urine pale; alkaline, specific gravity 1019; albumen, one eighth per cent.; sediment-crystals of triple phosphate, blood, pus, round and pavement bladder epithelium, and much mucus. The day after entering there was retention of urine and on passing a catheter a stone was discovered. On the following morning, under ether, the urethra was dilated with cervical dilators and the index finger. Stone forceps were introduced and a mixed calculus withdrawn. The shell of the calculus was phosphates and the centre calcic oxalate. It weighed one hundred and fifty-three grains. On the morning after the operation, April 1st, patient had control over the bladder.

April 2d. Severe pain in back and right hip; persistent vomiting; tongue dry and covered with brown coating; the pain is intermittent and so severe that patient screams out. Chloral was given by the rectum, but the vomiting was only partially relieved. On examination no contractions of the uterus could be felt, and the external os was not at all opened. Patient was then fed for a day and a half by the rectum.

April 4th. No vomiting for eighteen hours. Gin punch was given by the mouth and retained without causing nausea.

Patient gradually but slowly improved from this time. Each morning at five fifteen grains of chloral were given per rectum, and there was no return of the nausea and vomiting.

April 20th. Patient discharged.

She had perfect control over bladder, except when crying or coughing, at these times there was a slight dribbling of urine.

Nothing was detected in the bladder by the sound, and an examination of the urine showed it to be normal.

ANEURISM OF THE ARCH OF THE AORTA.

CASE II. G. R., aged twenty-four years, laborer, entered the hospital March 12th. Has had a cough for eighteen months. For the past six months has had pain in chest, referred to a point just beneath the middle portion of the sternum, but the pain has not been severe enough to deprive him of his sleep, or to cause any inconvenience; hoarseness of several months' duration; one week ago first noticed a tumor situated about the first piece of the sternum; at the same time was troubled with difficult deglutition; tumor when first noticed was as large as an orange; just previous to no-

ticing it had severe pain in upper part of chest just where the tumor appeared; the pain has continued severe. On entering, a swelling, irregular in shape, the size of a cocoa-nut, extended from just below the thyroid cartilage sixteen centimetres in median line; on the left side to third intercostal space; on the right side to third rib; transversely the tumor measured sixteen centimetres; diagonally in a line from left side of neck towards right nipple seventeen centimetres; in a line from right side of neck towards left nipple twenty centimetres; in highest point, five to six centimetres above the level of the chest; tumor was tense, somewhat elastic, and pulsation could be felt in all parts of it; veins of neck engorged and tortuous; breathing not interfered with; no thrill or murmur detected; no difference in pulsations of radial arteries; same was true of the carotids and femorals; swelling and pain over jugular veins of right side of neck; prominence of eyes; no œdema; tongue moist with its papillæ much enlarged; bowels constipated; no trouble with micturition; appetite good; temperature 99.8° F.; pulse 82; no history of syphilis; patient was kept perfectly quiet and in as nearly the horizontal position as possible.

Diet to consist of food rich in fibrine, and the daily quantity to be small. R. Vini antimonii, gtt. xx., tr. aconitii rad., gtt. i., tr. digitalis, gtt. x. M. Take every three hours.

March 15th. Size of tumor much increased during the past twenty-four hours; tissue over tumor on the left side œdematous and quite red.

March 18th. Severe pain in head; pain in tumor worse at night; increased difficulty in deglutition; eyes more prominent; unable to lift left hand to head; grasp of the left hand weaker than that of the right; pain in left upper arm.

March 21st. Left arm, from shoulder to wrist, œdematous.

March 23d. Difficulty in deglutition and breathing much increased; pain in tumor more severe; coughs more than at any previous time since entering hospital; complains of dizziness.

March 27th. Deglutition and breathing difficult; at times orthopnoea; increase of cough; voice almost gone.

March 28th. Breathing very labored; tracheal râles; severe pain in tumor; sulphate of morphia, one eighth grain *sub cute* given.

At eleven p. m. patient died, apparently of suffocation.

During the attacks of dyspnœa Hoffman's anodyne was used and invariably gave relief.

Autopsy. Left lung completely adherent; one hundred and fifty centigrammes clear serum in the pericardium; heart in normal position; diaphragm at fifth interspace on the right; diaphragm at fifth rib on the left; right lung free; liver enlarged, reaching two fingers' breadth above umbilicus; there was an aneurism of the arch of the aorta; the innominate and branches seemed to be perfect; the left carotid was not involved, while the left subclavian could not be traced; spleen not abnormal; kidneys injected; capsules removed readily; lobules healthy; stomach not abnormal; some scrofulous ulcers in lower part of ileum; sac of aneurism composed of degenerated muscle and fibrous tissue, wall of aneurism having disappeared; chronic endarteritis of aorta extending to bifurcation; subperitoneal hemorrhages in pelvis over bladder, and in region of sacrum between the internal iliaes.

INTERMITTENT APHASIA (EPILEPTIFORM ATTACKS), DISEASE OF ARTERIOLES.

BY S. G. WEBER, M. D.

Mr. D., aged fifty-four, sailmaker, was seen first February 21, 1873. The following history was given: He had had yellow fever many years previously, otherwise no severe sickness; he had for many years had periodical headaches, recurring once a month or so, sometimes very severe; the pain was frontal attended with a sensation of a band around his head, not accompanied with nausea; he had always devoted himself carefully and closely to business; did not worry about business at home, and always slept well.

In May, 1872, he had his first attack of disturbance in speech, these attacks had recurred afterwards every month or so at first, later every two weeks, or even once a week. First there was headache, then he was dizzy, then could speak only a little and that not connectedly, and had also loss of memory for some things. The headache might exist a few days previously to the loss of speech. At times there was also loss of eyesight and loss of hearing, but generally no such trouble. There was usually no change in the expression of his face and no change in motor power; during the loss of speech he had been able to leave his place of business and return home in the horse-car, walking to and from the car. If he did not try to talk there would be nothing to indicate any disturbance. He was rather irritable during the attack, apparently from impatience at not being able to talk, at least this was the opinion of his friends. Between the attacks he did not remember what happened during the attack; he also sometimes used wrong words and dropped words, talking as if intoxicated.

When seen he had nearly recovered from an attack, he talked in a restrained manner; his memory seemed to be poor; he was irritable; his pupils were about one sixteenth of an inch in diameter, and did not dilate when the light was diminished; the eyes moved naturally, and there seemed to be no impairment of vision; his tongue was protruded straight; the motion of both hands was the same, but they were a little unsteady; he walked naturally and well even with the eyes shut; he stood on the right foot rather more easily than on the left with the eyes shut, but the difference was very slight.

Sensation was a little more acute on the right than the left in hands and legs, he recognizing two points on the right hand at one eighth inch distance, on the left at one half inch; on the right leg at seven eighths inch, the left leg one and one fourth inches; on the face he often said there were two points when only one was applied; hearing was slightly better with the left ear, but not good in either; there was no tenderness over the spine nor over the sympathetic ganglia in the neck; his head was feeling badly from a sense of pressure across his forehead.

He was not seen again for nearly two weeks, during which time there had been no new attack; then he seemed better, but still he lost a word occasionally in talking; his memory was better. A little more than two weeks later he had a slight attack and in a week more a severe one. Between these two he had not been quite so well; he had been somewhat excited, especially in regard to business matters, had slept poorly, but the day before the severer attack was quiet and calm. In the morning he went to his business, but about 2.45

p. m. returned home unable to talk, could only say "yes" and "no;" saliva ran from his mouth, his face was pale; he had a dose of bromide of potassium and went to sleep. He was seen at six p. m., was quiet; his face rather flushed; could not talk connectedly; was especially troubled with using nouns; at times he used the wrong words; did not seem provoked nor angry at it, even smiled at his mistakes; when the right word was mentioned he recognized it and seemed pleased; pulse 90 to 96; temperature under left axilla 100° F., under right 101° F.; a pencil and paper were given him but he could not write. The next morning he talked well, with a pulse of 72; then was first noticed a slight loss of tone in the muscles on the right side of the face; he could then stand on the left foot with his eyes shut better than on the right.

There were certain mental symptoms which were not fully noted, most marked during the above attacks, such that it seemed best he should be restrained; he was very willful and obstinate; would not listen to advice as to giving up business or changing his habits. As he was incompetent to manage his business with safety, and it was difficult for his family to manage him, I advised his being sent to an asylum. This was objected to and I saw nothing more of him. He was, however, subsequently sent to an asylum, and in January, 1874, he died. I made the autopsy with Dr. Fisher's assistance January 19th. I do not know how long he had been dead.

The brain was the only organ seriously diseased, the abdominal and thoracic viscera being healthy.

The skull was thin; the dura mater not strongly adherent to it; there was no unusual opacity of the membranes; no excess of serum; the brain substance was softer than it is often found, perhaps post-mortem softening; the left isle of Reil and the sphenoidal lobe were very soft; the corresponding parts on the right were less soft; there was a slight shrinking or atrophy of the cortical layers; the larger arteries were healthy; in several places the pia mater was adherent, tearing off with itself thin layers of the gray substance; on making sections the smaller arteries projected above the section stiff and bristle like,—they had undergone calcareous degeneration, their walls being thickened; and yielding before the knife they were pressed into the brain and when divided sprang up again, so projecting above the surface of the section.

The brain cells in the softened parts were darkly pigmented and contained fat globules. The smaller vessels were surrounded with pigment and granular corpuscles, their walls were thickened and there was a calcareous deposit, forming very nearly a continuous sheath for the vessels; this degeneration affected the smaller vessels very generally.

This case is rather unusual in two or three respects. It is rare to have aphasia without motor disturbance in the limbs. Mr. D. had several times attacks of aphasia, in one of which I saw him, with no loss of power, so far as could be recognized, and apparently no other disturbance of function. As there was also loss of power to write, agraphia, from the inability to conceive the words, and transmit the verbal ideas to the hands, not from inability to hold pen or move fingers, it is impossible to know how much disturbance of mental function there really was. Yet there must have been at least a limited power for mental action; thus he was attacked suddenly in a friend's counting-room with inability to talk; he knew enough to rec-

ognize the attack, to take his hat and go to his own shop, then to walk to the cars, to take the right car out of a large number passing the Tremont House, to pay his fare, to get out at the right street, and go to his own house. All this was possibly somewhat automatic, yet there must have been considerable cerebral control to carry out such a long-continued course of automatic action.

I remember one other case of somewhat similar nature, but limited to a single attack. This was in a patient who had suffered from nervous symptoms several years, and had been under observation more than a year. He had had numbness in his legs, attacks of uncertainty of memory, then, after some months, lost the use of his left leg and arm, which was recovered after about twenty-four hours; about two weeks later had a similar though shorter and less severe attack. There was then an attack of loss of memory which lasted two days without additional loss of power, accompanied with febrile reaction. Possibly this attack was really aphasic in character like a subsequent attack. It was soon after the above attack of loss of memory that numbness was noticed in the little toe of the right foot. Some time later, while lying on a lounge, he found he could not speak; being quite frightened and agitated, he immediately rose, went to his brother's house, and the two together took a carriage, and came to see me. When I saw him he was able to talk. There was complete aphasia with no motor paralysis. I subsequently learned of his death with symptoms of cerebral hæmorrhage. There was no autopsy.

Another peculiarity was the intermittent character of the aphasic attacks. It is not necessary to dwell long on this point, as this has been made sufficiently evident in the account of the case. When I saw him, at least twice, there was still impairment of speech, once words being misplaced, another time nouns having dropped out of his vocabulary, but these occasions were immediately after an attack, and at other times, especially earlier in the disease, there was much more complete recovery, so that a casual observer would notice little or nothing wrong.

The mental condition was not normal, however, between the attacks, as shown by the change of disposition, by irritability, by unreasonable opposition to proper precautions for his own safety, and for the safety of his business relations, so that finally an asylum was the only resort.

Dr. Ball¹ reports cases of temporary aphasia which he ascribes to spasm of cerebral arteries, giving rise to local cerebral anæmia. The present case is easily explained by a local cerebral anæmia, due to the instability of the circulation through the diseased vessels, the current of blood being checked by comparatively slight causes.

The pathological lesion was peculiar. At the autopsy there was a limited amount of softening of the isle of Reil and the sphenoidal lobe on the left and to a less extent on the right. It must be taken into account that the body had been removed from the asylum to his home, and this softening was in part post mortem. It must also be remembered that several months had elapsed, at least nine, between the time that he was last seen and his death. The softening was altogether too slight to have existed so long previously, and must be referred to the later changes,

preceding death by a comparatively short interval. The aphasia was then not caused by a gross lesion of the brain substance, and must be referred to the disturbance of circulation caused by the disease of the small blood-vessels.

The changes in the blood-vessels were entirely different from anything I have elsewhere seen. It is not unusual to have small patches of calcareous degeneration in the coats of the arteries, and even crystals of calcareous matter may be deposited on the adventitia of the vessels, but in this case the middle coat of the smaller arteries was entirely transformed into a calcareous sheath encircling the vessel; this change was also very general. It will be easily understood how such a change, even if limited in extent, would interfere with the contraction and expansion of the vessels, and so seriously impair the normal action of the brain. Unfortunately it was not noted whether the portions found most softened at the autopsy showed this arterial change in any greater degree than other portions. My recollections are that they did not. The other changes in the brain have no special significance so far as concerns the aphasia. The slight atrophy of the cortex may have been due to age. The adhesions of the pia mater would explain the other mental phenomena.

The fact that between his attacks he remembered little or nothing of what happened during the attack, the recurrence of the attacks at periods more or less regular, their increasing frequency, the fact that they succeeded or were added to periodical headaches might lead one to consider the attacks of aphasia as an unusual form of epilepsy. It is interesting in this connection to recall that Living mentions that periodical sick headaches or megrim frequently change at a later period of life into epilepsy. Mr. D. had had for many years periodical headaches, recurring once a month or so, sometimes with great severity. At first the aphasic attacks recurred once a month, beginning with a headache. It is also of interest to mention that when first seen bromide was employed, and he had an interval of more than a month before the next attack.

Dr. H. Jackson² reports a case of epilepsy which was preceded and followed by aphasia, but the attack was attended during loss of consciousness with convulsions of the right side.

Oedman³ reports a case of loss of voice following epileptic attacks, which were the result of a blow upon the head. Here, too, there was spasmodic action, the right arm being chiefly affected.

Taking into consideration the mental symptoms, the course of the disease, and the cortical lesions found after death, we might be justified in regarding the affection, taken as a whole, as general paralysis, varying somewhat from the usual course of such cases in consequence of peculiarities of the lesion. When seen by me, however, the aphasic and epileptiform character of the symptoms were much the most noteworthy.

— According to London dispatches to the daily press, the decision of the International Medical Congress not to admit female doctors to the meeting has caused much dissatisfaction to the forty-three applicants affected by it. They have entered a protest against their exclusion from the meetings. The Queen is reported, we know not how truly, to regard the female practitioner with especial disfavor.

² Medical Times and Gazette, August 13, 1864.

³ Dublin Medical Journal, vol. xlv., 1869.

¹ L'Encephale, No. 1, 1881.

A CASE OF BILATERAL LACERATION OF THE UTERINE CERVIX, OF FIVE YEARS' DURATION, COMPLICATED WITH PROCIDENTIA; OPERATION; RECOVERY.¹

BY GEORGE H. RIXBY, M. D., BOSTON.

MRS. D., aged thirty-six, multipara, a tall, stout brunette, consulted me in April, 1880, for an affection which had occasioned her great suffering for a number of years.

Five years previously she gave birth to an unusually large male child. The labor was lingering, and finally terminated instrumentally. There was an unusual amount of hemorrhage. Convalescence was slow and tedious, much more so than on any previous occasion. Immediately after leaving the bed there was a marked tendency to prolapsus of the uterus. This continued to increase until at a period seven months from her confinement, at each act of defecation the organ was forced entirely without the vulva. The displaced organ was easily reduced by the patient herself, and held in position by means of a large sponge. Later the tendency to prolapsus was such that the method for relief, so satisfactorily employed before, ceased to be effectual. After a period of fifteen months' lactation the menses returned, lasted eight days, and always profuse. This circumstance, together with the effects of the other troubles, debilitated her exceedingly, and finally compelled her to seek medical aid.

Inspection showed the large, peculiarly formed organ in a complete state of procidentia, the cervix lacerated bilaterally, each lip measuring two and a half inches in length. The organ was in a condition of subinvolution, the cavity measuring four and one half inches.

Convinced of the absence of all complications, such as the result of pelvic inflammation, the organ being freely movable in every direction, in May, 1880, without any preliminary treatment, four days after the cessation of catamenia, with the valuable assistance of my friends, Drs. F. E. Bundy and John G. Blake, of Boston, the usual operation was performed. Five silver sutures on each side were sufficient to restore the cervix to its normal size and form.

The after-treatment consisted as follows: after the third day carbolized injections twice a day, drawing the urine for six days, confinement of the bowels for a week, with unstimulating diet for the same length of time.

The sutures were removed on the eighth day, union having taken place by first intention. In order to favor involution it was deemed advisable to keep the patient in the horizontal position for five weeks. On the fourth week already it was ascertained that the tendency to displacement, either when standing or at stool, had greatly diminished. Three months after the operation she was discharged, cured. Six months later she was reported entirely well, attending to all her domestic duties without mechanical support, with menstruation normal.

— The subject of cremation is under the consideration of the Japanese Government, who have appointed a special commissioner (Mr. Monosuke Sano) to study the subject. He is now investigating the merits of the Italian system at Milan.

¹ Read before the Boston Obstetrical Society, April 9, 1881.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. H. RICHARDSON, M. D., SECRETARY.

LEAD-POISONING.

APRIL 4, 1881. DR. J. J. PUTNAM spoke of a case illustrating the danger of overlooking lead poisoning as a factor in nerve disease. The only symptoms were numbness and slight weakness of the hands, with some atrophy of the balls of the thumbs. There was a very slight discoloration of one gum. Dr. Wood found lead in the urine.

DR. C. H. WILLIAMS asked whether in undoubted cases of lead disease it was not often necessary to give iodide of potash before the presence of lead could be detected in the urine.

DR. WOOD answered in the affirmative.

DR. PUTNAM asked whether iodide of lead is eliminated by the saliva, and whether, therefore, it is wise to use laxatives in connection with iodide of potash.

DR. WOOD could only say that in some cases when the blue line is absent from the gums the administration of iodide of potash will cause it to appear without any additional exposure to lead.

DR. J. S. GREENE then read a paper upon

SUBINVOLUTION OF THE UTERUS AND NEURASTHENIA.

DR. WEBBER mentioned a case in which he was called on account of extreme nervousness. The very annoying nervous symptoms seemed to him dependent upon an enlarged state of the uterus, and he consequently referred the case to Dr. Sinclair. The woman rapidly improved under treatment directed to the local condition.

DR. REYNOLDS spoke of the extreme rapidity with which involution takes place in ordinary cases. He thought the important question to answer was as to whether the improvement in neurasthenic symptoms kept pace with the retraction of the uterus.

DR. CHADWICK expressed doubts as to the interdependence of the local and general condition. His impression was rather that there was one general cause for both conditions rather than that one depended on the other. In some cases of uterine disturbance, especially of displacement, he has seen an accompanying train of nervous symptoms greatly improved after local treatment. He thinks that in many of these cases excess in coition is a pregnant source of trouble, and that its interruption in the course of treatment is an important factor of success. He has not had much success in the treatment of subinvolution by local measures.

DR. WEIR MITCHELL expressed his interest in the paper and subject. He said that he had not had occasion to refer cases of neurasthenia, or "nervous exhaustibility," as he preferred to call it, to subinvolution, possibly because not having much experience in uterine ailments he did not look to that organ for an explanation of symptoms as a specialist might. He was glad to have his attention called to the subject, that he might inquire into it in future cases. He said that he was inclined to compare the relation of the uterus to the general nervous system to that existing between the eyes and brain. A pair of defective eyes may cause no irritation to a healthy brain, but when the

brain is affected by any disease these eyes may become a fruitful source of discomfort. Just so the uterus, affected by some slight ailment which is ignored or well borne by a healthy nervous system, may cause much trouble when the nervous system is exhausted, and may greatly aggravate the nervous disorder.

COW-POX.

DR. HENRY A. MARTIN gave an interesting oral report of his investigations into the cases of supposed cow-pox reported briefly by Dr. Cushing at the meeting of February 1st. Contrary to his expectation, he found them to be cases of genuine vaccinia, as he tested by inoculation upon children and upon heifers. Many years ago Dr. Martin offered a considerable reward for any cases of genuine cow-pox which investigation should prove to be authentic and to have their origin in none of the stables where vaccinia is cultivated. He investigated more than thirty supposed cases, and found various pustular eruptions, but in none of them true vaccinia. In 1872, through Dr. Tarbell, he heard of a pustular eruption among some cows at Hingham. When he saw these cattle, however, the disease had already run its course, and although the scars left were very suggestive of cow-pox, still there were no means of verifying their character. It is interesting that the present cases should be found in the same sections of the country, which renders it probable that Dr. Tarbell's cases were indeed true vaccinia. This view was further confirmed by the statement of various hands about the dairies in Cohasset, who said that for years such cases had been not infrequent, and several of the milkers had had pustular eruptions upon the hands when milking cattle so affected. One of these men had a well-marked vaccinia scar as the result of such a pustule. Dr. Martin further made some interesting comparisons of the course of the vesicle in the cases inoculated from this new virus and that in inoculations from the well-known Beaugey stock. The vesicle from the Cohasset virus is slower of development. He urged the importance of studying the changes in the vesicles between the tenth and thirtieth day after vaccination, in order to arrive at a correct appreciation of the value of one inoculation. The vesicle from humanized virus develops more quickly, but not so completely as that following inoculation from the cow. At the close of Dr. Martin's remarks the thanks of the society were voted for his very interesting communication.

PROCEEDINGS OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

STATED meeting, first Thursday of June. President WILLIAM W. WHEELER in the chair.

J. J. CAMPBELL, M. D., of Baltimore, honorary member, communicated a paper entitled

CAPABILITY OF UTERINE LESIONS TO SUPERINDUCE SCLEROSIS OF THE CORD AND PARALYSIS.

The general argument of the author was to the effect that as lesions of nearly every other organ and tissue may originate sequentially to uterine disease, it is right to assume that sclerosis may and does so orig-

inate. In electricity was placed the chief dependence both for the diagnosis and treatment of sclerosis. A discussion followed the paper, in which Fellows quite generally took part, the general purport of which was to the effect that while there was much of interest in Dr. Campbell's paper, the actual relation of uterine disease and spinal disease was not proven, nor was it established by the experience of the profession.

RUBBER SURGICAL APPLIANCES.

H. O. MARCY, M. D., offered to the society the exhibition of certain rubber surgical appliances: first, an ice-cap, made of connected rubber tubing, and calculated to allow of a continuous current of ice-water about the head. Had intended to have a similar apparatus made for him by the Davidson Rubber Company, when this was placed in his hands, originated, as he understood, by Thornton, of London. In a case of meningitis the patient had demanded its continuous use for twenty hours out of the twenty-four, and this had been kept up for a fortnight. Another device consisted of firm rubber tubing connected together to form a kind of oval-shaped mat, designed to rest under the patient's back or lie upon the abdomen, and provide a constant stream of cold water; would serve as well for hot water. A drainage pipe, at distal extremity, conveyed the water away. Also a kind of rubber bed-pan, much enlarged, convenient for the vaginal douche, and, equally, for use in uterine or rectal surgery. The doctor also showed various sizes of double drainage tubes, adapted both for washing out the stomach, bladder, and any artificial cavity.

DR. H. A. MARTIN objected to the drainage tube, as usually made, as containing sulphide of antimony, which made the rubber brittle and rendered possible its sudden snapping and breaking off while in use in stomach or bladder. The doctor also referred to a recent modification of the rubber catheter which had its orifice in the extreme distal extremity.

DR. MARCY approved of this, especially in case of enlarged prostate, as the firmness of the tube was not weakened, as with the fenestrated catheter, at just the point where it should be especially firm when it is being pushed through the narrowed canal. Occasionally, however, it will happen that the hole in the end of the catheter will catch for an instant in the mucous membrane as it is being withdrawn, occasioning considerable pain to the patient.

On call for

PATHOLOGICAL SPECIMENS

DR. MARTIN exhibited, with following history, a rounded tumor mass removed the week before from a woman sixty-two or sixty-three years old; had passed menopause fifteen years; had suffered greatly from fibroid tumors of the uterus for twenty-five years previous to cessation of menstruation, and had had a corresponding history of menorrhagia and anæmia; had long been annoyed by present tumor, but had refused all interference, but this resolve had been lately abandoned on account of the extreme pain the growth occasioned, especially on motion. Examination revealed a hard mass just under surface of abdomen, to left side, near region of ovary, very movable, and seemingly just below integuments, external to peritonæum, and unconnected with uterus. Pressure and movement of tumor gave great pain. In beginning to operate had in mind a similar growth he had previously

removed from the nates of a boy, and which was attached to a glutæus muscle.

Dissected down carefully, seeing nothing like serous membrane, and had reached the capsule, when he suddenly found himself inside the peritoneum, and tumor instantly disappeared. Enlarged the incision, found tumor, and enucleated with finger. Patient, in giving her history, said that as much as seven years ago she first observed a small growth of the size of a filbert near the left groin, and this had been growing since. Last four or five months it had greatly changed in character, had hardened and developed nodosities, to which change was attributable the increased suffering the tumor occasioned when it was moved. It was probably at first a much larger fibroid, but it had degenerated, had become in a measure calcified, and so had shrunk, and its roughness of surface become more and more apparent. Probably had developed from the broad ligament. No hemorrhage, except from one small vessel, which gave a good deal of trouble. Tumor so hard that it had to be cut through with a saw in order to divide it.

In this connection, Dr. Martin referred to strictures he had previously made in respect of meddling with uterine fibroids so long as the patient's condition does not present an absolute demand for their removal. Similar ground was taken by Tait in an article published in the *American Annals of Anatomy and Surgery*, just issued.

Dr. WEEKS asked Dr. Martin if the operation was done antiseptically. Reply: It was not; had never operated in this way, and never should. He would distinguish, however, between a proper regard for cleanliness, including free washing and bathing with carbolic acid, and the paraphernalia of the antiseptic system, which was founded on the germ theory, and equaled in its absurdity the old "doctrine of signatures."

A question by Dr. W. S. BROWN elicited the information that the operation was but little retarded by adhesions, and the enucleation had been wholly accomplished by the fingers without aid of the knife. Dr. Martin further remarked of antiseptic surgery that, had he used this method at the beginning, he should probably have so continued, and grown to be among its enthusiastic adherents, for his results could hardly have been better otherwise, in certain departments, than as now presented, and it would have been but natural to give the praise to antiseptics. He was now about to go to London to report his results in over one hundred and fifty tapings of synovial membranes for effusion into joint-cavities, chiefly the knee. It was his practice to let the patient walk away within ten or fifteen minutes after the puncture, and his success had been quite uniform. Had begun otherwise; had supposed patient ought to remain still a considerable time after the operation, but with further experience he had come to believe that he was rather better for the walk home.

Dr. NORTON showed specimens of monstrosity, with following history: Patient had been previously confined six times, in all of which confinements but the last he had attended her. Last confinement at full term five years before; eldest child a deaf mute. Specimen was the result of a recent miscarriage at six months, a twin pregnancy. One child normally developed, the other a monstrosity, with following features of prominence, namely, hydrocephalus, left arm want-

ing, right immensely developed, left eye and ear lacking, hare-lip, exstrophy of abdominal viscera.

Dr. MARTIN reported a case of so-called hydatids, in which an immense quantity of this growth had been developed synchronously with a fetus up to six months. In another case, that of a male, he was summoned in haste because patient was in terrible distress from inability to pass his water. Had got relief before his arrival; after brief intellectual straining a large cyst came away, and this was immediately followed by smaller ones in sufficient quantity to fill a basin. This happened twenty-five years ago; the man was still living, and had had no trouble since.

CLITORODECTOMY.

Dr. MARCY presented the specimen from an operation for clitorodectomy. Patient, a German, fifty-four years of age, had had a number of children, and was of very nervous temperament; menstruation ceased about ten years ago. A few years before, suffering from irritation about the vulva, she was sent to the Massachusetts General Hospital, and there the urethra was dilated, but without affording relief. When first seen by Dr. Marcy there were urethral caruncles, which were removed and have not returned, but the vulvo-vaginal irritation was in no wise lessened. She represented she was constantly teased with sexual excitement to such extent that life had become a burden. Sleep, without opiates, was the exception; appetite very seriously impaired. There were periods of excitement and depression, of hysterical weeping, and she was thought by some members of her family to be insane.

She had taken up with avidity a distant suggestion that the clitoris might be removed, and the family were earnestly in favor of it; glad to have anything done that might afford relief. The doctor further said he had found but little in the books to guide him in performing the operation. Baker Brown, whose name and fame were unhappily associated with the removal of the clitoris, did not describe his method in his book. The doctor said he made a free dissection from about one half inch anterior to the gland, and dissected the crura at about the same distance upon either side of the bifurcation. Encountered more hemorrhage than he had expected, chiefly from the division of an artery on both sides, which was about two thirds the size of the radial. Was obliged to pass a ligature around each crus. The lips of the wound were carefully approximated, convalescence was uninterrupted, and union by first intention was obtained. Had brought to the meeting a clitoris, presumably healthy, which he had dissected from a subject of autopsy. The clitoris of clitorodectomy was shown to be much the larger, but it was not certain the increased size was evidence of disease, as nature allows considerable latitude in respect of the size of this organ, as also of the penis. Dr. Marcy added, in conclusion, there was still a difference of opinion as to the nervous centres which controlled sexuality, many believing that, in the female, the ovary was the principal source of such influence. This could hardly be true in the case reported, as the ovarian function had long since ceased.

Dr. BROWN suggested that Battley's operation would have been more appropriate.

Dr. MARCY admitted this was a mooted point. Dr. Thomas had recently operated upon a young married woman of extreme nervous temperament and long

given to masturbation, who was crazed by every effort on the part of her husband, to such extent that his life had been more than once attempted, as on one occasion with a razor. The doctor removed the clitoris down to the rami. In a case which Dr. Marcy had reported to the society, and of which he had exhibited the specimens, where more than one year ago he had removed both ovaries, sexuality had in no wise lessened. Menstruation has also continued quite regularly, and at times in quantity sufficient to greatly weaken the patient.

DR. MARTIN gave the points of a case of a man who had consulted him for seminal emission. The penis had become so sensitive that friction of the clothing would cause orgasm and seminal discharge. Demanded circumcision, and the doctor acceded to the request. In this operation had used a peculiar kind of forceps which were invented by a Jew. They had given him considerable trouble in their working, but he was pleased with the result of the operation. A ribbon-like section of the prepuce was removed, and the wound healed kindly, leaving no apparent cicatrix, and no redundant tissue or awkward scar, as was so often done by the usual method, requiring a subsequent trimming to give the organ a respectable look.

Society adjourned.

Recent Literature.

Supplement to Ziemssen's Cyclopædia of the Practice of Medicine. Edited by GEORGE L. PEABODY, M. D. New York: Wm. Wood & Co. Pp. 844.

Most practitioners in the United States are sufficiently familiar with Ziemssen's Cyclopædia to be aware that some of the volumes are much older than others, and that all of them need some additions to bring them up to the present status of the specialties of which they treat. The work before us is for the purpose of doing this, and has been written by twenty-eight American physicians. An attempt to criticise it, therefore, as one is supposed to criticise a book he knows all about, involves the assumption that the critic has himself gone over all the ground covered by the aforesaid twenty-eight, the inherent improbability of which feat is so great as to suggest even to the most learned reviewer that he had better confine himself within much narrower limits. It is obvious that bibliography must form a very important part of such a book, and this department seems to have been thoroughly cared for, the number of references being very great, and in those portions where the writer is able to judge from his own reading very complete.

It is to be regretted, however, that one very important series (that upon syphilis) was omitted for want of room. It would have been worth while to sacrifice for such a purpose the sub-title pages, of which there are many, and one could here and there pick out some pages even of the text which could be better spared. The articles based upon these references and upon the writers' own views naturally vary a good deal in their character, in some being but a brief *resumé* of the more important articles, while in others a more serious attempt at coördination and logical arrangement is made. The latter we cannot help considering, when the writers are so judiciously selected, as by far the most valuable. Nearly every article, however, is to

be commended as thorough and sensible. A notable exception, however, is to be found in the very important subject of diseases of the female sexual organs, which we cannot help thinking (though without opportunity of reference to the original) is but little more than a translation of some of the passages contained in the second German edition of Ziemssen and not in the first. It must be almost worthless to American practitioners.

In speaking of perimetritis, to which four and a half lines are devoted, if the statement that "if an abscess points externally it should be freely opened, injected with carbolized water," etc., represents the progress made since the last edition, what must have been the status of this branch of gynecology at that time. Our suspicions of the method of preparation of this article are strengthened by the fact that when spring waters are mentioned they are all German, and the tincture of iodine spoken of is marked Ph. Bor.

Fancy the feelings (and language?) of the "busy practitioner" who is in a hurry to learn the latest thing that has been suggested for that most annoying symptom, pruritus vulvæ, and finds, on consulting this volume *only*, "When the pruritus is a symptom of diabetes, a course at Carlsbad offers the best chance of cure."

Many suggestions are offered by such a book beside those strictly connected with the subjects treated of.

Obvious as it must be on looking over the bibliographical lists how largely medical science depends on the untiring German patience, a comparison of this volume with its predecessors will at least show (and especially to those who helped translate the earlier ones) that in *telling* what they know the American authors are at no disadvantage, and that their clear and condensed style contrasts (to us at least) most agreeably with the complacent verbosity of many of the original writers.

This volume is a most important and useful addition to the series.

Prompt publication adds greatly to the value of articles of the character of those which make up this series, and it is said that a year has elapsed between their receipt by the publishers and the appearance of the book. It is but fair to the writers that this, if a fact, should be known.

— In the eleventh Annual Report on the Health of Salford for the year 1879, Dr. Tatham gives a striking illustration of one of the modes of spread of scarlatina. The source in this case was found to be a pawnbroker's shop in the affected district, where people were in the habit of pawning such of their clothes as they can spare early in each week, taking them out again on Saturday when the weekly wages were received.

The premises of this shop consisted of three rooms, the outer two of which were used as shop and store-room, and the inner as a living room. In this last a large quantity of pawned bedding, etc., was deposited, and here was found a child recovering from scarlet fever. There was free access between this room and the outer rooms. The patient was removed, and the house and stock in trade thoroughly disinfected, after which the spread of the fever ceased. — *Sanitary Engineer.*

Medical and Surgical Journal.

THURSDAY, AUGUST 11, 1881.

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No. 1 PARK STREET, BOSTON, MASS.

VACCINATION OF CHARBON.

At a recent meeting of the French Academy of Medicine (June 21, 1881) M. Bouley made a statement of Pasteur's experiments with the virus of charbon, a disease peculiarly fatal to sheep, and of the results at which he has arrived with the protective inoculation of a modified virus. To judge by this statement and the result of experiments since reported, there seems to be no question but that Pasteur has succeeded in formulating a law for the preparation of a thoroughly protective charbon-vaccine and of explaining the various stages of the process. Previously M. Toussaint, the veterinarian, had found by experiment that the defibrinated blood of a sheep attacked with charbon, if exposed from ten to twenty minutes to a temperature of 55° C., lost the excess of virulence which renders the blood as originally taken fatal, while still retaining sufficient energy to transmit a mild charbon fever upon inoculation, by which immunity is acquired against the disease.

This fact was established by more than forty experiments, but Toussaint did not arrive at any exact formula for the preparation of the vaccine virus, and, moreover, the results of his experiments were to a certain extent contradictory of those of Pasteur with the virus of chicken cholera, inasmuch as the behavior of the two germs upon exposure to the air was quite different.

The virulence of the microbion of chicken cholera was found to be in inverse ratio to the length of its exposure to fresh air; the microbion of charbon, on the other hand, was in no wise affected by such exposure, preserving its activity for months and years. M. Pasteur suspected that this difference depended upon the different modes of propagation of the two organisms, and this he eventually found to be the case. The microbion of chicken cholera propagates itself solely by fissure, there are no spores, whilst the microbion of charbon has two ways of generation, — by fissure and by spores.

Now although the substance proper of the mycelium of charbon is easily affected by the air, the spores resist all exposure. These, however, can be destroyed by more active agents, such as heat. Pasteur found that at a temperature of 12 or 13° C. the bacteria of charbon continue to generate by fissure, but no longer produce spores. By keeping the culture-liquid at that temperature and exposing the mycelium engendered to the action of the air, he found that it gradually lost its virulence in the same manner as did the cul-

ture liquid of chicken cholera, and the poison assumed a mild character compatible with life when employed for inoculation.

Pursuing this line of investigation Pasteur found, moreover, that the microbion which has lost the power of producing spores in a hot medium will resume this power if transferred to a cold one, and that these spores born from a mycelium enfeebled by exposure to heat possess only a modified virulence, exactly proportioned to that of the parent mycelium.

Pasteur seems to be justly credited with having succeeded in discovering the conditions of life of the micro-organisms constituting the poison of charbon, in directing their development according to a pre-arranged plan in such a way as to reduce their activity to any desired degree; in short, with having succeeded in making with certainty, at pleasure, of a deadly organism one which is benign, and which will by inoculation confer immunity against the effects of the other. These pretensions are now supported by a large number of confirmatory experiments performed by a variety of competent investigators. Were the practical confirmation of these principles to be confined merely to the control of so destructive a malady as charbon has proved among sheep, the result would be sufficiently important, but the probability of their wider application is sufficiently great to give good cause to expect much more extended and beneficent consequences in the not distant future.

STATE MEDICAL SOCIETY JOURNALS.

UNDER the title of the *Ohio Medical Journal* the *Ohio Medical Recorder* has become the journal of the Ohio State Medical Society, and will in future take the place of the usual volume of Transactions. The editor in charge is the secretary of the society, and was formerly managing editor of the *Recorder*; he is to be assisted by four associate editors from as many of the larger cities in different parts of the State.

It is estimated that the proceedings of the Society will by this arrangement have a circulation of three thousand copies instead of less than five hundred, as under the old method. We believe the Ohio Medical Society will not regret this step, which it is, if our memory serves us, the first State society to take. The arrangement adopted is practically on a small scale that existing between the British Medical Society and its Journal, a connection, which has been for a number of years entirely satisfactory to all concerned. The adoption of such an arrangement for publication was urged, as our readers will remember, upon the American Medical Association year before last at its meeting in New York by its then President, Dr. Sayre, and we have ourselves called attention to the advantages of such a method of publication from a considerably earlier period.

Some drawbacks have been pointed out and others may present themselves, and the success of such an arrangement must, of course, depend largely upon the vigor and tact of the occupant or occupants of the offices of secretary and editor.

We shall watch with interest the results of the connection between the Ohio Medical Society and the *Ohio Medical Journal*, which we have little doubt, unless some unforeseen complication should arise, will result in the infusion of new life and activity into each. The members of the Society, on the one hand, will at least be sure of prompt publication and of a larger and more critical audience; the *Journal* of the Society, on the other, will have a certain *clientèle*, each one of whom will be at once a reader, a subscriber, and a possible contributor, having a personal and general interest in its welfare and improvement.

MEDICAL NOTES.

— The vital statistics of the city of New York for the first quarter of 1881 offer some curious and interesting figures, from among which those bearing on the relative proportion of the native and foreign population are not the least so. During this quarter 2228 couples were married in the city. Of the 2228 men only 1003 were natives, leaving 1225, or 55 per cent., of foreign birth. Of the 2228 females 1218, or 55 per cent., were natives. Of native males 844 took native wives, so only 37 per cent. of the 2228 couples were natives on both sides. The other native-born grooms took 49 German, 42 Irish, 32 English, 6 West Indian, 5 Canadian, 4 Austrian, 3 French, 3 Scotch, 2 Polish, and 1 each of Belgian, Danish, Low Dutch, Swiss, Australian, Isle of Guernsey, and Prince Edward Island women. Of the native-born brides — 1218 in all — 844 took native husbands, 204 married Germans, 47 English, 41 Irish, 9 Scotch, 9 West Indian, 7 Austrian, 7 Russian, 6 Polish, 5 Canadian, 5 Bohemian, 5 Italian, 5 French, 4 Danish, 3 Swiss, 3 Spanish, 2 Belgian, 2 Hollandish, 2 Norwegian, 2 Swedish, 2 unknown, and 1 each of Welsh, Portuguese, Turkish, and Australian. So, within the first three months of the year, New York girls formed alliances with twenty-four countries beside their own. From such an intermingling of races and nations there naturally follows an exceedingly mixed race of descendants. More than one half of the city's population is rated as "native born." But upon examination for "natives" pure and simple — that is, natives of native parentage — the figures shrink surprisingly. Thus it appears that of 6832 children born in the three months under consideration, only 1796 had Americans for both father and mother. Native-born mothers had 1031 children by foreign fathers, of whom 523 fathers were German, 212 Irish, 94 English, 66 unknown, 22 Canadian, 19 Scotch, 13 Italian, 11 French, 10 Austrian, 8 Swedish, 8 West Indian, 7 Spanish, 6 Polish, 6 Russian, 5 Hollandish, 5 Swedish, 5 Bohemian, 3 Danish, 3 Welsh, and 1 each of China, Canary Islands, South America, and Turkey. Here are twenty-four countries besides our own represented. Of mixed parentage there were a considerable number, of course, as in the case of American mothers, who had 2827 children, of whom 1796 had native and 1031 foreign born fathers. There were 1624 children whose fathers and mothers were Ger-

mans, 523 of American mothers and German fathers, and only 83 of American fathers and German mothers. Irish mothers gave 1122 children, 821 of whom were of full Irish blood, 170 half American, 43 half English, 28 half German, 17 half unknown, 11 half Scotch, etc. Children of English mothers numbered 209, of whom only 66 had English fathers, 67 American fathers, 31 Irish, and 18 German.

— We notice in the *Medical Press and Circular* that the Rev. W. K. Hobart, of Londonderry, an ex-scholar of Trinity College, Dublin, is about to publish, by subscription, a work showing, from internal evidence, that the "Gospel according to St. Luke," and the "Acts of the Apostles," were written by the same person, and that the writer was a medical man. The work consists of an examination of words and phrases peculiar to these parts of the Bible, compared with the use of the same words and phrases in the works of the Greek medical writers, namely, Hippocrates, Aretæus, Dioscorides, and Galen.

— The *Medical Press and Circular* quotes an American surgeon, who is in England for the purpose of attending the International Medical Congress, on the subject of literary plagiarism, as follows: "Few of us pretend to write anything original; we either have n't the time or we have n't the mind. You Europeans leave us nothing to do, and so instead of pretending to take you down a stripe we take a book that we guess will suit our purpose, make a few foot-notes, and stick another name on the title-page. The book is none the worse for it, and its new author is helped like a lame dog over a tall stile."

— Dr. Burq, well known for his researches on metallotherapy, lately drew up some statistics, which he culled from different military hospitals, to show the influence of wind-instruments on pulmonary affections; and he remarked that pulmonary phthisis was much less frequent among the bandsmen who played on these instruments than among those who played on others; he therefore concludes that, as a preventive measure, persons threatened with phthisis ought to be made to sing, and to use their voice more than is generally done. Dr. Burq has constructed an apparatus by which the capacity of the lungs for inspiration or expiration can be measured; but I doubt whether his experience about wind-instruments would tally with that of our military surgeons; or whether his recommendation for the preventive cure of phthisis would be received with much favor by the generality of British physicians. I have just read in a medical paper the following anecdote bearing on the subject. A certain hospital physician, having notions opposed to those expressed by Dr. Burq, always made it a point to question his phthisical patients as to their musical practices. At his hospital visit one morning, a cachectic-looking patient, who was in the last stage of consumption, went to consult him. "What is your profession?" asked the doctor. "Musician, sir," was the reply. The doctor, turning to the students who were about him, observed, "What did I say? Here is a remarkable example of phthisis in those who use wind-instruments. What instrument do you play on?" continued the doctor.

"The bass drum," was the patient's reply. You may imagine the doctor's confusion; and, as the article adds, it is to be hoped he was forever cured of his etiological conceit. — *Paris Correspondent British Medical Journal.*

PHARMACEUTICAL NOTE.

ADMINISTRATION OF TANNIN.

—According to a recent article by Dr. Lewin in Virchow's *Archiv* it should be borne in mind that when tannin enters the stomach it forms with albumen precipitates, which require for their solution an excess of albumen, of lactic, or of hydrochloric acid. If the albuminate be not soon dissolved, especially if the tannin has been given in the form of a powder, the solid particles are likely to adhere to the gastric walls, and produce extensive irritation of the mucous membrane. To avoid this the tannin should be given either as a solution of albuminate of tannin or as alkaline tannate, and not in the form of a powder. A solution of albuminate of tannin is readily prepared by adding a solution of albumen to a solution of tannin till the precipitate at first formed is redissolved in the excess of albumen. This, if made alkaline by the addition of soda carbonate, is still more readily absorbed.

Miscellany.

ACUTE SUPPURATIVE ARTHRITIS IN INFANTS.

MR. G. A. WRIGHT, Surgeon to the Hospital for Children, Pendlebury, gives in the *Lancet* an instructive account of three cases of the above disease:—

The disease of which the following cases are instances is one of which I think inadequate descriptions are given in discussing the affections of joints in children, and of which Mr. Thomas Smith has alone, as far as I can discover, given us a really complete account in his paper in the St. Bartholomew's Hospital Reports for 1871; and yet it is a condition which cannot be very rare, as Mr. Smith records twenty-one instances of it, and speaks of them as a selection only out of a larger number, while the great fatality occurring among these cases, and the urgent need for prompt treatment, make the recognition of the tendencies of the disease all-important. The affection is that of primary or acute suppurative arthritis occurring in infants at any time during the first year of life, or thereabouts. The disease is acute in its onset; it generally affects but one joint at first, and it produces great depression of the child's powers; it is exceedingly destructive, not only to the joint, but to the ends of the bones forming the articulation, in which, indeed, the lesion originates.

CASE I. Hannah H., eleven weeks old, was admitted under my care into the Hospital for Sick Children at Pendlebury, on October 8th, 1880, with the following history. When fourteen days old, a swelling was noticed in the end of the left leg; this disappeared, and the child was then said to have had an attack of erysipelas of the thigh and groin, and then the inflammation seemed to focus itself in the left knee, below

which an opening formed, and from this discharge had escaped up to the time of admission. The child had been suckled and had had no injury or other illness. There was no history pointing to syphilis. On admission the left knee was much swollen and very painful. Just below and in front of the joint was an opening discharging pus; this led down to a softened patch in the head of the tibia. The child was very ill and marasmic, and its temperature rose at times to above 103°. On exploring the sinus, soft carious bony detritus was felt and gouged away from the upper part of the bone, and it was found that pressure upon the knee joint caused pus to well through an opening in the articular surface of the tibia into the wound. The joint was then freely incised on each side of the patella, and a drainage tube passed through it. During the first twenty-four hours the child had carboloria, after this it improved a little for a day or two, but again sank, and died on October 21st. On examining the knee, the joint was found to be completely disorganized, and the upper end of the tibia destroyed.

CASE II.—Martha R., aged thirteen months, was admitted on October 1st, 1880. Two months before admission the child had measles, followed by temporary albuminuria, but soon completely recovered. One month later pain and swelling appeared, extending from the hip to the knee. Fourteen days before admission she became feverish, with vomiting, and much pain in the limb. There was no history of injury; the family history was good; the child had been suckled and had never walked. On admission she was very anæmic and worn; there was great swelling round the right hip, reaching up to the buttock, into the groin, and over the lower part of the abdomen, where fluctuation was well marked; the superficial veins were much distended. On October 7th the abscess was opened antiseptically, after the child's condition had been somewhat improved by careful feeding, and six or eight ounces of pus escaped. On exploration with the finger the head of the femur was found to be exposed and rough, and the joint entirely disorganized; the wound was washed out with carbolic acid (one in forty). There was no bleeding of any importance. The same night the child was collapsed and carboloria appeared; this, however, passed off the next day, and up to the 15th she improved somewhat, but there was still free discharge, which was exhausting her; and on the 17th the upper end of the femur was removed, and a small, rough, carious button of bone, covered with granulations, was found to be the only representative of the head and neck of the femur. The operation was antiseptic. From this time the child did uninterruptedly well, and rapidly gained flesh and strength; and on November 16th the wound had entirely healed, and she is now (November 28th) well, and has considerable power over the limb, which is barely half an inch shorter than the sound limb.

CASE III.—Anna B., aged nineteen days; admitted November 5th, 1880. The child was said to have been healthy at birth, but fretful. It was suckled, and there was no syphilitic family history. The account stated that it was a "cross birth," and the mother was attended by a midwife, who "helped" the labor. A day or two before admission the child was apparently in pain, and vomited; and on November 4th a swelling was noticed round the right shoulder.

On admission a large fluctuating swelling, without much redness, was found surrounding and obscuring

the right shoulder. The child seemed to be fairly well.

On November 6th the abscess was opened antiseptically, and carefully explored with the finger. A large sac was found surrounding the front and outer side of the joint, but no communication with the interior of the joint could be felt, and it was concluded that the abscess was probably peri articular, and due to some violence used by the midwife at the time of its birth.

The child went on well until November 16th. There was no heat or tenderness about the shoulder, but it discharged rather freely. The temperature ranged not higher than 100.4°, and the abscess nearly healed. On the 17th a slight swelling was noticed over the right parotid region, and this proved to be an abscess; and on the 18th an abscess appeared over the lower part of the sacrum. Temperature 101.6° to 99.6°. The child took its food well, and did not seem very ill. The abscess over the parotid was aspirated; the one over the sacrum left alone. On the 19th, a large abscess was found round the left hip and upper part of the left thigh; the whole leg below was cedematous, and roughness could be felt on moving the joint. Temperature 98.6°. She still took her food well, but was pale. On the 20th the abscess over the left hip was opened antiseptically and carefully explored; no communication with the joint could be felt. The facial abscess refilled, and on the 24th discharged through the ear. There was a great deal of discharge from the hip, which looked unhealthy and was septic. There was much induration round the wound and neighboring parts. The child went on in much the same state till December 4th, the opening in the shoulder having entirely healed, and no fresh abscesses appeared. The child then got worse, and was sick and refused its food. This and the unhealthy condition of the hip induced me to explore the wound afresh; and so, under chloroform, the wound was examined, and the joint felt to be rough and disorganized. The upper end of the femur was dissected out and removed with a scalpel. No trace of the head of the bone was left; a small hollow in the upper part of the great trochanter, with a few little bony granules upon it, was all that represented the head and neck of the bone. There was very little bleeding, but the child was very low. In the evening it took its food and was quiet. On the 6th there was some carboluria; the child was pale and weak, and vomited twice. During the next two days it sank, in spite of stimulation and careful feeding, and died on the 8th. The carboluria lasted only a few hours.

Necropsy.—On examining the hip, the wound was found gray and sloughy; the upper end of the femur was unhealthy. The acetabular cartilage was soft and discolored, but not eroded. The child was much wasted, and scattered about the body and limbs were numerous cutaneous pyæmic abscesses. On exposing the right shoulder the joint was found completely gone, and no trace of the head or neck of the humerus remained. Some repair had taken place, and the wound was soundly healed over the joint, which contained no pus. The abscess over the parotid was empty and healed. The abscess over the sacrum communicated with the lower sacral joints, which were disorganized. In the abdomen some recent lymph was found coating the spleen, but no other peritonitis. In the liver were two pyæmic abscesses, one immediately beneath the capsule, and the other rather deeper. In the right

kidney was an abscess occupying almost the whole of one pyramid, and the corresponding amount of cortex. The upper lobe of the right lung was pneumonic, and there were scattered patches of pneumonia with abscesses throughout the rest of the lungs. The brain was not examined; there was no pus in either knee-joint.

Mr. Holmes, and more particularly Mr. Smith, have pointed out that the disease frequently, if not always, begins as a subarticular osteitis, which often penetrates the joint, and of this Case I. was a typical instance. Mr. Smith, as well as other writers, point out the difference between this disease and the so-called "syphilitic decapitation of the epiphyses," or "syphilitic telostitis," in which the seat of the disease is between the epiphysis and diaphysis, and abscess may or may not occur, while many bones are affected. In the three cases here recorded there was no evidence of any syphilitic taint. A noteworthy point in these cases, alluded to by Mr. Holmes, is the great extent of the primary inflammation, which seems to attack a large area of the limb before it concentrates itself upon the particular joint, and this gives rise to the question whether it is possible that the lesion is primarily a general phlebitis of the limb, in which the veins of the bones are involved, whilst the centre of ossification of the epiphysis, being one of the most vascular parts in the neighborhood, suffers most, for there seems to be little doubt that the disease is a true osteitis, and that the joint affection is secondary by extension.

Of the twenty-one cases recorded by Mr. Smith thirteen died, and in none of these was any operation, except opening the abscesses, performed; in the others more or less useful limbs resulted without further operation, but I cannot help thinking that in these cases the amount of repair required, if the diseased part is not removed, makes too great a demand upon the already over-taxed powers of the child, and that the results would be better if the disorganized bone was removed and the progress of the disease arrested. As to the ætiology of the disease, in four of Mr. Smith's cases there was a history of injury, and in one of scarlatina. In one of my own cases there was a history of measles, and in another of possible injury; but there appears no doubt that the disease most commonly arises spontaneously. The drawback of the depressing effects of carbolic poisoning was felt in all these cases, which seem peculiarly susceptible to it, though there was no albuminuria.

INJURIES OF THE HEAD.

BY WILLIAM MAC CORMAC, F. R. C. S.

THE following interesting article on the treatment of injuries of the head is a portion of an address delivered before the South Western Branch of the British Medical Association.

"I remember about five years ago a distinguished member of the Court of Examiners of the Royal College of Surgeons saying to me, he had asked a candidate the following question: "Under what circumstances would you trephine the skull?" and the candidate replied, "Never." I remember thinking that though the candidate was perhaps a little too positive, he was in the main right, and that if one rule were to be adopted or followed in every case, the foregoing was the right one. My experience in the war of 1870

impressed me strongly with the comparative advantages of non-interference in gun-shot fracture of the skull, for I believe every one who had been operated on by the trephine or elevator died.

"For many years past the general experience of the disastrous results which commonly ensued upon the operation of trephining, led to its abandonment, except in a very limited class of cases.

"The practice has been, not to trephine in compound fractures, even with depression, unless this was accompanied by symptoms, except perhaps the fracture be a punctured one. Under no circumstances, was it always taught, ought a simple depressed fracture to be converted into a compound one. . . .

"Now, although it be quite true that some cases of depressed fracture, both with and without symptoms, do well without operative interference, I do not think that this practice, if invariably carried out, will produce such desirable results, immediate and remote, as we may now expect with the aid of the improved antiseptic method of treatment.

"Almost any degree of head injury, we know, may be recovered from, but we must not from this assume that head injuries are unimportant.

"From time to time startling and almost incredible instances of recovery after head injury are published. In the records of military surgery there are many such. . . .

"In a patient under my own observation, a long nail, which had been used as the ramrod of a pistol, was shot into the forehead, passing right back for at least two inches through the anterior lobe of the brain. The boy walked a couple of miles with the nail sticking in his head; and when I removed the nail, twenty-four hours afterwards, brain substance exuded. The boy recovered, with some slight mental deficiency. This, as Professor Ferrier states in his work on the localization of cerebral symptoms, is a common sequence of injury of the frontal lobes of the brain.

"But cases such as these do not in the least affect the general question of how best to obtain the greatest surgical good for the greatest number; and I must now say that I endorse, as in my opinion true, all that your President says in the very interesting and instructive Address which he read before this branch in 1877. He tells us it has been the invariable practice of surgeons in this district, to elevate depressed bone in compound fracture of the skull, without waiting for symptoms, and that recovery is the rule, due perhaps in a large measure to the pure antiseptic breezes from the great ocean beside you. Septic influences here are doubtless at a minimum, and I can well appreciate the advantage of trephining in cases, many of which, from the manner of their production, by small bodies falling from a height upon the head, much resemble punctured fractures. Dr. Hudson has also told you, in his Address, how rare the operation of trephining had become in our great London hospitals. He is right in so saying; and also, I think, in further stating that of late years the operation is again coming more or less into general favor.

"He quotes, with approval, the opinion that it is the surgeon's duty to trephine at once in punctured fractures of the skull, without waiting for symptoms of irritation or compression.

"I am sure that this is correct, and that he who waits under such circumstances waits until it is too late, or

until he must operate under conditions much less favorable. For when symptoms of irritation, compression, or inflammation of the brain and its membranes supervene after some interval from the date of injury, and this is a frequent experience in compound fractures of the skull, at any rate when antiseptic precautions have not been adopted, it is often too late to do good by operative interference, and quite irrespective of it, the symptoms generally progress to a fatal issue.

"In every case where trephining or elevation of depressed fragments is performed for injury, I believe that it ought to be determined upon and performed regardless of the presence or absence of symptoms. The primary disinfection of the wound is often otherwise impracticable. Indeed, the question much resembles the greatly debated one of the comparative advantages of primary amputation and secondary amputation. We have, long since, finally decided upon which of these is the better, and I feel sure, for reasons, some of which are not very dissimilar, that when trephining for injury is likely to be required at all, it must also be primary in order to be successful. The cases in which trephining is most needed and most useful, are those in which the forces productive of fracture mainly exhaust themselves in causing the local bone injury, without seriously compromising the general brain mass.

"Small bodies, such as stones or bullets, striking the skull with a high velocity, often produce typical instances of this kind of injury, and I feel assured that, if performed with antiseptic precautions, the immediate removal of fragments of splintered skull is the better course to pursue, whether these occasion immediate brain symptoms or not.

"The chances of subsequent meningitis and brain inflammation are thus minimized, and the patient is, to a large extent, protected from the too frequent results of depressed fracture, which, when healed in this state, is apt to result in many cases in violent headache and neuralgia, partial paralysis of the extremities, and even of the organs of sense, with perhaps epileptiform seizures.

"Further, when I had good reason to suspect that the skull was comminuted and depressed, I should not hesitate, in certain cases at least, to cut through the unbroken scalp, expose the seat of injury in the bone, and thus convert the simple fracture into a compound one. I would do so, believing in the efficient protection which antiseptic precautions afford, and because I should thus hope to give the patient a better prospect of complete recovery and of future health.

"I have returned, therefore, to a practice, though with some differences in the manner in which it is carried out, as advocated by Mr. Pott a hundred years ago. . . .

"Experiment, as well as experience, sufficiently justifies our reliance upon the security that the antiseptic method affords in injury of the head.

"Professor Gerald Yeo, for example, thus terminates a note upon his interesting series of experiments on the trephining of monkeys, the animals nearest to man in respect of septic receptivities, their behavior under chloroform, and the influence which operative procedures exert upon them.

"Among the cases treated antiseptically," he says, "there was not one case of inflammation; and where the antiseptic method could not be had recourse to, there was intense encephalitis — in short, one hundred per cent. of those cases treated by antiseptic dressings

recovered without inflammation; while without antiseptic dressings, one hundred per cent. perished of acute encephalitis."

THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.

THIS exhibition, which the Executive Committee of the Parkes Museum in London has been organizing since the beginning of the year, was formally opened Saturday, July 16th. The opening ceremony took place in the Royal Albert Hall, upwards of 4300 persons, half the number at least being ladies, were present. It is expected that a handsome sum will be realized for the benefit of the Museum. The secretary of the committee made the following statement:—

"The brief statement I have the honor to make to you on behalf of the Exhibition Committee must, I think, gratify both the exhibitors and the public generally, since it clearly shows that the interest taken in this, the first International exhibition of its kind, has been of an eminently practical character. It was natural that the committee should count upon receiving the coöperation of their own countrymen in an undertaking which could not fail to benefit this country; but they could hardly have expected the large amount of support that has come from the people of other countries. The exhibits are divided into seventeen sections, and they represent almost every industry connected with medicine, architecture, and sanitary engineering. One feature specially worthy of mention is that the work of artisans is exhibited by themselves. Besides the exhibits which have been contributed by London, Dublin, Edinburgh, Glasgow, Liverpool, Manchester, Birmingham, and other large towns in the United Kingdom, the following countries have sent contributions, namely: France, Germany, Austria and Hungary, Italy, Switzerland, Turkey, Holland, Belgium, Norway and Sweden, Bohemia, Bavaria, India, and America. Thanks to the heartiness with which the exhibitors have fallen in with the arrangements made by the committee, the exhibition that you have been invited to inspect to-day is not in an unfinished condition, but is full and complete. It was at first intended that the judges of the different sections should make their awards to the exhibitors on the opening day; but the extent of the exhibition has made it necessary for them to prolong the time for their examinations, and therefore the awards will not be made until next week. The public spirit shown by the subscribers to the guarantee fund should not be overlooked, as without this the committee could not have ventured on an undertaking of such magnitude. With such an inaugural meeting as the present, there can be little doubt that this exhibition will be the means of providing a considerable sum for the Parkes Museum; and at any rate it is sure to stimulate invention and improvement in all that relates to health."

The *British Medical Journal* in a short résumé directs attention to some of the more striking exhibits in Section I. which was devoted to the beds and apparatus shown by the hospitals.

SECTION I.—THE BEDS AND APPARATUS SHOWN BY THE HOSPITALS.

By a very happy thought, the committee of this exhibition were induced to request the metropolitan hos-

pitals to show, in rooms devoted to the purpose, a series of beds illustrating the methods of nursing and treatment in use in the various institutions. The project met with ready response; and the resulting exhibit, now on view in the western gallery (second floor) of the Albert Hall is, we do not hesitate to say, one of the most interesting in the whole exhibition. At first, it was proposed to have living patients to illustrate the various appliances; but better counsels prevailed, and an appeal was made to various eminent artists to lend their lay figures for this purpose—an appeal which was acceded to by Sir Frederick Leighton, Mr. Leslie, Mr. Pettie, Mr. Frith, and many others.

It is impossible to do more than refer very briefly to the apparatus shown, though there are few of the exhibits which would not repay careful study. We may begin with Guy's Hospital, to which a separate room and a lion's share of the beds has been assigned. In one of these beds we notice, as worthy of attention, a specimen showing the method of applying a "Hodgen's" splint (modified by Bloxam and others) to a fractured thigh. The limb is swung in a wire cradle, with flannel understraps, and the long splint, with its elaborate bandages, is entirely dispensed with. In a compound fracture, the wound can be got at without disturbing the limb; and the only drawback is, that a certain amount of lateral movement is permitted between the fractured ends of the bone. In the next bed is seen, applied to the head, an ingenious apparatus (of German invention) for applying cold to any part of the body; a current of iced-water is kept constantly circulating through a system of tubes, made of lead, sufficiently firm to resist the weight of the body, and yet small and soft enough, it is said, to cause no inconvenience to the patient. This apparatus is much used by Mr. Bryant, and may be seen, in various sizes and shapes, in the surgical-instrument department of this Section.

A very neat and convenient cot is shown; and on the opposite side will be found a tracheotomy cot and tent, which is as well suited for its purpose as any other exhibited; though this is, unfortunately, by no means high praise. In this cot we notice Mr. Golding-Bird's "trachea-dilator," made for him by Messrs. Milikin and Down. This instrument consists of two fenestrated blades, which are designed to be introduced into the tracheal wound, and then separated by a screw-action. We have lately had an opportunity of testing this instrument, and can testify to the ease with which it can be introduced, and to the effectual manner in which it keeps open the wound in the trachea, and gives free exit to mucus and membrane. As might be anticipated, the pressure exerted on the two edges of the tracheal wound quickly led to ulceration of the mucous membrane; and for this reason the use of the instrument must, we believe, be limited to the first twenty-four hours. At the end of that time, when hemorrhage will have ceased, and most of the membrane about the chords has been cleared away, its place may be well supplied by one of Mr. Morrant Baker's India-rubber tubes, which are shown in use in a tracheotomy tent exhibited by St. Bartholomew's. This tent is very neat and pretty, and consists entirely of washable materials. It, however, strikes us as rather small, and as by no means perfect; indeed, we hope that one of the salutary results of the exhibition may be to stimulate inventors to design a really suitable tent for this purpose.

Among the other specimens shown by St. Bartholomew's Hospital, is the apparatus for fractured patella, designed by Mr. Manning, as also another method of treating this lesion designed by Mr. Stephenson, a former house-surgeon of the hospital, in which the fragments are retained in position by two broad elastic bands attached to a subjacent wooden cradle. We also notice the contrivance of the late Mr. Callender (commendable for its simplicity) for making pressure on a femoral artery. Fracture of the femur is treated by a long outside (Liston) splint, and extension is made by an ingenious little apparatus, designed, we learn, by a former house-surgeon, Mr. Sankey, and adopted also by the Children's Hospital (Great Ormond Street). This latter hospital exhibits a cot illustrating the treatment of hip-joint disease in general use there. The diseased limb is bandaged to a splint which is supported beneath by an apparatus on the principle of a book-rest, and extension is made as above stated; a long outside splint is applied to the sound limb, and the head only of the little patient is supported on a small square pillow; the child is retained in the recumbent position by the so-called "Queen's Square armlets," a method also made use of in the bed shown by St. Mary's, where it is adapted to a "patient" on whom is also demonstrated the method of treating cervical caries by a leathern collar moulded (by Spratt of Brook Street) to the neck. Leathern splints made by the same firm are also shown in the St. Mary's cot adapted to the treatment of strumous disease of the knee. The collar for cervical caries is supplemented by sand-bags so arranged as to prevent rotation of the head.

The Middlesex Hospital shows the old-fashioned, but very useful, if rather clumsy, De Morgan's splint for the treatment of morbus coxae; and a most convenient apparatus, first used, we believe, by Dr. Cayley, for bathing a fever patient with the least possible disturbance; a hammock slung from a movable gallows receives the patient, who is then raised from his bed by pulleys, carried by a traveler until he is suspended over a bath placed beside the bed, and finally lowered into the bath by a reversed action of the pulleys.

The exhibit of King's College Hospital shows the various apparatus used in the antiseptic treatment of wounds, though we may remark, by the way, that the dressings are only placed in the basket shown when about to be used; it is, we think, unfortunate that one of the tin boxes ordinarily in use for storing the dressings is not also exhibited. We are sorry to find fault, but the tracheotomy-test shown by this hospital, with its heavy flannel curtains and clumsy frame, seems to us singularly unsuited for its purpose, and unworthy of the institution from which it emanates. Neither is the bed shown by University College Hospital worthy of the reputation of that school; we may notice, however, the method of treating Colles's fracture by Carr's splints.

We have nothing but praise for the beds shown by St. Thomas's Hospital. That one which illustrates the adoption of plaster-of-Paris splints (as recently recommended by Mr. Croft in a paper read before the Royal Medical and Chirurgical Society; see *British Medical Journal*, July 2, p. 13) is particularly worthy of careful study, and seems to us the perfection of neatness and simplicity. A cot is also shown by the hospital, which demonstrates the most convenient method of treating hip-joint disease.

We must also strongly recommend to the careful study of our readers the apparatus shown by Charing Cross Hospital. Two beds show the fenestrated splints designed by Mr. Barwell, which are so simple that they can be made by the ordinary engineer of the hospital. The one designed for excision of the knee strikes us as particularly admirable; a back-splint, with broad plates of soft iron moulded to the thigh and calf, reaches from the fold of the nates almost to the knee; the anterior splint consists of three plates moulded to the thigh, leg, and foot, connected together by light iron rods; the heel is left entirely free, and the fenestrum over the knee is sufficiently wide to permit of the easy application of an antiseptic dressing without at all disturbing the splints, which are from the first firmly fixed to the limb by plaster bandages. Another bed, arranged by Mr. Bloxam, shows a "Hodgen's" apparatus, already referred to, as modified by him, and a similar arrangement by which the use of bandages in the treatment of fractured tibia can be entirely dispensed with. The London Hospital, the New Marylebone Infirmary, the Royal Free Hospital, and the Westminster Hospital show beds which are of interest, but which contain no special novelties; and St. George's Hospital also exhibits some apparatus, but of a rather antiquated type.

Lastly, we may notice the bed shown by the hospitals of the army and navy, which illustrates the first treatment of wounds and fractures, and is a marvel of ingenuity. Esmarch's triangular bandages are used throughout, and we would especially direct attention to the treatment of fractured thigh; a rifle forms a long outside splint, a waist-belt supplies the place of a body-bandage, triangular bandages fix the impromptu splint to the thigh and ankle, and a third bandage is used as a perineal band; the same bandages serve to fix two bayonets to the arms, where they act as excellent splints; and a wound of the hand is also dressed with this bandage. If any fault can be found, it must be with the tourniquet in use, which we have heard described by a good authority as the worst in existence.

CARYATIDES FROM CADAVERA.

THE *British Medical Journal* is responsible for the reproduction of the following:—

A new method of inhumation has, according to the *Cronica Medica Quirurgica Horana*, lately been recommended by an engineer, named Cruz. It is a procedure by which the bodies of the dead are incrustated in an artificial stone, which is perfectly impermeable to gases, and which consequently will not permit the escape of the slightest mephitic emanations. Before proceeding to the operation in question, the cadavera are submitted to the following treatment. The body is placed in a bath composed of equal parts of lime and clay, dissolved in a sufficient quantity of water. Upon the removal of the body, which is found to be covered with a thick layer of the above-named substance, it is covered with another layer of natural cement, destined to absorb the excess of water, after which the cadaver is submerged in a bath of pitch, and covered, finally, with a layer of lime: the contact, only, between the lime and the calcareous cement being sufficient to solidify the pitch rapidly, a thick coating being formed in this manner, which possesses the

same properties as the pitch of Judea, a substance to which the Egyptian mummies owe their peculiar indestructibility. As can be readily understood, a subject so prepared can exhale no marked odor; the different layers of lime, clay, and pitch forming around it a kind of solid wrapping, which is opposed, effectually, to the disengagement of gases. A cadaver, after being treated in this manner, is deposited in the interior of a

mould, which is filled with the following mixture, that very soon solidifies, and is transformed into stone: Cement, five parts; sand, three parts; ashes, two parts; water, a sufficiency. The stones which are obtained by this process acquire a remarkable solidity. Obituary inscriptions can be engraved upon them; they can be placed in mausolea, or may serve for the construction of sepulchral monuments of various forms.

REPORTED MORTALITY FOR THE WEEK ENDING JULY 30, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Lung Diseases.	Diphtheria and Croup.	Malarial Fevers.
New York.....	1,206,590	—	—	—	—	—	—	—
Philadelphia.....	846,984	446	139	32.74	22.20	1.79	3.18	—
Brooklyn.....	566,689	353	216	49.58	36.26	5.95	7.37	1.42
Chicago.....	503,304	334	222	47.90	35.63	4.79	2.10	—
Boston.....	362,335	187	98	41.71	36.36	4.81	3.21	—
St. Louis.....	350,522	168	86	36.90	23.81	1.19	2.97	3.57
Baltimore.....	332,190	184	107	45.11	29.89	1.09	9.24	1.09
Cincinnati.....	255,708	121	58	19.83	14.05	6.61	—	—
New Orleans.....	216,140	138	39	29.00	8.67	2.89	.72	16.67
District of Columbia.....	177,638	97	45	30.93	24.74	2.06	—	3.09
Pittsburgh.....	156,381	86	43	44.19	22.09	5.81	4.65	—
Buffalo.....	155,137	118	81	46.61	37.29	3.39	.85	1.69
Milwaukee.....	115,578	64	41	40.63	31.25	4.69	1.56	—
Providence.....	104,857	54	33	48.15	38.89	3.70	3.70	—
New Haven.....	62,882	22	10	31.82	27.27	—	—	4.55
Charleston.....	49,999	31	11	19.35	9.68	—	3.23	—
Nashville.....	43,461	—	—	—	—	—	—	—
Lowell.....	59,485	29	12	31.03	20.69	3.44	6.89	—
Worcester.....	58,295	17	9	23.53	17.65	11.76	5.88	—
Cambridge.....	52,740	26	18	46.15	42.31	7.69	3.85	—
Fall River.....	49,006	46	23	34.78	26.09	—	2.17	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	14	6	35.71	—	7.14	14.29	—
Springfield.....	33,340	10	8	10.00	—	10.00	—	—
Salem.....	27,598	11	7	45.45	45.45	—	—	—
New Bedford.....	26,875	8	3	37.50	25.00	—	—	—
Somerville.....	24,985	12	9	41.67	41.67	8.33	—	—
Holyoke.....	21,851	10	6	30.00	20.00	—	—	—
Chelsea.....	21,785	12	9	41.67	25.00	—	8.33	—
Taunton.....	21,213	9	4	44.44	33.33	—	11.11	—
Gloucester.....	19,329	3	2	66.67	33.33	—	—	—
Haverhill.....	18,475	13	7	38.46	30.77	—	—	—
Newton.....	16,995	4	1	50.00	25.00	25.00	25.00	—
Newburyport.....	13,537	1	0	—	—	—	—	—
Fitchburg.....	12,405	4	2	—	—	25.00	—	—
Twenty-three Massachusetts towns.	203,695	64	25	28.13	20.31	9.38	3.12	—

Deaths reported 2696 (no report from New York); 1380 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1015, diarrhoeal diseases 746, consumption 280, lung diseases 102, diphtheria and croup 97, malarial fevers 42, typhoid fever 40, scarlet fever 31, small-pox 27, measles 23, whooping-cough 19, cerebro-spinal meningitis 18, puerperal fever eight, erysipelas four. In addition, Nashville reports deaths from diarrhoeal diseases eight, consumption four, measles, typhoid fever, malarial fever, and puerperal fever one each, — total deaths and deaths under five years not given. From *typhoid fever*, Philadelphia 11, Chicago five, St. Louis, District of Columbia, and Pittsburgh three, Boston, New Orleans, and Charleston two, Brooklyn, Cincinnati, Milwaukee, Providence, Lowell, Fall River, Lynn, Holyoke, and Chelsea one. From *scarlet fever*, Pittsburgh seven, Brooklyn six, Philadelphia five, Buffalo four, Chicago and Milwaukee two, Baltimore, Cincinnati, Providence, Springfield, and New Bedford one. From *small-pox*, Philadelphia and Chicago 12, Pittsburgh three. From *measles*, Chicago seven, Brooklyn six, Baltimore three, Boston, Cincinnati, Pittsburgh, Buffalo, Milwaukee, Providence, and Fall River one. From *whooping-cough*, Philadelphia four, Baltimore and Cincinnati three, Brooklyn, Chicago, St. Louis,

and Buffalo two, Gloucester one. From *cerebro-spinal meningitis*, Chicago and St. Louis four, Lynn two, Baltimore, Cincinnati, Pittsburgh, Buffalo, Milwaukee, Fall River, Haverhill, and Brockton one. From *puerperal fever*, Chicago two, Brooklyn, Boston, St. Louis, Baltimore, New Orleans, and Attleborough one. From *erysipelas*, Philadelphia, St. Louis, New Orleans, and Weymouth one. Three deaths from sunstroke occurred in Cincinnati.

Eight cases of small-pox were reported in Brooklyn, 48 in Chicago, 40 in Pittsburgh, and one in Milwaukee; diphtheria 23, scarlet fever four, in Boston; scarlet fever 13, diphtheria five, in Milwaukee.

In 44 cities and towns of Massachusetts, with a population of 1,082,428 (population of the State 1,783,086), the total death-rate for the week was 23.12 against 22.56, and 20.07 for the previous two weeks.

For the week ending July 9th in 149 German cities and towns, with an estimated population of 7,789,743, the death-rate was 29.8. Deaths reported 4467; under five 2680: pulmonary consumption 485, diarrhoeal diseases 374, acute diseases of the respiratory organs 263, diphtheria and croup 114, scarlet fever 74, typhoid fever 44, whooping-cough 42, measles and röteln 41, puerperal fever 12, typhus fever (Königsberg two, Stettin two, Thorn three, Erfurt, Leipzig) nine, small-pox (Kö-

nigsberg two, Danzig, Berlin, Kottberg, Aachen) six. The death-rates ranged from 12.9 in Munster to 58.8 in Posen; Königsberg 35.1; Breslau 42.6; Munich 33.2; Dresden 26.1; Berlin 17.3; Leipzig 28.8; Hamburg 22.5; Hanover 17.4; Bremen 19.2; Cologne 25.5; Frankfurt 20.1; Strasburg 31.8.

For the week ending July 16th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 23.1. Deaths reported 3361: diarrhoea 414, acute diseases of the respiratory organs (London) 168, measles 115, scarlet fever 108, whooping-cough 96, small-pox (London 49) 52, fever 32, diphtheria 17. The death rates ranged from 14.7 in Bradford to

28.1 in Liverpool; Bristol 18.1; Sheffield 18.6; Birmingham 20.2; Manchester 22; London 24.7; Leeds 26; Liverpool 28.1. In Edinburgh 17.1; Glasgow 19.9; Dublin 21.1.

In the 21 chief towns of Switzerland, for the week ending July 16th, population 479,934, there were 31 deaths from diarrhoeal diseases, acute diseases of the respiratory organs 20, typhoid fever seven, diphtheria and croup six, whooping-cough five, measles two.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.		Thermom-eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
July, 1881.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 24	29.913	69	85	59	78	58	78	71	W	SE	SW	2	4	4	C	C	C	—	—
Mon., 25	29.966	74	85	63	74	57	84	72	SW	SE	W	6	14	12	H	H	C	—	—
Tues., 26	29.832	69	77	64	93	91	84	89	SE	SE	W	17	4	3	O	H	C	5.15	.88
Wed., 27	29.830	67	86	63	86	86	90	87	Calm.	Calm.	W	0	0	4	H	O	F	—	—
Thurs., 28	29.901	63	77	58	92	87	94	91	Calm.	E	E	0	4	3	H	R	G	—	—
Fri., 29	30.195	61	66	57	100	91	90	94	NE	E	NE	3	7	5	R	G	O	8.40	.06
Sat., 30	30.324	61	65	60	91	89	94	91	NE	NE	NE	8	8	6	O	O	O	7.40	.03
Week.	29.994	67	86	57														21.35	.97

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JULY 30, 1881, TO AUGUST 5, 1881.

KING, WILLIAM H., captain and assistant surgeon. Now awaiting orders at Greenacastle, Pa., to report in person to commanding general, Department of the East, for assignment to temporary duty. S. O. 171, A. G. O., July 28, 1881.

GARDNER, EDWIN F., first lieutenant and assistant surgeon. Relieved from duty in Department of Dakota, to proceed to Eastport, Me., and on arrival there report by letter to the surgeon-general. S. O. 171, C. S., A. G. O.

BOOKS AND PAMPHLETS RECEIVED.—On the Value of Phosphorus as a Remedy for Loss of Nerve Power and Functional Disorders of the Nervous System induced by Overwork and the Exigencies of Modern Life. By Edmund A. Kirby, M. D. Philadelphia: Presley Blakiston. 1881.

The Mother's Guide in the Management and Feeding of Infants. By John M. Keating, M. D. Philadelphia: Henry C. Lea's Son & Co. 1881.

Landmarks, Medical and Surgical. By Luther Holden, assisted by James Shuter, F. R. C. S. Third Edition. Philadelphia: Presley Blakiston. 1881.

Clinical Lectures on the Diseases of Old Age. By J. M. Chace, M. D. Translated by Leigh H. Hunt, M. D. With additional Lectures by Alfred L. Loomis, M. D. New York: William Wood & Co. 1881.

Official List of Medical Officers and Acting Assistant Surgeons of the United States Marine Hospital Service, with their Stations July 1, 1881.

Curtwright Prize Essay. Observations with the Nymphetom-eter upon the Globular Compositions of the Blood and Milk. By Frederick P. Henry, M. D. Philadelphia: F. A. Davis, 1881.

On the Park Worms (or Flesh Worms). How to Detect them, and How to Avoid them, being a Popular Account of their History, Modes of Propagation, and Means of Destruction, intended for the use of Farmers, Butchers, Pork Dealers, and the Owners of Pigs. By John Pinn. Rochester: The Rausch & Loomis Printing Company. 1881.

On the Larynx, or Laryngeal Phthisis. A Paper read before the New-England Medical and Surgical Society. By C. C. Lamb, M. D.

Stenosis of the Larynx, with Fibrous Adhesive Bands of the True Vocal Cords, Tracheotomy, etc.

Some Remarks concerning the Value of the Galvano-Cautery in Treatment of Diseases and Growths of the Naso-Pharynx. By W. H. Daly, M. D. (Reprint.)

Glaucoma caused by Mental Worry, illustrated by the Report of a Case. By Leartus Connor, M. D. (Reprint.)

Wood's Library of Standard Medical Authors. Vols. III., IV., V., and VI. A Treatise on Diseases of the Joints. By Richard Barwell, F. R. C. S. Illustrated by numerous Engravings on Wood. Second Edition, revised and enlarged.

A Treatise on the Continued Fevers. By James C. Wilson, M. D. With an Introduction by J. M. Da Costa, M. D.

A Medical Formulary based on the United States and British Pharmacopœias. By Lawrence Johnson, M. D.

Clinical Lectures on the Diseases of Old Age. By J. M. Chace, M. D. Translated by Leigh H. Hunt, M. D. With Additional Lectures by Alfred L. Loomis, M. D.

Supplement to Ziemssen's Cyclopædia of the Practice of Medicine. Edited by George L. Peabody, M. D. New York: William Wood & Company. 1881.

The Question of Axillary or Scapular Support in the Treatment of Joint Diseases of the Lower Extremity. By A. B. Judson, M. D. (Reprint.)

The Remedial Properties of the Hot Springs, Arkansas. Also a brief Consideration of the Locality as a Resort for Pithical Invalids. By Charles H. Lothrop, M. D. (Pamphlet.)

An Essay on Anti-septic Surgery. Read by Appointment before the Luzerne County Medical Society. By George W. Guthrie, M. D. (Pamphlet.)

On Cancer, its Allies, and other Tumors, with special reference to their Medical and Surgical Treatment. By F. Albert Pirell, M. D., with Microscopical Illustrations. Philadelphia: Presley Blakiston. 1881.

Antiseptic Surgery. The Principles, Modes of Application, and Results of the Lister Dressing. By Dr. Just Lucas-Championnière, Surgeon to the Hôpital Tenon, etc. Translated from the second and completely revised edition, with the special sanction of the Author, and edited by Frederic Henry Gerrish, M. D., Surgeon to the Maine General Hospital. Portland: Loring, Shost, and Harmon. 1881.

The Compend of Anatomy, for Use in the Dissecting Room and in preparing for Examinations. By John B. Roberts, M. D. Philadelphia: C. C. Roberts & Co. 1881.

Programme of the International Medical Congress.

INTERNATIONAL MEDICAL CONGRESS,

1881.

OPENING ADDRESS.¹

BY THE PRESIDENT, SIR JAMES PAGET, BART.

It is not necessary to defend the meeting of an International Congress. Such meetings have become one of the general customs of our time, and have thus given evidence that they are generally approved. Let me rather suggest to you some thoughts as to the work which, being in Congress, we have to do, and the spirit in which it may best be done, so that the good effects of our meeting may last long after our parting.

In the largest view of our design, it may seem to be that of bringing together a multitude of various minds for the promotion and diffusion of knowledge in the whole science and art of medicine, in their widest range, in all their narrowest divisions, in all their manifold utilities. And this design, I cannot doubt, will be fulfilled; for, although the programme tells of selected subjects for discussion, and defines the order of our work, yet knowledge will be promoted in a much wider range in the meetings without order, which will be held every day and everywhere — meetings of men with all kinds of mental power and all forms of knowledge and of skill; every one ready alike to impart and to acquire knowledge.

It is safe to say that in the casual conversations of this coming week there will be a larger interchange and diffusion of information than in any equal time and space in the whole past history of medicine. And with this interchange will be a larger increase, for in the mart of knowledge he that receives gains, and he that gives retains, and none suffer loss.

The increase will be the greater because of the great variety of minds which will meet. As I look round this hall, my admiration is moved not only by the number and total power of the minds which are here, but by their diversity; a diversity in which I believe they fairly represent the whole of those who are engaged in the cultivation of our science. For here are minds representing the distinctive characters of all the most gifted and most educated nations; characters still distinctly national, in spite of the constantly increasing intercourse of the nations. And from many of these nations we have both elder and younger men; thoughtful men and practical; men of fact and men of imagination; some confident, some skeptic; various, also, in education, in purpose and mode of study, in disposition and in power. And scarcely less various are the places and all the circumstances in which those who are here have collected and have been using their knowledge. For I think that our calling is preëminent in its range of opportunities for scientific study. It is not only that the pure science of human life may match with the largest of the natural sciences in the complexity of its subject-matter; not only that the living human body is, in both its material and its indwelling forces, the most complex thing yet known; but that in our practical duties this most complex thing is presented to us in an almost infinite multiformity. For in practice we are occupied, not with a type and pattern of the human nature, but with all its varieties in all classes of men, of every age and every occupation, in all climates and all social states; we

have to study men singly and in multitudes, in poverty and in wealth, in wise and unwise living, in health and all the varieties of disease; and we have to learn, or at least to try to learn, the results of all these conditions of life while, in successive generations and in the mingling of families, they are heaped together, confused, and always changing. In every one of all these conditions man, in mind and body, must be studied by us; and every one of them offers some different problems for inquiry and solution. Whenever our duty or our scientific curiosity or, in happy combination, both, may lead us, there are the materials and there the opportunities for separate original research.

Now, from these various opportunities of study, men are here in Congress. Surely, whatever a multitude and diversity of minds can, in a few days, do for the promotion of knowledge, may be done here. Every one has something he may teach, much more that he may learn; and, in the midst of an apparent utter confusion, knowledge will increase and multiply. It has been said, indeed, that truth is more likely to emerge from error than from confusion and, in some instances, this is true; but much of what we call confusion is only the order of nature not yet discerned; and so it may be here. Certainly, it is from what seems like the confusion of successive meetings such as this that that kind of truth emerges which is among the best moving and directing forces in the scientific as well as in the social life — the truth which is told in the steady growth of general opinion.

But it is not proposed to leave the work of the Congress to what would seem like chances and disorder, good as the result might be; nor yet to the personal influences by which we may all be made fitter for work, though these may be very potent. In the stir and controversy of meetings such as we shall have, there cannot fail to be useful emulation; by the examples that will appear of success in research, many will be moved to more enthusiasm, many to more keen study of the truth; our range of work will be made wider, and we shall gain that greater interest in each other's views and that clearer apprehension of them which are always attained by personal acquaintance and by memories of association in pleasure as well as in work. But as it will not be left to chance, so neither will sentiment have to fulfill the chief duties of the Congress.

Following the good example of our predecessors, certain subjects have been selected which will be chiefly, though not exclusively, discussed, and the discussions are to be in the sections into which we shall soon divide.

Of these subjects it would not be for me to speak even if I were competent to do so; unless I may say that they are so numerous and complete that — together with the opening addresses of the Presidents of Sections — they leave me nothing but such generalities as may seem commonplace. They have been selected, after the custom of former meetings, from the most stirring and practical questions of the day; they are those which most occupy men's minds, and on which there is at this time most reason to expect progress, or even a just decision, from very wide discussion. They will be discussed by those most learned in them, and in many instances by those who have spent months or years in studying them, and who now offer their work for criticism and judgment.

¹ Reprinted from advance sheets. Delivered August 3, 1881.

I will only observe that the subjects selected in every section involve questions in the solution of which all the varieties of mind and knowledge of which I have spoken may find their use. For there are questions, not only on many subjects, but in all stages of progress towards settlement. In some the chief need seems to be the collection of facts well observed by many persons. I say by many, not only because many facts are wanted, but because in all difficult research it is well that each apparent fact should be observed by many; for things are not what they appear to each one mind. In that which each man believes that he observes, there is something of himself; and for certainty, even on matters of fact, we often need the agreement of many minds, that the personal element of each may be counteracted. And much more is this necessary in the consideration of the many questions which are to be decided by discussing the several values of admitted facts and of probabilities, and of the conclusions drawn from them. For, on questions such as these minds of all kinds may be well employed. Here there will be occasion even for those which are not unconditionally praiseworthy, such as those that habitually doubt, and those to whom the invention of arguments is more pleasing than the mere search for truth. Nay, we may be able to observe the utility even of error. We may not, indeed, wish for a prevalence of errors; they are not more desirable than are the crime and misery which evoke charity. And yet in a Congress we may palliate them, for we may see how, as we may often read in history, errors, like doubts and contrary pleadings, serve to bring out the truth, to make it express itself in clearest terms and show its whole strength and value. Adversity is an excellent school for truth as well as for virtue.

But that which I would chiefly note, in relation to the great variety of minds which are here, is that it is characteristic of that mental pliancy and readiness for variation which is essential to all scientific progress, and which a great International Congress may illustrate and promote. In all the subjects for discussion we look for the attainment of some novelty and change in knowledge or belief; and after every such change there must ensue a change in some of the conditions of thinking and of working. Now for all these changes minds need to be pliant and quick to adjust themselves. For all progressive science there must be minds that are young whatever may be their age.

Just as the discovery of auscultation brought to us the necessity for a refined cultivation of the sense of hearing, which was before of only the same use in medicine as in the common business of life; or, as the employment of the numerical method in estimating the value of facts required that minds should be able to record and think in ways previously unused; or, as the acceptance of the doctrine of evolution has changed the course of thinking in whole departments of science, so is it, in less measure, in every less advance of knowledge. All such advances change the circumstances of the mental life, and minds that cannot or will not adjust themselves become less useful, or must, at least, modify their manner of utility. They may continue to be the best defenders of what is true; they may strengthen and expand the truth, and may apply it in practice with all the advantages of experience; they may thus secure the possessions of science and use them well, but they will not increase them.

It is with minds as with living bodies. One of their

chief powers is in their self-adjustment to the varying conditions in which they have to live. Generally those species are the strongest and most abiding that can thrive in the widest range of climate and of food. And of all the races of men they are the mightiest and most noble who are, or by self-adjustment can become, most fit for all the new conditions of existence in which by various changes they may be placed. These are they who prosper in great changes of their social state; who, in successive generations, grow stronger by the production of a population so various that some are fitted to each of all the conditions of material and mode of life which they can discover or invent. These are most prosperous in the highest civilization; these whom nature adapts to the products of their own arts.

Or, among other groups, the mightiest are those who are strong alike on land and sea; who can explore and colonize, and in every climate can replenish the earth and subdue it; and this not by tenacity or mere robustness, but rather by pliancy and the production of varieties fit to abide and increase in all the various conditions of the world around.

Now, it is by no distant analogy that we trace the likeness between these in their successful contests with the material conditions of life and those who are to succeed in the intellectual strife with the difficulties of science and of art. There must be minds which in variety may match with all the varieties of the subject-matters and minds which, at once or in swift succession, can be adjusted to all the increasing and changing modes of thought and work.

Such are the minds we need; or, rather, such are the minds we have; and these in great meetings prove and augment their worth. Happily the natural increase in the variety of minds in all cultivated races is — whether as cause or as consequence — nearly proportionate to the increasing variety of knowledge. And it has become proverbial, and is nearly true in science and art, as it is in commerce and in national life, that, whatever work is to be done, men are found or soon produced who are exactly fit to do it.

But it need not be denied that, in the possession of this first and chiefest power for the increase of knowledge, there is a source of weakness. In works done by dissimilar and independent minds, dispersed in different fields of study, or only gathered into self-assorted groups, there is apt to be discord and great waste of power. There is, therefore, need that the workers should from time to time be brought to some consent and unity of purpose; that they should have opportunity for conference and mutual criticism, for mutual help and the tests of free discussion. This it is which, on the largest scale and most effectually, our Congress may achieve; not, indeed, by striving after a useless and happily impossible uniformity of mind or method, but by diminishing the lesser evil of waste and discord which is attached to the far greater good of diversity and independence. Now, as in numbers and variety the Congress may represent the whole multitude of workers everywhere dispersed, so in its gathering and concord it may represent a common consent that, though we may be far apart and different yet our work is and shall be essentially one; in all its parts mutually dependent, mutually helpful, in no part complete or self-sufficient. We may thus declare that as we who are many are met to be members of one body, so our work for science shall be one though manifold; that as we, who are of many nations, will, for a time, for-

get our nationalities, and will even repress our patriotism, unless for the promotion of a friendly rivalry, so will we in our work, whether here and now or everywhere and always, have one end and one design,—the promotion of the whole science and whole art of healing.

It may seem to be a denial of this declaration of unity that after this general meeting we shall separate into sections more numerous than in any former Congress. Let me speak of these sections to defend them; for some maintain that even in such a division of studies as these may encourage, there is a mischievous dispersion of forces. The science of medicine, which used to be praised as one and indivisible, is broken up, they say, among specialists, who work in conflict rather than in concert, and with mutual distrust more than mutual help.

But let it be observed that the sections which we have instituted are only some of those which are already recognized in many countries, in separate societies, each of which has its own place and rules of self-government and its own literature. And the division has taken place naturally in the course of events which could not be hindered. For the partial separation of medicine, first from the other natural sciences, and now into sections of its own, has been due to the increase of knowledge being far greater than the increase of individual mental power.

I do not doubt that the average mental power constantly increases in the successive generations of all well-trained peoples, but it does not increase so fast as knowledge does, and thus, in every science, as well as in our own, a small portion of the whole sum of knowledge has become as much as even a large mind can hold and duly cultivate. Many of us must, for practical life, have a fair acquaintance with many parts of our science, but none can hold it all; and for complete knowledge, or for research, or for safely thinking out beyond what is known, no one can hope for success unless by limiting himself within the few divisions of the science for which, by nature or by education, he is best fitted. Thus our divisions into sections is only an instance of that division of labor which, in every prosperous nation, we see in every field of active life, and which is always justified by more work better done.

Moreover, it cannot be said that in any of our sections there is not enough for a full strong mind to do. If any one will doubt this, let him try his own strength in the discussions of several of them.

In truth, the fault of specialism is not in narrowness, but in the shallowness and the belief in self-sufficiency with which it is apt to be associated. If the field of any specialty in science be narrow, it can be dug deeply. In science, as in mining, a very narrow shaft, if only it be carried deep enough, may reach the richest stores of wealth and find use for all the appliances of scientific art. Not in medicine alone, but in every department of knowledge, some of the grandest results of research and of learning, broad and deep, are to be found in monographs on subjects that, to the common mind, seemed small and trivial.

And study in a Congress such as this may be a useful remedy for self-sufficiency. Here every group may find a rare occasion, not only for an opportune assertion of the supreme excellence of its own range and mode of study, but for the observation of the work of every other. Each section may show that its own

facts must be deemed sure, and that by them every suggestion from without must be tested; but each may learn to doubt every inference of its own which is not consistent with the facts or reasonable beliefs of others; each may observe how much there is in the knowledge of others which should be mingled with its own; and the sum of all may be the wholesome conviction of all that we cannot justly estimate the value of a doctrine in one part of our science till it has been tried in many or in all.

We were taught this in our schools; and many of us have taught that all the parts of medical science are necessary to the education of the complete practitioner. In the independence of later life, some of us seem too ready to believe that the parts we severally choose may be self-sufficient, and that what others are learning cannot much concern us. A fair study of the whole work of the Congress may convince of the fallacy of this belief. We may see that the test of truth in every part must be in the patient and impartial trial of its adjustment with what is true in every other. All perfect organizations bear this test; all parts of the whole body of scientific truth should be tried by it.

Moreover, I would not, from a scientific point of view, admit any estimate of the comparative importance of the several divisions of our science, however widely they may differ in their present utilities. And this I would think right, not only because my office as president binds me to a strict impartiality and to the claim of freedom of research for all, but because we are very imperfect judges of the whole value of any knowledge, or even of single facts. For every fact in science, wherever gathered, has not only a present value, which we may be able to estimate, but a living and germinal power of which none can guess the issue.

It would be difficult to think of anything that seemed less likely to acquire practical utility than those researches of the few naturalists who, from Leeuwenhoeck to Ehrenberg, studied the most minute of living things, the Vibrionidæ. Men boasting themselves as practical might ask, "What good can come of it?" Time and scientific industry have answered, "This good: those researches have given a more true form to one of the most important practical doctrines of organic chemistry; they have introduced a great beneficial change in the most practical part of surgery; they are leading to one as great in the practice of medicine; they concern the highest interests of agriculture, and their power is not yet exhausted."

And as practical men were, in this instance, incompetent judges of the value of scientific facts, so were men of science at fault when they missed the discovery of anesthetics. Year after year the influences of laughing gas and of ether were shown: the one fell to the level of the wonders displayed by itinerant lecturers, students made fun with the other; they were the merest practical men, men looking for nothing but what might be straightway useful, who made the great discovery which has borne fruit not only in the mitigation of suffering, but in a wide range of physiological science.

The history of science has many similar facts, and they may teach that any man will be both wise and dutiful if he will patiently and thoughtfully do the best he can in the field of work in which, whether by choice or chance, his lot is cast. There let him, at least, search for truth, reflect on it, and record it accurately;

let him imitate that accuracy and completeness of which I think we may boast that we have, in the descriptions of the human body, the highest instance yet attained in any branch of knowledge. Truth so recorded cannot remain barren.

In thus speaking of the value of careful observation and records of facts, I seem to be in agreement with the officers of all the sections: for, without any intended consent, they have all proposed such subjects for discussion as can be decided only by well-collected facts and fair direct inductions from them. There are no questions on theories or mere doctrine. This, I am sure, may be ascribed, not to any disregard of the value of good reasoning or of reasonable hypotheses, but partly to the just belief that such things are ill-suited for discussion in large meetings, and partly to the fact that we have no great opponent schools, no great parties named after leaders or leading doctrines about which we are in the habit of disputing. In every section the discussions are to be on definite questions, which, even if they be associated with theory or general doctrines, may yet be soon brought to the test of fact; there is to be no use of doctrinal touchstones.

I am speaking of no science but our own. I do not doubt that in others there is advantage in dogma, or in the guidance of a central organizing power, or in divisions and conflicting parties. But in the medical sciences I believe that the existence of parties founded on dominant theories has always been injurious; a sign of satisfaction with plausible errors, or with knowledge which was even for the time imperfect. Such parties used to exist, and the personal histories of their leaders are some of the most attractive parts of the history of medicine: but, although in some instances an enthusiasm for the master-mind may have stirred a few men to unusual industry, yet very soon the disciples seem to have been fascinated by the distinctive doctrine, content to bear its name, and to cease from active scientific work. The dominance of doctrine has promoted the habit of inference, and repressed that of careful observation and induction. It has encouraged that fallacy to which we are all too prone, that we have at length reached an elevated sure position on which we may rest, and only think and guide. In this way specialism in doctrine or in method of study has hindered the progress of science more than the specialism which has attached itself to the study of one organ or of one method of practice. This kind of specialism may enslave inferior minds: the specialism of doctrine can enchain into mere dreaming those that should be strong and alert in the work of free research.

I speak the more earnestly of this because it may be said, if our Congress be representative, as it surely is, may we not legislate? May we not declare some general doctrines which may be used as tests and as guides for future study? We had better not.

The best work of our International Congress is in the clearing and strengthening of the knowledge of realities; in bringing, year after year, all its force of numbers and varieties of minds to press forward the demonstration and diffusion of truth as nearly to completion as may from year to year be possible. Thus, yearly, our Congress may maintain and invigorate the life of our science. And the progress of science must be as that of life. It sounds well to speak of the temple of science and of building and crowning the edifice, but the body of science is not as any dead thing of human work, however beautiful; it is a something liv-

ing, capable of development and a better growth in every part. For as in all life the attainment of the highest condition is only possible through the timely passing-by of the less good, that it may be replaced by the better, so is it in science. As time passes, that which seemed true and was very good becomes relatively imperfect truth, and the truth more nearly perfect takes its place.

We may read the history of the progress of truth in science as a paleontology. Many things which, as we look far back, appear, like errors, monstrous and uncouth creatures, were, in their time, good and useful, as good as possible. They were the lower and less perfect forms of truth which, amid the floods and stifling atmospheres of error, still survived; and just as each successive condition of the organic world was necessary to the evolution of the next following higher state, so from these were slowly evolved the better forms of truth which we now hold.

This thought of the likeness between the progress of scientific truth and the history of organic life may give us all the better courage in a work which we cannot hope to complete, and in which we see continual and sometimes disheartening change. It is, at least, full of comfort to those of us who are growing old. We that can read in memory the history of half a century might look back with shame and deep regret at the imperfections of our early knowledge if we might not be sure that we held, and sometimes helped onward, the best things that were in their time possible, and that they were necessary steps to the better present, even as the present is to the still better future. Yes, to the far better future; for there is no course of nature more certain than is the upward progress of science. We may seem to move in circles, but they are the circles of a constantly ascending spiral; we may seem to sway from side to side, but it is only as on a steep ascent which must be climbed in zigzag.

What may be the knowledge of the future none can guess. If we could conceive a limit to the total sum of mental power which will be possessed by future multitudes of well-instructed men, yet could we not conceive a limit to the discovery of the properties of materials which they will bend to their service. We may find the limit of the power of our unaided limbs and senses; but we cannot guess at a limit to the means by which they may be assisted, or to the invention of instruments which will become only a little more separate from our mental selves than are the outer sense-organs with which we are constructed.

In the certainty of this progress the great question for us is, What shall we contribute to it? It will not be easy to match the recent past. The advance of medical knowledge within one's memory is amazing whether reckoned in the wonders of the science not yet applied, or in practical results in the general lengthening of life, or, which is still better, in the prevention and decrease of pain and misery, and in the increase of working power. I cannot count or recount all that in this time has been done; and I suppose there are very few, if any, who can justly tell whether the progress of medicine has been equal to that of any other great branch of knowledge during the same time. I believe it has been; I know that the same rate of progress cannot be maintained without the constant and wise work of thousands of good intellects; and the mere maintenance of the same rate is not enough, for the rate of the progress of science should constant

ly increase. That in the last fifty years was at least twice as great as that in the previous fifty. What will it be in the next, or, for a more useful question, What shall we contribute to it?

I have no right to prescribe for more than this week. In this let us do heartily the proper work of the Congress, teaching, learning, discussing, looking for new lines for research, planning for mutual help, forming new friendships. It will be hard work if we will do it well; but we have not met for mere amusement or for recreation, though for that I hope you will find provision, and enjoy it the better for the work preceding it.

And when we part let us hear away with us, not only much more knowledge than we came with, but some of the lessons for our conduct in the future which we may learn in reflecting the work of our Congress.

In the number and intensity of the questions brought before us we may see something of our responsibility. If we could gather into thought the amounts of misery or happiness, of helplessness, or of power for work, which may depend on the answers to all the questions that will come before us, this might be a measure of our responsibility. But we cannot count it; let us imagine it; we cannot even in imagination exaggerate it. Let us hear it always in our mind, and remind ourselves that our responsibility will constantly increase. For, as men become in the best sense better educated, and the influence of scientific knowledge on their moral and social state increases, so, among all sciences there is none of which the influence and, therefore, the responsibility will increase more than ours, because none more intimately concerns man's happiness and working power.

But, more clearly in the recollections of the Congress, we may be reminded that in our science there may be, or, rather, there really is, a complete community of interest among men of all nations. On all the questions before us we can differ, discuss, dispute, and stand in earnest rivalry; but all consistently with friendship, all with readiness to wait patiently till more knowledge shall decide which is in the right. Let us resolutely hold to this when we are apart; let our internationality be a clear abiding sentiment, to be, as now, declared and celebrated at appointed times, but never to be forgotten; we may, perhaps, help to gain a new honor for science, if we thus suggest that in many more things, if they were as deeply and dispassionately studied, there might be found the same complete identity of international interests as in ours.

And then, let us always remind ourselves of the nobility of our calling. I dare to claim for it that among all the sciences ours, in the pursuit and use of truth, offers the most complete and constant union of those three qualities which have the greatest charm for pure and active minds, — novelty, utility, and charity. These three, which are sometimes in so lamentable disunion, as in the attractions of novelty without either utility or charity, are in our researches so combined that, unless by force or willful wrong, they hardly can be put asunder. And each of them is admirable in its kind. For in every search for truth we cannot only exercise curiosity, and have the delight — the really elemental happiness — of watching the unveiling of a mystery, but, on the way to truth, if we look well round us, we shall see that we are passing among wonders more than the eye or mind can fully apprehend. And as one of the perfections of nature is that in all her works

wonder is harmonized with utility, so is it with our science. In every truth attained there is utility either at hand or among the certainties of the future. And this utility is not selfish; it is not in any degree correlative with money-making; it may generally be estimated in the welfare of others better than in our own. Some of us may, indeed, make money and grow rich; but many of those that minister even to the follies and vices of mankind can make much more money than we. In all things costly and vainglorious they would far surpass us if we would compete with them. We had better not compete where wealth is the highest evidence of success; we can compete with the world in the nobler ambition of being counted among the learned and the good who strive to make the future better and happier than the past. And to this we shall attain if we will remind ourselves that as in every pursuit of knowledge there is the charm of novelty, and in every attainment of truth utility, so in every use of it there may be charity. I do not mean the charity which is in hospitals or in the service of the poor, great as is the privilege of our calling in that we may be its chief ministers, but that wider charity which is practiced in a constant sympathy and gentleness, in patience and self-devotion. And it is surely fair to hold that, as in every search for knowledge we may strengthen our intellectual power, so in every practical employment of it we may, if we will, improve our moral nature; we may obey the whole law of Christian love, we may illustrate the highest induction of scientific philanthropy.

Let us, then, resolve to devote ourselves to the promotion of the whole science, art, and charity of medicine. Let this resolve be to us as a vow of brotherhood; and may God help us in our work.

INTRODUCTORY REMARKS.

DELIVERED UPON THE OPENING OF THE SECTION ON
PATHOLOGY.

BY SAMUEL WILKS, M. D., F. R. S.

I welcome all of you here to-day. But are we not already of one brotherhood? Has not a common bond long ago united us in one family? Although we may not have shaken hands, we have been joined in spirit, or perhaps some of us have even been in more direct communication by means of winged words. Amongst all the ties which link man and man together, some of the closest are those forged by science. A special scientific inquiry will find two minds closely akin, although separated by thousands of miles, nationalities, or tongues. In our own department of pathology it creates a thrill of satisfaction to feel that the study of some morbid process may have led some of us to the discovery that another investigator, of whose existence we had been hitherto ignorant, has his thoughts and occupation in perfect unison with our own, and that although oceans and continents may separate us, our minds are both attuned to the same string. It is not surprising that the vast subject which more immediately occupies us can never cease to interest man in all its details, whilst he has a resting-place on this globe.

I would fain have inaugurated this Section with a general address, but have refrained from doing so, daring not to sacrifice to platitude our too precious time when so much practical work has to be accomplished.

I cannot, however, but occupy you a few moments

in order to take a glance at the immensity of the subject before us, embracing questions as it does in which humanity will be forever interested, namely, those referring to disease, decay, and death.

Our subject, in a word, is Pathology. Pathology has received various definitions, the most common being that which contrasts it with Physiology; for as the latter is regarded as the science of healthy organic life, so the former has been held to be the science of the unhealthy or of the abnormal course of life contrasted with the normal. This division of vital action into normal and abnormal is true in a superficial sense, and might be made theoretically to stand as a definition, but it is by no means applicable to our practical science of pathology, nor can it be made of any value as an expression of diagnostic knowledge in treating the thousand ills to which flesh is heir.

In the first place, it must be admitted that the changes which occur in every organic structure, as years roll on, are to be regarded as normal, unless we take an imaginary or ideal standard of a being living in some former golden age, where nought was known but perpetual youth, and regard every departure from this as morbid. Although we do not frame such a picture to ourselves, but know that the various changes in the bones, the cartilages, the lungs, the brain, and other parts which take place in age are in harmony with the dictates of Nature, yet how often are we called upon to treat these changes as forms of disease? They are, however, no more unnatural or pathological than the scere and yellow leaf which falls from the oak in autumn.

It, however, these senile changes occur prematurely, they will then be abnormal, and may be strictly regarded as morbid. Herein is one form of a pathological condition with which we have to deal—a premature decay arising from the various causes which bring the organism to an end, either from their operating with unusual force or from some inherent weakness in the body, which is unable to moderate their action. Now, if all these potent influences, instead of driving the mechanism too quickly, and so bringing it prematurely to an end, concentrate their forces upon one organ only, that organ would become, in ordinary parlance, diseased; but the process there set up may be of exactly the same nature as time would otherwise have produced. In comparatively young persons, for instance, we meet with fibroid and fatty changes in the heart and vessels, distention of the air-cells, alterations in the structure of bones and joints, which resemble in every respect those which age would have ordinarily induced. Therefore many of the conditions which we call disease seem nothing more than the result of the concentration on a particular organ of all those agencies which, under ordinary circumstances, bring about senile changes. These changes, therefore, although *crise* in character, are abnormal, and therefore may be rightly regarded as pathological.

The pathologist, therefore, cannot but regard the body in the first place in its physiological relations with its surroundings, and mark the alterations which time produces. The physiologist is aware that the production of force must be accompanied by loss elsewhere, seeing that gain and loss are equal, and therefore, in observing organic life, he must regard the destructive processes as well as the formative. He sees as if peep upon changes continually going on in relation with the atmosphere in which all living bodies

are steeped. The burning of the fuel in oxygen supplies the forces necessary for living processes; we therefore, although alive, are constantly being consumed. During so many years the body is undergoing combustion, or, we might say, slow destruction, and this process occurs much more rapidly in some persons and in some animals than in others. Why one creature should live longer or burn out sooner than another is not clear; why, for example, should a dog be worn out in ten or twelve years, its limbs be stiff, its sight and hearing impaired, its intellect obtuse, and senile changes be discoverable in its brain and elsewhere, when a parrot may take a century for the production of the same destructive changes? Why tissues of the same composition should wear out in one animal after ten revolutions of the earth when it takes a hundred revolutions to destroy similar ones in another, is by no means apparent. In man, if the destructive and reproductive changes are normally counterbalanced, the ordinary duration of life is reached. If the balance be not kept, the destructive agencies may be in the ascendancy, and life be shortened. If any of the ordinary surroundings which are always exerting their influences upon us, as various kinds of air, food, moral and mental moods, be in any way noxious, they may in time tend to premature death; and if they should act in such a manner as to cause localized organic changes, we should style these changes disease. There can be little doubt that a large number of maladies in England, as gout, Bright's disease, etc., are induced by mere excesses or inequalities in a mode of life which is considered ordinarily correct. It ought to be one of our studies to consider the relations of the human race to the soil, and observe all the circumstances which centuries have induced to bring about this normal or healthy relation between them. We might then observe the effects of the concentration of some of the more untoward of the influences which ordinarily environ it, as well as inquire into the effects of transplantation into another country. It seems that all the usual surroundings of life in civilized society, acting in undue proportion or in a more determined manner, induce a very large number of the diseases which we are called upon to treat.

In considering all these agencies working for what we call evil, and leading to destruction, we must not overlook an opposing law—that of reparation. Not only do we observe a production of living force in necessary association with a dissolution of material, but an ever-existing tendency towards the remaking of the injured tissues. We can scarcely think of a morbid change in the body which is not attended by another which has an opposite tendency. Every phthisical lung showing destruction of the tissue exhibits at the same time the attempt to limit the process and to save life by shutting off the escape of air from the lung or sealing the ulcerated blood-vessels.

Then, again, in considering the definition of disease, after having observed how large a number of maladies are produced by the influences of all our ordinary surroundings, we have to recognize those external causes of an extraordinary or specific character which prey upon the human frame, and often bring its machinery to an end. Now, if these causes are obviously parasitic, we are not witnessing so much the case of disease as the spectacle of one animal preying upon another. As regards the parasite, it is pursuing its normal life history, and as regards the patient or the host, he is simply being destroyed; the difference in his mode of

death from that which would result from the onslaught of a wild animal would consist merely in time. If a man fall a victim to the bite of a cobra, he is not said to die of disease; but the term is applicable if he die of glanders. There is this difference, however, in the latter case—the poison is not a natural one even in the infecting animal. If, however, in these infectious diseases the morbid cause be an animal or vegetable organism, although microscopic, then we really have to deal with the operation of one living being acting upon another, and the so-called specific malady exhibits nothing more than the natural course of life of certain specific organisms. The term disease, according to the definition, is here again scarcely applicable.

All these abnormalities of the human organism, under whatever conditions they may arise, suggest that as every branch of biological science is being studied in relation to the lower organizations, and according to the law of evolution, so must pathology become the subject of a large field of inquiry, and be made to embrace the diseases of all animal and vegetable life. The comparison of disease in man and animals may throw much light upon its nature, and it is remarkable that so few persons have been stimulated to the work, by considering the long controversy which has taken place as to the relation between vaccinia and variola, or hydrophobia and rabies. A true human pathology should have its basis in comparative pathology. Here lies a mine of wealth but little worked. As at the present time every structure and function of the human body is being studied in reference to its antecedents in the lower animals, so there can be no doubt that the various morbid changes to which it is liable may be also profitably discussed in reference to similar actions in more simple forms of life. The truth of this has been clearly seen by philosophers who have had no special acquaintance with our department of science. Thus Buckle, in his *History of Civilization in England*, says: "The best Physiologists distinctly recognize that the basis of their science must include not only the animals below man, but also the entire vegetable kingdom, and that without this commanding survey of the whole realm of organic nature we cannot possibly understand even human physiology, still less general physiology. The Pathologists, on the other hand, are so much in arrear, that the diseases of the lower animals rarely form parts of their plan, while the diseases of plants are almost entirely neglected, although it is certain that until all these have been studied, and some steps taken to generalize them, every pathological condition will be eminently empirical on account of the narrowness of the field from which it is collected." This is almost as true now as when written, several years ago; but we are pleased to think that our countryman, Sir James Paget, has already removed this slur upon our scientific procedure by his lecture on "Elemental Pathology," in which he shows the importance of observing the resemblances between the changes in the various tissues of man and the vegetable world, and also the deductions to be drawn therefrom.

Again, if the specific diseases be due to organisms, and the hypothetical *contagium vivum* be a reality, it must be subject to the same laws as other organic matter; and if the doctrine of evolution be true, it must have numerous relations with families of its own kind, and perhaps with others which are now obsolete. This idea has occupied the minds of several medical

men in this country, and it will no doubt further fructify in their hands.¹

A highly contagious disease prevailing in a particular locality may be exhibiting the differentiation of some more simple, less virulent, and widely-spread disorder. For example, a slightly contagious epidemic sore-throat might in course of time develop into a more virulent one until it culminated in diphtheria; and if this disease be due to an organism, the latter might have found a more genial soil for its development, or be altered by propagation and time, so that new properties might at last have been added to it. There may be a progressive development of infectiveness. Then, again, the doctrine of natural selection might obtain in the fact of some specific diseases remaining amongst us, while others have become obsolete. The same law, too, if allowed its full operation, might tend still more than it does to the subjugation of many hereditary diseases; for as these appear in youth, and often cause death, they would fade away by a process of self-destruction. As regards the specific diseases, we see again how the most susceptible persons would be struck out by the poison and the least susceptible remain, so that the poison would be modified in its virulence. We witness this fact in the more moderate characters of the exanthemata in all civilized nations, in comparison with the more profound effects produced by them in nations where the diseases had been hitherto unknown, as, for example, the fatality in the Pacific Islands of our comparatively mild British measles.

Besides the maladies which are induced by the evil influences of our ordinary surroundings, and those due to specific causes just named, there is a class of diseases styled new growths, which take a very large share in adding to man's mortality. The advance made in our knowledge of these structures is very considerable, and is still rapidly progressing towards a determination of their origin and the discovery of their relation to the normal tissues. These investigations are assisting us in discarding some of our older notions regarding their constitutional and malignant nature, and proving that many are accidental in their origin, and therefore may possibly be averted.

In these brief remarks we see how the simple definition of pathology as a deviation from the healthy standard fails in its application, and how wide is the range of subjects included in its domain. What these are, you, gentlemen, are about to illustrate in the different subjects which you will bring before the section.

INTRODUCTORY ADDRESS.

BY THE PRESIDENT OF THE SECTION ON SURGERY,

JOHN ERICH ERICHSEN, F. R. S., ETC.

GENTLEMEN,—Surgery is never stationary. To be stationary while all around is in movement would be practically to retrograde. But movement does not necessarily mean advance. The general direction of the movement may undoubtedly be forwards, but the factors of that movement do not all equally tend to progress. When the history of surgery comes to be written,—and this has never yet been done,—it will be found that the surgery of the nineteenth century has not been uniform in its progress in all departments; that its advance has not been continuously in one line, but that its progress has been materially affected by the prevail-

¹ Dr. Airy, Dr. Thorne, etc.

ing bias of the professional mind of the day. Anatomical at one time, physiological at another, the tendency of the surgery of the present day is influenced in one direction by the mechanical spirit of the age, and in another by the advanced pathology which is one of its chief medical characteristics. Yet the continuous advance of our art is undoubted. The gain that thus results has been definitively secured to surgery and to mankind. It can never be lost. Every conquest that has been made has been permanent. Year after year some new position has been won, often, it is true, after a hot conflict of opinion; but once occupied it has never been abandoned. Thus our standpoint has ever been pushed on in advance. For knowledge in science is cumulative, and skill in art is a tradition that is hereditarily transmitted from master to pupil, if not by the individual, yet by the profession to which he belongs, from which he has acquired and to which he bequeaths it, augmented and perfected by his own labors. With the knowledge of our predecessors we are familiar; to its stores each generation has added. What they have done has been transmitted to us, and we can readily accomplish. In what we can do, we may be sure, our successors will not fail.

It is well that from time to time this advance should be measured, this gain weighed. The business of this section is not only to measure the extent of the advance, but to determine the value of the gain, and to do this, not so much by the novelty of the practice, or by the brilliancy of its exposition, as by an estimate of its intrinsic merit, as shown by its proved utility. Our business here has to do with practical considerations, having reference to the recent advances in, or the future lines to be followed by, modern surgery.

The executive of this section has proposed eight subjects for the consideration of its members. It is hoped that these will be found to include the more important surgical questions that are at present most prominently before the profession. The short time at our disposal, which will scarcely enable us to do full justice even to these subjects, has prevented the possibility of our bringing forward other and perhaps equally interesting questions; but some of these will be found to have received consideration in the papers which will be read, either *in extenso* or in abstract, as time may allow.

I will now briefly refer to the more important subjects that have been set down for our consideration.

(1.) In no department of surgery has a more marked or a more brilliant advance been made of late years than in that which concerns the operative treatment of intra-peritoneal tumors.

The establishment of ovariectomy as a recognized surgical operation has now long been matter of history, but the perfection of safety to which it has of late years been carried, by the improvement of its details, has led the way to a vast and rapid extension of operative surgery for the cure or relief of various diseased abdominal organs. The uterus and the spleen, the stomach, the pylorus and the colon, have each and all been subjected to the scalpel of the surgeon; with what success has yet to be determined; and it is for you to decide whether some, at least, of these operations constitute real and solid advances in our art, or whether they are rather to be regarded as bold and kingly experiments on the endurance and reparative power of the human frame—whether in fact they are crowned triumphs or operative audacities. They must, indeed, be a credit to the progress of operative surgery

in this direction. Are we at present in a position to define it? There cannot always be new fields for conquest by the knife; there must be portions of the human frame that will ever remain sacred from its intrusion, at least, in the hands of the surgeon. May there be not some reason to fear lest the very perfection to which ovariectomy has been carried may lead to an over-sanguine expectation of the value and the safety of the abdominal section, and exploration when applied to the diagnosis or cure of diseases of other and very dissimilar organs, in which but little of ultimate advantage, and certainly much of immediate peril, may be expected from operative interference?

(2.) In the discussion of the next great question, I would submit that we may, with advantage, direct our attention less to the mere mechanical—the simple operative part of the business, the details of which are now well understood—than to the consideration of those higher questions as to the diagnosis and nature of the various forms of renal disease, in which nephrotomy and nephrectomy may be respectively used, with a reasonable hope of relief or cure. And in considering the prospects afforded by these operations in the improvement of the health and the mitigation of the sufferings of the patient, it is surely not the least interesting point for us to study the after-physiological effects produced on the system by the extirpation of so important an eliminatory organ as the kidney.

(3.) We naturally pass from the consideration of operations on the kidney to that of those which implicate the bladder; and in doing so we have specially to direct our attention to the question as to what advances have of late been made in lithotomy and lithotripsy.

In lithotomy we see much of change, possibly something of novelty, but not so certainly anything of real progress. Have we indeed advanced one single step either in the perfection or in the results of that operation since the days of Cheselden, of Martineau, or of Crosse, not to mention the names of more recent but equally illustrious surgeons and successful operators? The revived median, the combination of it with lithotripsy, the suprapubic, whether done antiseptically or not, have certainly not been very encouraging in their results, and can scarcely claim to be considered in the light of an advance on the old lateral operation in skillful hands. But yet we must admit that these methods of lithotomy may deserve this consideration—that possibly, in some forms of calculus, and in certain conditions of the urinary organs, a wise eclecticism may be exercised in the choice of one or other of them.

In lithotripsy, however, it is probable that a great and real advance has been made, and certainly it is undoubted that a complete revolution has been effected by the enterprise and skill of one of our American brethren, for it cannot be questioned that "Bigelow's operation" has completely changed the aspect of lithotripsy, and there is every reason to believe that it constitutes one of those real advances in a method which marks an epoch not only in the history of the operation itself, but in the treatment of the disease to which it is applicable.

But here a fertile field opens up for our deliberation. We have to consider not only in what cases as regards the mere size of calculus, "Bigelow's operation" may safely be used; but also, and far more important than this, the ultimate result both upon the bladder and the kidney of prolonged intra-vesical instrumentation. The mere question as to the compar-

ative advantages of removal of stone by one or by several sittings, is dwarfed by the more important one of determining the state of the bladder that results, not perhaps so much as concerns the life as the future comfort of the patient. It is here that information is much needed, and it is here that unfortunately, but for very obvious reasons, the lithotritist himself may in many cases be unable to furnish it.

(4.) Pre-historic man was doubtless a victim of injury before he became the sufferer from disease, and the treatment of wounds constituted probably the first effort of the healing art. From the earliest dawn of human intelligence the attempt to cure a wound must have suggested itself to man, and yet at the close of the nineteenth century we are still discussing the best methods of doing this, and the causes of their failure. There is still difference of opinion and of practice amongst surgeons, not only as to the comparative advantages of the "open air" method, and that in which all atmospheric contact is carefully guarded against; of the "dry" and of the "moist" system of dressing; as to whether the "antiseptic method" in a modified form sutures, or whether the more elaborate system of local treatment before, during, and after an operation, which has been devised by the skill and worked out by the unwearied labor of Lister, be essential in all cases of operation wound. Not, of course, for its primary union—for this may be obtained by any and every of the methods mentioned. If it be contended that this system is necessary for the safety of the patient, and the due healing of the wound in some cases, has it been proved to be equally essential in traumatic lesions of all tissues, of all organs, and of all regions? These are questions that may well deserve the consideration of this section. But there are others of a yet wider character that must also engage our attention in any discussion on the best methods of securing primary union in wounds, for it is impossible to fail to recognize in the general constitutional state of the patient a most important factor in this direction; and we should be taking a narrow view of this many-sided question, if we did not give due weight to the influence of those hygienic conditions which, if faulty are inimical, or even destructive to, the due performance of those actions which are necessary for the maintenance of the organism in a healthy state, and for the proper nutrition and consequent repair of the tissues of the body. Is there no fear that in some of the modern systems of treating wounds we are in danger of expending all our precautions in the prevention of the local and of ignoring the risk of a constitutional infection?

(5.) The treatment of aneurism is one of those great questions which from an early period in the history of modern surgery has occupied the attention of practitioners, and has undergone no little fluctuation. A few years ago the battle between the ligature and compression appeared to have been decided in favor of the latter; but the invention of improved ligatures, made of various kinds of animal tissue, and applied with antiseptic precautions, has once more inclined the balance of professional opinion towards the Hunterian operation. But now again the practice of compression has received renewed strength from the employment of Esmarch's elastic bandage in the cure of certain forms of external aneurism, and it is for you to determine in what cases it can be used with advantage, and in what way a cure is effected by its means. For in the treatment of aneurisms, as in that of so many other

surgical diseases, the wiser and more scientific course is to follow a judicious system of selection in the method to be employed in each particular case, rather than to subject all to one unbending line of practice.

(6.) The treatment by re-section of some forms of chronic and otherwise incurable joint diseases, has in certain articulations, and at suitable ages, met with the universal approbation of surgeons, and the wide extension of the principles of "conservative surgery," is one of the most striking evidences of advance in our art in modern times. Re-section has, however, of late years come to be extensively applied to the treatment of cases of articular disease which formerly were subjected to procedures of a less heroic character; and it will be for the members of this section to weigh carefully the wisdom of such a measure, and to contrast its results, both as regards life of patient and after utility of limb, with those which may be obtained from the employment of milder means, such as absolute immobility with extension, and possibly, in some cases, simple incision of the articulation.

(7.) In considering the relations between adenoma, sarcoma, and carcinoma in the mammary gland of the female, I would venture to submit that this subject has to be discussed here from its clinical rather than from its pathological side. We have here less to do with the ultimate structure of the tumors, with their histological affinities, with the parts that are played by epiblasts and mesoblasts, with what epithelium or connective tissue cells can or cannot do, than with their clinical history, their differential diagnosis in their earlier stages, the best time for their removal by operation, the liability to recurrence after operation, and the possibility in recurrence of the substitution of one form of disease for another. With these, and such questions as these, we, as clinical surgeons, may advantageously occupy ourselves.

(8.) The last subject set down for discussion is one that has practical bearings of an importance that cannot be overestimated. There are few questions of the present day of deeper surgical or social interest than the far-reaching, the apparently illimitable, and most pernicious, extension of a syphilitic contamination of organs and of tissues; of the modifications impressed by it on other diseases that are the local developments of diatheses, whether strumous, tubercular, rheumatic, or gouty. Does the diathesis exercise any influence upon the form assumed by the syphilitic disease, and to what extent does it modify the characters presented by it in its primary and its secondary affections, more especially when the latter manifest themselves upon the skin or in the bones; how far are gummata and caries, psoriasis and rupia the consequences of a constitutional impress, influencing the direction of the syphilitic poison? To what extent may rickets and gray granulations be the ultimate products of the syphilitic taint? These and various other questions will probably occupy the attention of those who enter on the discussion of this wide-spreading subject.

We hope to be able to take the discussion of two questions on each day, so as to work through the eight in the time allotted to us. In addition to these there are various detached papers on subjects which are of much interest, but which scarcely admit of being classified under one or other of the above heads of discussion. These we shall take up as time and opportunity admit, but their number is so great that it is to be feared that full justice can scarcely be done to all, and

that it will be unavoidable, on account of the limited time at our disposal, that a large number be read in abstract.

OPENING ADDRESS IN THE SECTION ON OBSTETRICS.

BY ALFRED H. McLINTOCK, M. D., LL. D.,
President of the Section.

In opening the obstetric section of this Seventh International Medical Congress, the first and most gratifying duty that devolves upon your President is to offer an earnest and hearty welcome to those obstetric members who have come from other nationalities, and from distant British colonies, to take part in this, the largest convention of medical men that has ever, perhaps, assembled together at any one time or place.

I present this cordial salutation, not only on the part of the officers and council of the particular section over which I have the honor to preside, but also on the part of the obstetricians and gynecologists of England, Scotland, and Ireland.

We are proud and happy to meet here on British ground so many of our brethren from various parts of the civilized world, but especially from Germany, France, and America, and to accord them a friendly greeting, not only out of respect to their individual merits and high reputation, but as representing those great obstetric schools over which the names of Mauriceau, Levret, Baudelocque, and Dubois; of Roederer, Siebold, Naegele, Kiwisch, and Seanzoni; and of Bard, Dewees, Meigs, and Hodge, have severally shed such imperishable lustre!

Not the least of the important objects contemplated in this Congress is the interchange of friendly feelings among its members. I am fully persuaded that our reunions will be attended, not alone with benefit to us all by the attrition of mind with mind,—but that new friendships will be formed, and old friendships confirmed, and that sentiments of mutual respect and regard will be developed, so as to strengthen the bond of brotherhood which should unite us as fellow-workers in the same department of medicine.

Allow me, before going further, to express my deep sense of the unexpected, unmerited dignity which the Congress has conferred by putting me into the position of President of this important Section; I feel it to be the highest and most flattering honor of my long professional life. Such a compliment more than repays me for forty years of labor and devotion; for it sets the seal of approval by contemporaries on my past life, and leaves nothing further or higher to aspire to in the way of professional distinction. At the same time, gentlemen, this feeling of just pride and exaltation is mingled with a very poignant sense of incapacity, and I might well shrink from the responsibility of the post, but that in the discharge of its duties, I shall have the aid and cooperation of such accomplished men as those who constitute the Vice Presidents and Council of the section; they in truth are the giants on whose shoulders I am raised to the exalted position it is my good fortune to occupy in this Congress.

Inasmuch as this is the first occasion of the International Medical Congress meeting in London, it may not be inappropriate if I pass in review some of the more prominent among the many eminent obstetricians who lived and practiced in this city, who by their writings, teaching, and discoveries have contributed in no

small measure to the development of midwifery and gynecology, as well as to the medico-chirurgical fame of London.

I must, however, study brevity, being desirous, if possible, to keep within the fifteen minutes allowed for the readings of communications, so as to set an example of obedience to the rules of the Congress.

In this retrospective glance, I find only one name standing out in the sixteenth century, Thomas Raynald, the translator of Eucarius Rhodion's celebrated treatise, *De Partu Hominis*. The original English edition, by Raynald, appeared about 1540, and was the first distinct treatise on Midwifery in the English language, and for over a hundred years was the sole guide and text-book of obstetric practitioners, male and female.

In the early part of the seventeenth century, the immortal William Harvey (*tanto nomini nullum par enlogium*) stands forth conspicuous, the splendor of his fame increasing as years roll on. He spent most of his time here, being physician to the King; and he delivered courses of lectures, at the Royal College of Physicians, on anatomy and surgery. As a practitioner we know from the testimony of his contemporaries that Harvey excelled in midwifery, and in the treatment of female diseases.

Before the publication of his celebrated exercises on generation, parturition, conception, etc., there were, according to Dr. Aveling, "but three works on midwifery in our language; these were translations from Rhodion, Rueff, and Guillemeau. His was the first book on midwifery written by an Englishman, printed in our own language, and the influence which it had upon the practice of the time would with difficulty now be estimated. His claim therefore to eminence in our department of medicine is beyond question." With this conviction on our minds, we shall the more heartily yield our applause when his magnificent memorial statue is unveiled at Folkestone, the place of his nativity, on Saturday next,—a ceremony, I may remark, which has with good taste and judgment been purposely so arranged that this great Medical Congress may take a part in showing honor and respect to the memory of one of the greatest discoverers in the science of medicine, and, consequently, one of the greatest benefactors to the human race.

Contemporary with Harvey was another remarkable man, Peter Chamberlen, the inventor of the midwifery forceps, indisputably the most valuable instrument of the whole *armamentarium chirurgicum*. Unfortunately for him, however, the brilliancy of his reputation is obscured by the unworthy selfish conduct which caused him to keep the instrument a secret for the aggrandizement of himself and family. He was father of Dr. Hugh Chamberlen, the translator into English of Mauriceau's works. There is a handsome monument to the memory of this Dr. Hugh Chamberlen in Westminster Abbey, erected by his patron and friend, the Duke of Buckingham. No less than five generations of the Chamberlen family were eminent in the medical profession here; and Dr. Peter, who attained a great age, had been physician to five English sovereigns.

Towards the close of this (seventeenth) century, Richard Wiseman, "Serjeant Chirurgion" to Charles I., published his treatise on surgery, in which he gives an excellent description of pelvic abscesses, consequent on parturition. He thus anticipated Puzos' essay on the same disease, and put forward much more rational and correct views as to its pathology.

The eighteenth century was destined to see a marvellous development of midwifery, as well as of many other arts and sciences. As might therefore be expected, London can boast of several eminent obstetricians at this period.

In chronological order, the first to be mentioned is Dr. John Arbuthnot, F. R. S. and F. R. C. P., physician to Queen Anne. Although he has left no enduring evidence of obstetric superiority, yet he was an eminent accoucheur in his day, and reflected infinite credit on our order by his rare literary talents, his deep scholarship, and his exalted social position. He was skilled in everything that related to science, and held a prominent place among the ablest writers and wits of that Augustan age; one of whom (Swift or Pope) alludes in his poetry to

"Arbuthnot's soft obstetric hand."

A man who was considered a friend and an equal by Parnell, Gay, Bolingbroke, Swift, and Pope could not fail to adorn any pursuit to which he devoted his vast intellectual powers. Speaking of him, Swift said, "He has more wit than we all, and his humanity is equal to his wit." A higher tribute could not have been paid him.

The next to be mentioned is Dr. John Maubray, not on account of any peculiar merit in either of his works, — *The Female Physician*, and *Midwifery brought to Perfection*, — but because he is reputed to have been the first public teacher of midwifery in this country. He lectured, Dr. Denman tells us, at his house in Bond Street, so far back as the year 1724.

Nearly cotemporary with Maubray was Dr. Edmund Chapman. He was the second public teacher of midwifery in this city, and is entitled to our lasting gratitude for having been the first to publish to the world a description of that "noble instrument" (to use his own phrase), the obstetric forceps, the secret of which the Chamberlens kept to themselves for over fifty years. This he did in the *Edinburgh Medical Essays*, and subsequently in his treatise *On the Improvement of Midwifery chiefly with Regard to the Operation*: the operation meaning the application of the forceps. The first edition of this book came out in 1733.

About this same period also lived Sir Richard Manningham, F. R. S., a man of considerable learning and of great reputation as a successful midwifery practitioner. He was author of some obstetric works of temporary consequence, and his claim to remembrance arises from the circumstance that in the year 1739 he opened a ward in the Parochial Infirmary of St. James', Westminster, exclusively for the reception of parturient women, which was the first thing of the kind in Great Britain. Shortly afterwards the idea was taken up and enlarged upon elsewhere, and the great Lying-in Hospital of Dublin was founded by Dr. Bartholomew Morse, being the first hospital of the kind in the British Dominions.

The very same year that Sir Richard Manningham opened his obstetric ward in St. James's Infirmary, as we have just seen, a surgeon from a small country town in Scotland established himself here in London as an accoucheur, who ultimately effected the greatest reformation that had yet taken place in the principles and practice of obstetrics. This man was William Smellie, a name always to be respected wherever midwifery is cultivated as a science. For twenty years

Smellie practiced and taught here, and published the first volume of his celebrated treatise in 1751, and his splendid anatomical plates in 1754. Amongst his pupils who later on became eminent in the same branch of medicine were William Hunter, Denman, David McBride (of Dublin), John George Roederer (subsequently Professor of Midwifery at Göttingen), Dr. James Lloyd, of Boston, U. S., and Dr. William Shippen, afterwards Professor of Midwifery in the Pennsylvania University; these last being, according to Professor Parvin, "the two first American obstetric practitioners." Most gladly would I linger over the life and works of this great man, but I must content myself with a few sentences.

Smellie possessed a wonderful capacity for work, and a clear judgment; but beyond and above this he was endowed with a singularly accurate perception of facts, which made him as well as a close observer of nature. Herein lay the secret of his unrivaled success as a reformer and improver of midwifery. He himself felt this to be so, for in reviewing his practice, he says, "I diligently attended to the course and operations of nature which occurred in my practice, regulating and improving myself by that infallible standard." (Case 186, Sydenham Society Edition.) Truly, he was, in the words of Dr. Hugh Miller, a "noble character and an example of earnest living."

A couple of years after Smellie settled in London, there came to live with him a young man from the Scottish county — Lanarkshire — of which Smellie himself was a native. This young man was no less a person than William Hunter — a name familiar to you all — whose plates and descriptions of the human gravid uterus have gained their author a foremost rank among obstetric writers. By his great reputation as a lecturer and as an anatomist, aided no doubt by his prepossessing appearance, polished manners, and cultivated mind, Hunter proved a successful competitor of Smellie's in practice. Like him, he also gave special courses of lectures on midwifery, MS. notes of which are to be found in many libraries. Dr. Matthews Duncan tells us the College of Physicians possesses two pretty complete volumes of such notes.

In 1748, Hunter was appointed surgeon and man-midwife to Middlesex Hospital, and soon afterwards to the British Lying-in Hospital; for though the Physicians claim him as belonging to themselves, yet it cannot be disputed that Hunter was a surgeon, and a member of the Corporation of Surgeons of this city.

Besides being a rival, he was in some respects a contrast to Smellie. The school of obstetrics founded by the latter was not inaptly described by the late Tyler Smith as the mechanical school, from the importance it attached to the resources of art in aiding parturition. Hunter, on the other hand, placed extraordinary reliance on the powers of nature, and trusted too much to tincture of time. Hence his followers have been designated the physiological school; and through the influence of his commanding authority, they formed a large section of the profession, and could boast some great names.

Although we may regard Hunter as one of ourselves, and appropriate much of the glory with which his name is invested, yet it is necessary (as Dr. Duncan observes) with a view to justice to point out that his obstetrical fame is chiefly anatomical, and that his greatest claim on our admiration and gratitude arises

from his anatomical work and influence." (Harveian Address, 1876.)

It is a just boast of the English school of midwifery that what, in the truest and strictest sense, is "the most conservative of all the resources of our art," was first formally admitted a place among obstetric operations, in this city and about the year 1756. The recognition by the profession of the artificial induction of premature labor was the outcome of a medical conference held at the time and place just mentioned. Who was the first or most strenuous advocate of the operation at that conference does not appear; but we do know that the first to put it in practice was Dr. Macaulay, a midwifery practitioner of this city. It is natural and just, therefore, to identify his name with this most beneficent measure, and to accord him a prominent place among the many distinguished accoucheurs who lived and practiced here.

One of the greatest ornaments of that physiological school of accoucheurs — founded we may say by William Hunter — was Thomas Denman, a man of remarkably sound judgment, great prudence, and of the highest moral integrity. Throughout half a century he lectured and practiced in this city. His work, entitled *An Introduction to the Practice of Midwifery*, is well known to most of you. It has many peculiar excellencies, but to my mind the chief is his classification of labor, which is at once comprehensive, pathological, and practical, and thereby serves the highest purposes of any system of classification.

Did time permit, I could multiply these brief sketches so as to include many other London obstetricians who lived since the commencement of the present century, of less note, it is true, but yet men who stood far above mediocrity, and who, by their writings, their teaching, and their practice, materially aided the advancement of midwifery and gynaecology. I must content myself, however, with a mere recital of their honored names, namely: John Clarke, Orborne, Leake, Bland, Merriam, Charles Clarke, Gooch, David Davis, Blundel, John Ramsbotham, Marshal Hall, Robert Lee, Robert Ferguson, Rigby, jun., Francis Ramsbotham, Granville, Ashwell, Lever, Locock, Waller, Murphy, Tyler Smith, Oldham.

These men all lived so near our own times (at least those of us who, like myself, have reached the grand climacteric), that the bare mention of their names at once recalls the titles and the nature of their respective contributions to the funded capital of our professional knowledge.

Of the living obstetric celebrities, who make this city the scene of their work and their influence, I purposely refrain from speaking: —

"My thoughts are with the dead; with them
I live in long past years,
Their virtues love, their faults condemn,
Partake their hopes and fears;
And from their lessons seek and find
Instruction with an humble mind."

(SOUTH.)

But, to a more worthy occupant of this chair at some future meeting of the Congress, after we have played our little parts in life's drama, I bequeath the grateful, pleasing task of supplementing the above list with the names of those eminent London obstetricians and gynaecologists, whom to meet and to know is assuredly the most gratifying of the many privileges connected with this great international gathering.

"THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

INAUGURAL ADDRESS IN THE SECTION OF ANATOMY.

BY PROF. W. H. FOWLER, LL. D., F. R. S., F. R. C. S., ETC.,
President of the Section.

While thinking over various subjects for an address with which to open the business of the section over which I have the honor to preside, it has occurred to me that the time which has been allotted by the arrangements of the Congress for the purpose, may be made most useful to my hearers, if, instead of entering upon a discussion of any abstract question, I were to ask your attention to a subject upon which I may possibly be able to give a little information of practical use to members of the Congress during their visit to this city.

No class of persons can appreciate so fully the importance and value of museums as those whose occupation it is to study the form and relations of the various parts of the body, whether of plants, animals, or man.

Our science would make little progress if the objects of our inquiries, once used for examination or description, were then thrown aside, and those coming after were denied the opportunity of which we have availed ourselves. A museum is a register, in a permanent form, of facts, suitable for examination, verification, and comparison one with another.

Hence, ever since serious attention has been awakened to the interest of anatomical studies, museums have always been important adjuncts to their successful prosecution, and the preservation of the various structures of the body has occupied the attention of very many anatomists, since the time of the great Italian teachers of the early part of the seventeenth century, with whom, apparently, the art commenced.

We have in London, as you are all aware, a museum which stands, in some respects, in a peculiar position, differing perhaps from any in the world in its origin, its scope, its method of maintenance, and its relation to the profession and to the state, in which, for very nearly twenty years, it has been my privilege to pass my days. It has occurred to me that a few words in explanation of the history, arrangement, and contents of that museum might add to the interest and profit of those visits which I trust every one here will find time to pay to it during the meeting of the Congress.

The great mind of John Hunter, far in advance of his age, — and, it may be, even of ours, — saw at one glance the vast importance of biological science, and the best means to further its pursuit. To this end he founded his museum, and directed by his will that it should always be maintained in its integrity. Wherever civilized men are gathered together there are now minds who feel what Hunter felt. The necessities of such minds have created in every country in Europe, and the enlightened parts of the New World, museums designed to serve in their different degrees the same functions as our Hunterian collection. Such museums are evidently national needs; they have already come, though not by any means to the extent they will in future come, to be looked upon as an essential portion of the educational machinery of the state. Such museums are, in almost every capital of Europe, supported directly at the expense of the state, or are connected with some great educational institution dependent upon Government for aid. In England alone the need has

¹ Slightly condensed from the advance sheets.

been supplied, first, by a private individual, and secondly by a private, or semi-private institution, composed of members of a single profession, with only occasional assistance from the state. In this country the state (and therefore every individual composing it) is indebted to John Hunter and the Royal College of Surgeons for relieving it of the burden, which must otherwise have fallen upon it, of providing that portion of the national education afforded by a biological museum.

The period occupied by John Hunter in the formation of his collection was all comprised between thirty years — 1763, the date of his return from service with the army in Portugal, and 1793, that of his death. The labor which he accomplished during this time was something prodigious, as has often been recounted in various biographies and Hunterian "orations." Notwithstanding all that has been written and said, it is impossible to do justice to his wonderful activity and industry. In nothing, however, were these qualities so conspicuous as in the formation of his museum.

Public museums at that time scarcely existed. The British Museum was little more than a library and gallery of art: the small cabinet of natural history, reinforced by the old collection of the Royal Society, scarcely made any show. Anatomical specimens, even bones and teeth, were looked upon with disfavor. Some that had accidentally found their way into the collection were, even within the present century, treated as intruders, and turned out without much ceremony.

Teachers of anatomy were forming their own private collections, but these were all eclipsed by those of the two Hunters, William and John. That of the latter, especially, grew to such an extent as to become in some sort a national and public institution. He built a large room to contain it in Castle Street, at the back of his house in Leicester Square, and when finally arranged there, so much interest was taken in it that he found it necessary to open it to public inspection at certain stated times. Still it was maintained entirely at his own cost, and it is stated that by the time of his death he had spent upwards of £70,000 upon it. Whether this estimate be correct or not, his expenditure on it must have been very great, as, though he had for many years made one of the largest professional incomes in London, his museum was the sole property he left behind.

John Hunter was a very miscellaneous collector — minerals, coins, pictures, ancient coats of mail, weapons of various dates and nations, and other so-called "articles of *virtu*" engaged his attention. These, however, and his furniture and books, had to be sold to meet the most pressing needs of the family. What would be now called the "biological" part of his collection was kept intact, during the six years which elapsed between his death and its purchase by the English Government in 1799. The preservation of the collection during this period is mainly due to the devotion of William Clift, Hunter's last assistant, whose services were retained for this purpose at a very small salary by the executors, Sir Everard Home and Dr. Matthew Baillie, and whose fidelity was rewarded by his being appointed the first "Conservator" of the collection after it came into the possession of the College of Surgeons.

The story of the negotiations with a government whose interests and energies were then concentrated

upon the great Continental war, and the answer of the Prime Minister Pitt, when applied to on the subject, "What! buy preparations! Why, I have not money enough for gunpowder," are well known. These difficulties were, however, overcome, and on the recommendation of a committee of the House of Commons appointed to inquire into the subject, the sum agreed to by the executors, namely, £15,000, was voted for its purchase on the 13th of June, 1799. Then came the question what was to be done with it. There was at that time no department of government under the care of which such a collection could be placed. The condition of the British Museum has been already alluded to. The now flourishing and all-absorbing "department of science and art" had not been invented. There was one body in London which might be supposed to have some special interest in the maintenance of such a collection, — the venerable and dignified College of Physicians, — but that body, it is commonly reported, demurred to accept it on the ground of want of funds to meet the annual expense of its maintenance. With reference to this report Dr. Pitman has been kind enough, in response to my inquiries, to examine the archives of the College, and finds that there is no record of any such offer having been made or refused. If any negotiations were entered into they must, therefore, have been of a purely informal nature.

There was still another corporate body, — a comparatively obscure one at that time, — the Corporation of Surgeons, which had only separated itself some fifty-four years before from the old City Company of Barbers and Surgeons,¹ and although it had thrown off the connection which restrained its members from assuming the position of cultivators of a liberal profession, it had as yet done little to raise itself in public estimation, and had few resources from which to provide for the expenses of such a collection. Nevertheless, the Court of the Corporation determined by a unanimous vote on December 23, 1799, to accept the Museum on the terms proposed by the government, and almost simultaneously obtained a new charter, under which they became The Royal College of Surgeons, a body accredited by government to examine all persons wishing to practice surgery in the kingdom, and migrated from their old quarters in the city to the house in Lincoln's Inn Fields, round which the present establishment has grown up.

Thus John Hunter's Museum and the College of Surgeons of England, though of entirely independent origin, have had their fortunes inextricably intermixed, since the former became national property, and the latter took the title and position it now holds.

The College is still the principal examining body for those who practice surgery throughout the kingdom. It takes no part directly in professional education, though it exercises a considerable indirect influence by the manner of conducting its examinations, and by the

¹ By an act of Parliament, passed in the eighteenth year of the reign of George II., entitled "An Act for making the Surgeons of London and the Barbers of London two separate and distinct Corporations," it was enacted that the union and incorporation of the Barbers and Surgeons of London, made by the Act of the thirty-second year of King Henry VIII., should from and after the 24th day of June, 1745, be dissolved, and that such of the members of the said united Company who were Freemen of the said Company, and admitted and approved Surgeons, within the Rules of the said Company, and their successors, should from thenceforth be made a separate and distinct Body Corporate and Commonalty Perpetual, which at all times thereafter were to be called by the name of "The Master, Governors, and Commonalty of the Art and Science of Surgeons of London." The first Charter of the Company dates from the first year of the reign of King Edward IV. (A. D. 1461).

curriculum it requires from candidates. Its revenues are mainly derived from the fees paid for the diplomas which it grants, which, for the last ten years, have averaged three hundred and eighty-three a year. In former times these fees considerably exceeded the expenses of the comparatively slight examination required from candidates, and the surplus, besides defraying the current expenses of the Museum and Library, was devoted to the erection of the present buildings, and the acquisition of the freehold property and invested capital of the College. It says much for the personal disinterestedness of the eminent members of the surgical profession who have constituted the Court of Examiners, and who until very lately were practically the ruling body of the College, that they fixed their own remuneration at so low a rate as to permit an expenditure during the present century upon the purposes just indicated of a sum which cannot be estimated at less than £100,000. Now, owing to the more searching and practical character of the examinations, the expenses of conducting them have augmented to such an extent as to be scarcely more than covered by the payments of the candidates; and but for the proceeds of the investments made under different circumstances, the College would not have the means of carrying on the scientific work it has undertaken.

The various professorships and lectureships that are attached to the College have grown up chiefly in consequence of one of the conditions under which the Hunterian Collection was entrusted to it by government, — that a course of no less than twenty-four lectures shall be delivered annually by some member of the College upon comparative anatomy and other subjects, illustrated by the preparations. Other lectureships have been founded by private benefactions, but these are of limited number, or on special subjects, and are intended, not so much for the education of students, but rather as the means of introducing new discoveries or ideas to members of the profession and others interested in scientific pursuits, to all of whom they are freely open without payment.

Besides the Museum, the College has added to its means of benefiting its own members and the profession generally, a library containing every important work and periodical upon surgery, medicine, anatomy, and the collateral sciences.

During the first six years after the collection came into the possession of the College it remained in the gallery in Castle Street, which had been built by Hunter for its reception; but in 1806, the lease of the premises having expired, it was removed temporarily to a house in Lincoln's Inn Fields, adjoining the College of Surgeons, while the building in which it was destined to be lodged was preparing for its reception. This building, towards the erection of which Parliament contributed the sum of £27,500, was completed and first opened to visitors in 1813.

The Museum was greatly enlarged, entirely at the expense of the College, in 1835, and a still more important addition, that of the great eastern hall, was completed in 1855. Towards the expense of this Parliament contributed a further grant of £15,000, the whole of the rest of the expenses of the purchase of the site, the building, and the annual maintenance of the Museum having been borne by the College.

In keeping the Hunterian Collection, the College of Surgeons undertook a heavy responsibility, weight-

ier perhaps than was contemplated at the time. Although not required by the letter of the contract to do more than preserve Hunter's specimens, the College undertook the charge in the spirit of the founder, and thus made itself responsible for maintaining such a collection as should meet the requirements of the ever-expanding and vigorous young science to which it ministers. Hunter's collection was held to be the nucleus of a national biological museum, and its preservation and augmentation by the College has certainly prevented the formation of such a collection by the state.

Hunter was no specialist, and even after eliminating the non-biological subjects before alluded to, a very miscellaneous collection remained: illustrations of life in all its aspects, in health and in disease; specimens of botany, zoölogy, paleontology, anatomy, physiology, and every branch of pathology; preparations made according to all the methods then known; stuffed birds, mammals, and reptiles, fossils, dried shells, corals, insects, and plants; bones and articulated skeletons; injected, dried, and varnished vascular preparations; dried preparations of hollow viscera; mercurial injections, dried and in spirit; vermilion injections; dissected preparations in spirit of both vegetable and animal structures, natural and morbid; undissected animals in spirit, showing external form, or awaiting leisure for examination; calculi and various animal concretions; even a collection of microscopic objects, prepared by one of the earliest English histologists, W. Hewson.

It is very difficult to compare the present Hunterian Museum, as it is still often called, although officially only recognized as the Museum of the Royal College of Surgeons of England, with any other existing collection, as its nature and the character of its contents have been determined by several accidental circumstances rather than by any very settled purpose. Originally a private collection, embracing a large variety of objects, it has been carried on and increased upon much the same plan as that designed by the founder, with modifications only to suit some of the requirements of advancing knowledge. The only portions of Hunter's biological collection which have been actually parted with are the stuffed birds and beasts, which were transferred to the British Museum, and a considerable number of dried vascular preparations, which, having deteriorated from age and decay, have been replaced by others preserved by better methods. Of the various departments of which the Museum now consists, very few, in fact only the collection of illustrations of skin diseases, and the collection of surgical instruments, are not the direct continuation of series founded by John Hunter.

To find an analogous institution to the Museum of the College of Surgeons, in Paris, for instance, we should have to combine the collections of comparative anatomy and anthropology at the Jardin des Plantes, and even a portion of the separate paleontological collection at that establishment, the collection of human anatomy of the Musée Orfila, and that of pathological anatomy of the Musée Dupuytren. If these were all brought together under one roof, and somewhat compressed and rearranged, we should have something in its nature resembling the Museum of which I am now speaking.

In this combination on one spot, and under one management, of so many diverse collections, we have

a survival of a condition of scientific knowledge more characteristic certainly of the last century than of the one in which we live; but in this age of specialities it is well perhaps to be reminded by such an institution of the essential unity of biological knowledge, and of the important illustrations which one branch of it may afford to another, especially when the detailed facts are to be combined for the purpose of philosophical generalization.

In visiting the Museum, and in the comparison which may be instituted between it and others of its kind, it is important to recollect this origin and history, as they will account for many shortcomings. It must not be forgotten that to its comparative antiquity (for it is certainly the predecessor and prototype of all the anatomical museums of this country and of America, and to most of those on the Continent) is due many faults of construction and arrangement which should not be found in a building designed with the knowledge and experience of recent years. I have elsewhere pointed out what I consider the chief of these.¹

Though the large size of the principal rooms allows of a fine *coup d'œil*, such a construction does not permit of that separation and distribution of the different series which is desirable for the purposes of study. Human anatomy, invertebrate zoölogy, and pathology, for instance, come into such near juxtaposition as to produce some confusion in the minds of strangers, though familiarity with the arrangement soon disperses the difficulties at first met with in finding the situation and limits of the particular department required. The narrowness and unprotected condition of the shelves in the galleries is also a radical defect now, unfortunately, irremediable. Furthermore, the indulgence of those who have the happiness to live elsewhere than in the absolute centre of a population of four millions of coal-burning people must be asked for certain dusky results of such a situation, which no amount of care and expense can obviate.

I must now ask leave to be your guide to some of the contents of the Museum, as it is at present arranged, and will take the different branches of biology which are illustrated in it in some kind of order, beginning with the part which relates to life in a normal condition. Hunter's collection and observations were not limited to the animal kingdom. Wherever any physiological process could be illustrated by vegetable life, vegetables were pressed into the service, as may be seen in the physiological gallery, and by the Memoranda on Vegetation left by him in MS., and printed by the College in 1860. In his collection were many portions of various recent plants, and a series amounting to 184 in number of fossil woods, fruits, and impressions of stems and leaves. These specimens, with some additions made in former years (for since the great development of the parts of the Museum more essential to the general purposes of the institution, it has been necessary to restrict the growth of such branches as are more fully and advantageously illustrated elsewhere) are arranged in the large wall-case on the right hand side (on going in) of the entrance door of the first or western hall.

The zoölogy of invertebrate animals largely attracted Hunter's attention. Many of the treasures collected in the famous voyages of Captain Cook came into his possession through his friend, Sir Joseph Banks. He purchased, whenever opportunity offered, as at the

sale of Mr. Ellis's famous collection of corals and zoophytes. In 1786, at the sale of the Duchess of Portland's museum, he bought, for fifteen guineas, the fine *Pentacrinus* now in the Museum, of which very few examples had then been found. Of insects, especially *Lepidoptera*, he had a large series. Of fossil invertebrates, as many as 2092 specimens are now recorded in the catalogue as Hunterian. The series of fossil cephalopods is remarkably rich.

Such invertebrate animals as are dissected or illustrate any special anatomical fact, are arranged in the so-called physiological series in the gallery, to be described presently, but beyond these there remained a vast number of specimens only showing external form, which by selection and arrangement have been lately formed into a special zoölogical collection, intended to introduce the student to a general knowledge of the principal forms of animal life, and to the mode in which they are grouped.

Although locally far removed, occupying one portion of the upper gallery of the middle Museum, a small but interesting special collection, illustrating the subject of helminthology, may be mentioned here. It was thought that the importance in a medical and social point of view of those animals which infest the interior of man and the principal domestic and other animals, justified a more extended exhibition of their modifications than could be assigned to any other group of animals of such inferior organization, and by the aid of the well-known helminthologist, Dr. Spencer Cobbold, the present collection was arranged and catalogued in 1866, the materials being mostly already in the collection, though scattered in other series or hidden in the storerooms. The collection contains upwards of two hundred specimens, and may still be somewhat extended. The intention is to show every parasitic animal which, under any circumstances, can affect the human body, and a selection of the principal types of those that inhabit the lower animals, especially such species as are associated with man. If increased beyond these limits, the collection would become interesting only to the student of detailed systematic zoölogy, and therefore not a legitimate object for our Museum.

I will pass next to the section of the Museum which is, perhaps, altogether the most characteristic, and is certainly the most eminently Hunterian. It was specially the creation of his mind, is still arranged almost exactly as he left it, and, notwithstanding the very numerous additions, still contains a larger proportion of Hunterian specimens than any other department. This is the collection which is called *Physiological*, because the specimens in it are classified mainly according to their supposed function. Physiology, as we know it now, is scarcely a subject which can be illustrated in a museum. The processes and actions which take place in the living body are not to be shown in bottles, but the organs, through the medium of which physiological processes are performed, can be, and it is these which are illustrated in this collection. It is more truly a collection of comparative anatomy, or morphology as we should now call it. It shows the variations in form which the different organs undergo either in different species, or in the same species under different conditions, as age and sex or season. Many of these modifications clearly have relation to function, as we see in the difference of form and relative size of the compartments of the stomach of the young rumi-

¹ Journal of Anatomy and Physiology, vol. ix., May, 1875.

nant, which is nourished by milk, and the adult, which feeds on grass, the periodic variations in the size of the testis in birds, etc. But in a vast number more we can see no special adaptation to purpose, but merely variation, apparently for variety's sake. Look, for instance, at all the differences of the form of the liver throughout the mammalian series, which, as far as we know, have no relation to its action as a secreting gland. Though of little interest to the physiologist, modifications of this kind are of the highest importance to the morphologist. They throw light upon one of the great biological problems, classification, which, when rightly interpreted, means nothing more or less than a statement of the order in which living beings have been evolved one from another. From such variations of form most precious indications of the relationship of one animal to another can be obtained, and the less these variations are related to adaptation to some particular function, the better they can be relied on for this purpose. But Hunter's ideas were far different. He tried to bring together analogous parts according to their uses. — organs of progressive motion adapted for flying, eyes modified for seeing in water, eyes modified for seeing in air, etc. Practically, such a system could not be logically carried out. Too many modifications of form were found to occur, to which no special modification of function could be assigned, a compromise had to be made, and in the large number of cases the organs had to be arranged according to the affinities of the animals to which they belonged — brains of fishes, brains of birds, brains of mammals, etc. As the collection continues to advance, the classification according to homology is gradually superseding that according to analogy, with which it began.

This collection at present contains 6982 specimens mounted in bottles, of which 3745, or more than one half, are Hunterian. It may be convenient to know that these are distinguished by the figures upon them which refer to the catalogue, being painted in black. The specimens added since Hunter's time are lettered in red. The greater number of the former must be fully a century old, and being still in as perfect preservation as when first put up afford a fair guarantee of the absolute permanence, with proper care, of specimens preserved in alcohol. The skill displayed in dissecting, injecting, and mounting the majority of these preparations has scarcely ever been surpassed in modern times, and this collection alone, if it were all that Hunter had left, would be a grand monument to his industry and zeal for anatomical knowledge; as is its valuable and instructive descriptive catalogue, published in five volumes, and completed in the year 1810, a lasting evidence of the same qualities on the part of Mr. Cline's eminent successor in the conservatorship of the museum, Professor Owen.

Many points in comparative anatomy can be illustrated quite as efficiently, and more economically, by dried preparations, which require neither spirit nor bottles to preserve them in. Though we have not attained in this country the art of making such preparations in the elegant and instructive manner pursued in several of the museums in Italy, notably Pisa, and though nearly all the original Hunterian dried preparations have perished long ago, or become partially useless, there will still be found some worthy of attention in the rail cases round the galleries which contain the dried preparation. While speaking of the contents of these cases I would specially call attention to the series

showing the modifications of the small bones of the ear, throughout the mammalian class, arranged a few years ago by Mr. Alban Doran, one of the assistants in the museum, which is, probably, not surpassed in extent or variety and method of arrangement anywhere else.

The Histological Collection consists of upwards of 12,000 specimens, mostly prepared under the direction of Professor Quekett, who devoted the greater part of his life to this work. Since his death, in 1861, the additions have not been numerous, chiefly in consequence of the difficulties in exhibiting such a collection.

Although the anatomy of man naturally takes its place among that of other species in the physiological series, the preparations illustrating it are chiefly confined to viscera — the details of regional anatomy, and of the arrangement and distribution of muscles, vessels, and nerves, not finding a natural place in the scheme upon which that department of the Museum was organized. It was, however, a few years ago, thought desirable that human anatomy, in consideration of its great importance to our profession, should be exhibited on a much more extended scale than it had been hitherto, and that a ready demonstration should be afforded by means of permanent preparations of the structure of all parts of the human frame. To those who have already learnt their anatomy, and who wish to refresh their memory, or verify a fact about which some passing doubt may be felt, or those who are precluded by circumstances from visiting the dissecting-room, the preparations of this series must prove of great value. The series of dissections already made with this end, commenced by a former able assistant in the museum, Dr. J. Bell Pettigraw, and carried on to their present perfection by Mr. W. Pearson, are arranged on shelves over the floor cases on the western side of the Western Museum contiguous to the series of human osteology, to which they form the natural sequel.

No portions of the structure of vertebrate animals can be preserved with greater facility than the bones and teeth. Moreover, the skeleton being the framework around which the rest of the body is built up, gives, more than any other system, an outline of the general organization of the whole animal, and it has this special importance, that a large number of species — all those in fact which are not at present existing upon the earth — can be known to us by little beyond the form of the bones. Osteology has, therefore, always had many votaries, as a special branch of study, and it is one which finds much favor in the eyes of curators of museums, from the satisfactory manner in which it can be illustrated by specimens. Hunter's osteological collection was considerable, quite in advance of any other in this country. The two small whales (*Balenoptera rostrata* and *Hyperoodon rostratus*) which formed part of it, were almost the only skeletons of animals of their order which existed in any museum at the time of his death. This fact alone shows the marvelous change that has taken place within less than a century in the facilities for the study of comparative anatomy. How great the contrast to what may now be seen here in the College of Surgeons, in the British Museum, in Oxford, Cambridge, Edinburgh, Dublin, in a score or more of museums on the European continent, in America, even in Australia and New Zealand! Richly supplied osteological collections have sprung up in every considerable centre of scientific culture over the world; but as ours was one of the first in point of time, we may also claim for it a high position in point

of completeness. Others, such as that at the British Museum, the Jardin des Plantes at Paris, and the famous Leyden collection, may be larger, but this is because the College Museum has been designedly limited rather to selected illustrations of all the most important modifications of structure, than to numerous examples of closely allied species, which may be perfectly necessary in a purely zoological museum. When important forms have become extinct, their characters are shown by their fossilized remains, which, though at present most illogically arranged in a distinct room apart from their existing allies, will soon be incorporated in the general osteological series, where alone they can find a reasonable position in an anatomical museum.

The value of a collection is not to be estimated only by the number of specimens it contains, nor by even their rarity or judicious selection, but also by the condition of the specimens, and the facility by which they may be made available for study and reference. On this head we claim to be somewhat in advance of other museums, on account of the improvements which have been made in late years in preparing and articulating entire skeletons, and displaying portions of the bony framework in an instructive manner. Formerly all the bones were rigidly fixed together, so that their articular surfaces, if not actually destroyed, were completely concealed; and no bone could possibly be removed and separately examined. The aim of a series of changes in the method of mounting skeletons introduced here, and now adopted more or less completely in many other museums (the details of which were carried out with great skill by our late able articulator, Mr. James Flower), has been to obviate all these difficulties, and to make each bone, as far as possible, independent of all the rest, while preserving the general aspect and form of the entire skeleton.

Another improvement in the osteological series, introduced within the last twenty years, has been the formation of a special collection designed to show the principal modifications of each individual element of the skeleton throughout the vertebrate classes, by placing the homologous bones of a number of different animals in juxtaposition. For convenience of comparison, the specimens of this series are all placed in corresponding positions, mounted on separate stands, and to each is attached a label bearing the name of the bone, and the animal to which it belongs. This series is especially instructive to the students of elementary osteology, and forms an introduction to the general series.

As in other departments of the Museum, the more nearly man is approached in structure, the more complete do the illustrations of anatomical modification become, and, as might be expected, the osteology of man is far more thoroughly shown than that of any other species. The specimens of human osteology (of which a revised catalogue, enumerating 1306 specimens, was published two years ago) begin by illustrations of the development of the bones; these are followed by the normal skeleton, exhibited under various aspects, then by individual variations, among which may be mentioned one of the most remarkable objects in the museum, the skeleton of the celebrated Irish giant, O'Brian, who died in London in 1783, and about the preservation of whose remains so many legends are told in the biographies of John Hunter. Finally, the special osteology of man or illustrations of the osteo-

logical characters of the various races of mankind. In this important subject Hunter was a long way in advance of most of his contemporaries, as the origin of his collection dates almost, if not quite, as far back as that of the founder of physical anthropology, the celebrated Blumenbach. The series has been greatly augmented of late years, and completely rearranged, and the splendid addition made to it last year, by the purchase of the great private collection of the late Dr. Barnard Davis, has brought it up in point of completeness to truly national importance.

As forming a transition from the department of normal anatomy and physiology to that of pathology, may next be mentioned the teratological series, or collection of congenital malformations of man and the lower animals, which necessarily forms a part of every general biological museum. This difficult, mysterious, — and as far as the light it throws upon the workings of the laws of nature, — still unsatisfactory subject, had considerable attraction for Hunter, and many of the specimens in the series formed part of his museum. It has been steadily, though not very rapidly, increasing ever since, and had the advantage a few years ago of being thoroughly revised, rearranged, and catalogued by Mr. B. T. Lowne. It is arranged in the upper gallery of the Middle Museum.

The pathological series is the section of the Museum, to the study of which in the eyes of Hunter and his successors all the others form an introduction. It occupies the whole of the two galleries and part of the ground floor of the western hall. As the Museum of the College differs from those attached to the various medical schools, in having no hospital or *post-mortem* room in connection with it, from which to draw the supplies for completing this collection, it has been increased by the acquisition from time to time, when opportunity afforded, of various private collections, as those of Mr. Heavyside in 1829, Mr. Langstaff in 1835, Mr. Howship and Mr. Taunton in 1841, Mr. Liston in 1842, and Sir Astley Cooper in 1843, obtained by purchase; and the collections of Sir William Blizard in 1811, Sir Stephen Love Hamminck in 1851, and Dr. Peacock in 1876, presented to the College. Contributions of recent specimens are also constantly received from numerous individual donors, the acquisitions from this source having greatly increased of late years. The total number of specimens now in the catalogue amounts to 5148, of which 1672 are Hunterian. As in the physiological galleries, the latter are distinguished by their numbers being painted in black. The descriptive catalogue of this series, written by Sir James Paget, and published in five quarto volumes between the years 1846 and 1849, is one of the best known and most valuable of all the publications of the College, and has always been looked upon as a model upon which other pathological catalogues should be formed. The additions made to the collection since that time have been so numerous that the necessity of a new catalogue has long been felt. Under these circumstances, it is a matter of great congratulation to all who are interested in the welfare of this valuable collection, that the author of the original catalogue has undertaken, with the coöperation of Dr. Goodhart and Mr. Doran, to make a new one, in which the old descriptions will be revised, the new specimens incorporated in their appropriate places, and such changes introduced into the general arrangement as the advance of pathological knowledge and greater experience of

the requirements of the Museum appear to necessitate. This great work, especially arduous for one so much engaged in professional avocations as Sir James Paget, is now far advanced. The prospect of its early completion will doubtless compensate the members of the Congress who will make an inspection of this part of the collection, for the transitional and somewhat disarranged condition in which they will find it on their present visit.

As adjuncts to the general pathological series are certain special collections, which have separate catalogues devoted to them. One, which will be examined with interest by those devoting themselves to aural pathology, is the series of preparations illustrative of diseases of the ear, formed by the late Mr. Joseph Toynbee; which came into possession of the College at his death in 1866. It is a large and probably unique collection of 824 specimens, illustrating all the known morbid conditions of the organ of hearing, such as could only have been brought together by one specially engaged for a considerable number of years in investigating this branch of surgery, and the value of which is greatly enhanced by a complete descriptive catalogue, published during Mr. Toynbee's life-time.

Lastly, must be mentioned a collection—for the reception of which a separate room, approached from the end of the Eastern Museum, was devoted in 1870—of surgical instruments and appliances, which, though small at present, contains many instruments curious for their antiquity, or interesting for their associations, and, doubtless, now that a convenient and appropriate locality has been established for their reception and preservation, will be gradually augmented by additions of a similar nature. It is mainly to the interest taken in the subject which it illustrates by the late Sir William Fergusson that the establishment of this collection is due.

Such is a general outline of the history and contents of the Museum which, for eighty years, the College of Surgeons has maintained for the benefit not only of its own members, but for that of the profession at large, and, indeed, of all who take any interest in biological science, whether the young student preparing for his examination, or the advanced worker who has here found materials for many an important contribution by which the boundaries of knowledge have been materially enlarged. To all such it is freely open without any fee or charge. Even the written or personal introduction of members, still nominally required, is never asked for on the four open days from any intelligent or interested visitor; and on the one day of the week in which it is closed for cleaning, facilities are always given to those who are desirous of making special studies, and to the increasing number of lady students, whether artistic, scholastic, or medical. Artists continually resort to the museum, to find opportunities of studying the anatomy of man and animals, which no other place in London affords; and of late years it has been the means of a still wider diffusion of knowledge, by the visits which have been organized on summer Saturday afternoons by various associations of artisans, to whom a popular demonstration of some part of its contents is usually given on each occasion by the conservator.

If the knowledge of organic nature is of any value to man, and this is a proposition which I am sure all who attend this Congress will admit, as on such knowledge the whole superstructure of their profession is

built, there can be no question but that such an institution as I have here sketched out, must be one of pure and simple benefit. Its maintenance has been a worthy object, upon which the College has spent its care and its money, and whatever may be the changes which impending legislation may effect in the organization of the profession, we may all hope that the great work begun by John Hunter, and carried on by those who, under the guidance and support of the council of the College, have followed him in the care of the collection, may not be impaired or destroyed. Whether the whole of the charges of maintaining such a museum in all its parts on a continually extending scale should be the duty of one institution, like the College of Surgeons, or even of one profession, may be a question for future consideration; but, in the mean time, how easily could its preservation and future extension be rendered entirely independent of all the chances and changes of medical education and legislation, or even of Government assistance and interference! When we see the immense sums voluntarily provided every year in this country by donation and bequest; when we see, and see with pleasure and gratitude, through the length and breadth of the land, cathedrals, churches, chapels, colleges, schools, hospitals, and asylums founded, endowed, enlarged, and restored, may we not hope that an old and tried institution like ours will not be so entirely neglected as it has hitherto been by members of our profession in search of some means for the disposal of any surplus wealth they may possess. Few objects can be so surely productive of good, so little liable to abuse at any future time, as the preservation, augmentation, and maintenance of a museum in which the facts of the beautiful and wonderful world around us are displayed for the instruction of mankind.

Recent Literature.

American Nervousness, its Causes and Consequences. A Supplement to Nervous Exhaustion (Neurasthenia). By GEORGE M. BEARD, A. M., M. D. New York: G. P. Putnam's Sons. 1881. Pp. xxii., 352.

Dr. Beard omitted the chapter on *Ætiology* from his book on *Neurasthenia*, and this volume is intended to supply that omission, but it does much more. A general review of "nervousness," its nature, the signs of its presence, its causes and effects, are given, among the latter being probably included the chapter on the longevity of brain workers, and the relation of age to work.

In a general way the book is interesting reading,—the author expresses his views with the enthusiasm of conviction, and so arouses interest,—it is broken up into short sections, the language for the most part is simple, and it is not difficult to understand the author's meaning. He has brought together a large number of facts and statements, many of which deserve attention, and the more thought there is given to many of the propositions advanced the more important they will appear.

Several times the author makes complaint that previous writings of his have not received the acceptance they deserved as scientific facts. There are probably two reasons for this, which will equally interfere with the acceptance of his views as expressed in the present work. Many of the statements made are such as not

to be susceptible of universally convincing proof. They are simply the views of a specialist who has seen one side of the problem of social life and health much more clearly than any other side thereof, and who states his impressions accordingly. It is not strange that other observers, working under different conditions, having different phases of health or disease brought to their notice, should differ with him; that they should consider a neurologist too prejudiced to judge accurately as to the increase and prevalence of nervousness. Where only impressions and opinions are stated it would require time before others should be able to see the same facts in the same light, and so be able to give assent to the views expressed.

The second hindrance to a speedy acceptance of the views advanced is the absence of scientific data in the book. Opinions are given, statements are made as to facts coming within the author's observation, but not so as to bring conviction of their accuracy to one who has not observed the same facts, or who may interpret these facts differently. Even where it were possible to establish the truth of his propositions — in regard to the longevity of brain workers — the author has not given the data upon which he bases his statements; the list of names, with the ages of the persons whose lives he has studied with reference to this theory should have been given, in order to convince the skeptical and to establish his theory.

In the preface he "epitomizes the philosophy of the work." Nervousness is strictly deficiency or lack of nerve force. This condition has developed mainly with the nineteenth century. Nervousness is to be distinguished from simple excess of emotion and from organic disease. The chief and primary cause of this increase of nervousness is *modern civilization*; among the secondary and tertiary causes are climate, institutions, personal habits, etc. These secondary and tertiary causes cannot alone induce nervousness. The signs of American nervousness are considered at length, among which are many apparently trivial signs, or signs to which not everybody would ascribe importance, as early and rapid decay of teeth, premature baldness, sensitiveness to cold and heat, increase of certain diseases, as diabetes and certain forms of Bright's disease, unprecedented beauty of American women, frequency of trance and muscle-reading, American oratory, humor, speech, and language. There is much that is interesting in the chapter where these signs are considered, much that is true and deserving of consideration.

The longevity of brain workers and the relation of age to work is a subject to which Dr. Beard has previously given considerable attention; his conclusions, drawn from studying the lives of very many eminent men, are decidedly in favor of the tendency of brain work to promote long life. The average longevity of all classes he places at a little over fifty-one years. One hundred of the greatest men of the world lived on an average seventy-five years; one hundred and fifty precocious great men lived 66.5 years; five hundred great men lived 64.2 years; clergymen live six-four years; farmers sixty-four; lawyers fifty-eight; physicians fifty-seven years. The greatest amount of original work he finds is done between the ages of thirty and fifty years, most of it before the forty-fifth year.

The book closes with a chapter on the physical future of Americans, in which a very comforting view is taken of our future prospects. "Applying the omnistic phi-

losophy (by omnistic the author means to include both optimism and pessimism, the word is not a misprint for optimistic) to our subject, we find that the American people are not coming to complete and immediate overthrow; the forces that renovate and save are mightier far than the forces that enervate and destroy. Although mental friction is the most fruitful source of all causes of nervousness, yet the intellectual activity in the serene realms is an antidote and a modifier of nervousness and other diseases."

The next paragraph to the above reads almost as if optimistic was meant instead of "omnistic." "It is not a dream to predict that, under the inspiration of the scientific sense, the last and best expression of the evolution of mind, there shall be developed on this continent a higher order of humanity from which shall be developed what the world, thus far, has never seen, a limited number of philosophers who, in all the eternal problems, shall think for themselves, as though the gods were blind, and they were alone upon their footstool."

This will serve as a single example of some passages in which the author's enthusiasm seems to run away with his common English sense, and he degenerates into spread-eagle style of writing. S. G. W.

A Medical Formulary based on the United States and British Pharmacopœias, together with numerous French, German, and Unofficial Preparations. By LAWRENCE JOHNSON, A. M., M. D. New York: William Wood & Co. 1881. Pp. 402. 8vo.

The design of this work, according to its author, is to present in a manner convenient for ready reference the drugs and preparations in common use, together with formulæ illustrating the manner in which they are combined by good practitioners of the present day. This is fairly accomplished by aid of its very full index.

Although it contains much valuable information for the discerning physician which is not to be found in the United States or National Dispensatories, yet like all formularies it is open to the objection of offering encouragement to the all too common routine practice of copying certain favorite recipes for the treatment of certain diseases without the making of the proper allowances for the ever-varying aspect of the individual cases. Moreover, this particular work mingles indiscriminately recipes made up in the like terms for weight and measure of the troy and avoirdupois weights and the wine and imperial pint measure. This is very liable to cause mistakes to be made by those using the book, as recipes written in the terms of the British Pharmacopœia are likely to be dispensed as if written in the same terms of the United States Pharmacopœia. This in very many cases can be avoided only by the knowledge of an expert in the names of hospitals and physicians that the separate recipes are of British and not of American origin, for there is nothing else to distinguish them. B. F. D.

Landmarks, Medical and Surgical. By LUTHER HOLDEN, assisted by JAMES SHUTER. Third Edition. Philadelphia: Presley Blakiston. 1881.

The paper and printing of this edition are very handsome. The text differs but slightly from that of the second. The merits of this book are too well known for it to require further comment. T. D.

Medical and Surgical Journal.

THURSDAY, AUGUST 18, 1881.

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THE OPENING ADDRESSES AT THE INTERNATIONAL MEDICAL CONGRESS.

HAVING received advanced sheets of the addresses delivered by the president of the Congress and by the presidents of some of the Sections on the first day of the meeting of the International Medical Congress at London, the JOURNAL is enabled to offer its readers the perusal of these at an earlier date than they could otherwise see them, especially as with this end in view the day of publication of the present number has been advanced.

We feel that the character of some of these addresses will reconcile our readers to the postponement of the original articles to which the first part of the JOURNAL is usually devoted. That of the president, Sir James Paget, is a really noble production, in every way worthy of the occasion and of its author's reputation. It is broad, liberal, and elevating, and at the same time perfectly simple and concise. The addresses at the opening of the Sections are not all of equal merit or equal importance: if we ventured to single out any to which to call special attention it would be that of Dr. Samuel Wilks to the Section on Pathology, and of Mr. Erichsen to the Section on Surgery.

The meeting which has just taken place in London is, if the Medical Congress at Philadelphia during our Centennial celebration be excepted, the seventh consecutive International Medical Congress which has been held.

The idea originated at the annual meeting of the French Medical Congress at Bordeaux, in 1865. In 1867 the first Congress was held at Paris during the Exhibition. The second Congress was held at Florence in 1869, the third at Vienna in 1873, during the Exhibition there; the fourth at Brussels, in 1875; the fifth at Geneva, in 1877; and the sixth at Amsterdam, in 1879. Since 1873 the interval of two years has been preserved. For a short *résumé* of the transactions at the previous meetings the reader is referred to Dr. Warren's address at the last meeting of the Massachusetts Medical Society, which was published in the JOURNAL for June 30th.

Of the success of this last Congress our readers will shortly have an opportunity to form their own estimates, as plans have been taken to secure full accounts from several sources. If the discussions in the Sections were attuned to the key-note given by the president in his address the immediate results must have been extremely valuable, whilst the indirect good influences

flowing from such reunions, not only to medical science, but to all the best interests of civilization, cannot be better portrayed than in the very words of Sir James, when he says:—

"But more clearly in the recollections of the Congress, we may be reminded that in our science there may be, or, rather, there really is, a complete community of interest among men of all nations. On all the questions before us we can differ, discuss, dispute, and stand in earnest rivalry; but all consistently with friendship, all with readiness to wait patiently till more knowledge shall decide which is in the right. Let us resolutely hold to this when we are apart; let our internationality be a clear abiding sentiment, to be, as now, declared and celebrated at appointed times, but never to be forgotten; we may, perhaps, help to gain a new honor for science, if we thus suggest that in many more things, if they were as deeply and dispassionately studied, there might be found the same complete identity of international interests as in ours."

Miscellany.

LETTER FROM LONDON.

LONDON, August 4, 1881.

MR. EDITOR.—Amidst the incessant turmoil of the present session of the International Medical Congress, I think myself fortunate to be able to find the necessary minutes wherein to pen the following disconnected items of news relating to the all-absorbing source of medical interest at the present moment, and congratulate myself on having been able to furnish to you, a week since, many of the more important addresses which are just now from day to day engaging the attention of so many of our most distinguished *confrères* from all parts of the civilized world.

The members of the Congress now amongst us number upwards of twenty-five hundred, at least three fifths of whom are from abroad, and include many of the best known professors from all recognized medical schools, as may be judged from the attached account of the inaugural meeting of the session held yesterday in St. James's Hall.

The official representatives of various governments were present. At eleven o'clock the hall was densely crowded in every part. The appearance upon the platform of some of the most distinguished visitors was the signal for applause, Professor Virchow, of Berlin, coming in for an ovation at the hands of his many admirers. A similar tribute was also paid to Professor Charcot, of Paris, and others. Amongst those present at the commencement of the proceedings were Professor Acland (Oxford), Dr. M. Acosta (Spain), Professor Albernesi (Palermo), Dr. C. Allbutt (Leeds), Professor McCall Anderson (Glasgow), Dr. Fordyce Barker (New York), Dr. Bayer (Brussels), Dr. Lionel S. Beale, Dr. Benedikt (Vienna), Sir J. R. Bennett, Dr. Bouchert (Paris), Professor Cowen Bottini (Milan), Dr. Brandis (Aachen), Dr. Brann (Vienna), Dr. Brinelli (Rome), Professor Businelli (Rome), Dr. Byrd (Illinois), Dr. Chevadaia (Naples), Professor Azzio Casselli (Reggio Emilia), Dr. Lucas Championnière (Paris), Dr. Kraus (Vienna), Sir W. Gull, Cardinal Manning, Sir R. Loyd Lindsay, V. C., M. P., Dr. Chepmell, Canon Barry, the Bishop of London, Pro-

fessor Tyndall, Sir Henry Thompson, Surgeon Major de Chaumont (Netley), Professor Chauveau (Lyons), Mr. Andrew Clark, Dr. Cohen (Hamburg), Sir J. Rose, — Cormack (Paris), Professor Donders (Utrecht), Dr. Matthews Duncan, Professor Esmarch (Kiel), Dr. Austin Flint (New York), Professor Fossagrives (Montpellier), Dr. Galewski (Paris), Dr. W. A. Guy, Dr. Hans von Hebra (Vienna), Mr. Prescott Hewett, Professor Kolliker (Würzburg), Professor Komad (Amsterdam), Dr. C. E. Lyster, Dr. Quain, Professor Pignocco (Palermo), Professor Reverdin (Geneva), Dr. Lydygier (Kulm), Dr. N. Simeinbergh (Rome), Professor Grainger Stewart (Edinburgh), Professor Trelat (Paris), Professor Trendelenburg (Rostock), Professor Erasmus Wilson, Dr. Wunderlich (Stettin), Dr. Wywodzoff (St. Petersburg), Professor Huxley, etc.

The Prince of Wales arrived at twenty-five minutes past eleven. His Royal Highness was received at the doors by Sir William Jenner, Sir William Gull, Sir James Paget, Dr. MacCormac, the general secretary, and other members of the committee, and was conducted by them to the platform, on which his appearance was the signal for prolonged cheering.

It subsequently transpired that the late arrival of His Royal Highness, the Prince of Wales, who is notoriously conspicuous for his almost unexceptional punctuality, was due to his having in vain waited that he might be accompanied by the Crown Prince of Germany. The truth of this rumored explanation was most happily borne out by the Crown Prince of Germany appearing about noon, his arrival in town having been delayed through the shallowness of water near the landing stage at which he disembarked after crossing from the Isle of Wight. His unexpected arrival was the signal for very hearty applause, and he occupied a chair to the left of the President during the remainder of the meeting.

Sir Wm. Jenner, President of Royal College of Physicians, and chairman *ex-officio* of the general committee, took the chair. He said that when our most gracious sovereign the Queen, whose sympathy with all suffering was so true and deep, and whose interest in the advance of medicine and all good works was so widely and well known (cheers) consented to be patroness, and that her likeness should be imprinted on the medal struck in commemoration of this meeting, the success of the Congress as an International Congress was secure, and when, further, his Royal Highness the Prince of Wales announced his willingness to open the Congress, a guarantee was given to the world that their proceedings would be conducted with a gravity and dignity, and their discussions be matters of a nature and importance calculated to support the honor of their profession. (Cheers.)

It would be scarcely courteous to them or congenial to his own feelings were he not to express his idea of the sentiments and aims of those who had collected from all parts of her Majesty's dominions, and from all the great schools of the world (cheers) where the science of medicine was cultivated and advanced, and through which, by means of their pupils, the science of practical medicine and its fruits were diffused throughout the earth. They had been told that commerce was the golden girdle of the world, binding men and nations together by common interests, and with a common aim. But science bound men and nations together with a girdle, the links of which were far

stronger, more durable, and more precious than were the links of the golden girdle of commerce. (Cheers.)

Knowledge was far more precious than gold. Who loved not knowledge? who railed against her beauty? None. With every increase in the world's stock of gold, the metal lost something of its value, while every addition to the world's store of scientific truth added to the value it already had, and was a stepping-stone to the acquisition of more. (Cheers.) Who shall put a limit to knowledge? If this was true of science in general it was true in the highest and widest sense of the science of medicine. (Cheers.)

Commerce was fettered in the supposed or real interests of nations. Commerce, therefore, separated as well as bound men together. Discoveries in other applied sciences than medicine were stimulated by a desire for pecuniary reward, but the discoveries in scientific and applied medicine were open to all the world to use for themselves or to use as foundations for future discoveries. (Cheers.)

The less a physician working to advance medical knowledge was animated by a desire for pecuniary gain, by feelings of personal ambition, or a desire for common applause; the less he mingled his personal wishes with his researches; the less he allowed his hopes and fears to give a bias to the result of his researches; the less he attempted to pervert the answer which Nature gave to the questions he put to her; the more he exhibited in his researches a desire to know the truth for the truth's sake alone; the greater relief his researches afforded to suffering humanity or the more they tended to prevent the recurrence of those sufferings; the more just and generous he showed himself in appreciating the opinions and works of other laborers in the same field with himself, the nearer did he approach to that ideal which they and he had formed of the worthiest workers in their science.

He was sure they all must know men who were thus worthy of fame, and who had approached or reached their own ideal. He had known such; but in the vista of time he looked down and saw one noble form, and he mentioned him because his name was impressed on that great museum which they would have an opportunity of inspecting — Edmund Alexander Parkes. (Cheers.)

To all who knew him he was the ideal scientific worker, and such men not only did good in their generation, but they created amongst those who worked with them, and amongst those who knew them, a desire to tread in their footsteps. (Cheers.)

All medical discoveries were common property, and the richest reward that the discoverers in scientific and practical medicine could have was the consciousness that by the result of their labor and its wide diffusion lives were spared, sufferings were alleviated, and disease was prevented. (Cheers.)

The assembling of this great Congress illustrated the truth of much that he had said. They were here to spread the truths they knew, and to learn from others the truths they could tell. They were here to give their knowledge freely, and to receive from others as freely the knowledge that they could bestow; and in the giving as well as in the receiving they would increase their own store. They were here to thresh out the corn of truth from the worldly chaff in which it was too often enveloped. They were here by their discussions to elicit the truth from the conflicting statements of what was the truth. They were here to meet each

other socially; to remove in that way all prejudices, to promote kindly feeling, to renew old friendships and to lay the foundations of new friendships, and by personal inter-communication to knit more closely the bonds of that professional brotherhood of which they were justly proud. (Loud cheers.)

Mr. Wm. MacCormac, honorary secretary, then read the report of the executive committee, which described the arrangements made for the meetings of the Congress.

Sir J. Risdon Bennett proposed the adoption of the constitution of the Congress, and the acceptance of the list of officers nominated by the committee. He also, in both English and French, bade the delegates welcome.

Professor Donders (Utrecht), president of the Congress of 1879, seconded the motion, which was agreed to by acclamation.

The commemorative medal was then presented to his Royal Highness. Sir James Paget, the newly elected president, having taken the chair, the Prince of Wales, who was loudly cheered on rising, said: "Sir James Paget, your Imperial Highness, and Gentlemen, — I gladly comply with the request that I should be patron of the International Medical Congress of 1881, and amongst my reasons for so doing was my conviction that few things could tend more to the welfare of mankind than that educated men of all nations should from time to time meet together for the promotion of the branches of knowledge to which they devote themselves. (Cheers.)

"The intercourse and mutual esteem of nations have often been advanced by great international exhibitions, and I look back with pleasure to those with which I have been connected. But when congresses are held among those who, in all parts of the world, apply themselves to the study of science and the scientific professions, even greater international benefits may, I think, be confidently anticipated (cheers), more especially in the study of medicine and surgery; for in these the varieties of climate, of national habits, and of social life must give to the practitioners of each nation opportunities of acquiring knowledge which is of considerable value, not to themselves alone, but to those of other countries whom they may meet in Congress. (Cheers.)

"I venture to think, gentlemen, that the executive committee have acted wisely in instituting sections for the discussion of the very wide range of subjects, including both the sciences on which as foundations medical knowledge must rest, as well as many of its most practical applications. I am very happy to see that so great scope will be granted to the discussion of important questions relating to public health, to the care of the sick in hospitals and in the houses of the poor, and to the welfare of the army and navy. (Cheers.)

"The devotion with which members of the medical profession are ready to share in the dangers of climate, of fatigue, and of war, to study every means, not only for the remedy, but for the prevention of disease, deserves the warmest acknowledgment from the public. Gentlemen, I have the great satisfaction of believing when I see this crowded hall that I may already regard the Congress as being very successful in having attracted a number hitherto never equalled of medical men from all parts of this kingdom as well as from every country in Europe, and from the United States of America. (Cheers.)

"The list of officers of the Congress, including, as it

does, the name of nearly every one distinguished in Great Britain in any branch of medical science, shows how heartily the proposal to hold the meetings in London were received; and I think it speaks well for the good feeling of the profession that there was so warm a reception of the proposal from abroad. How cordial it was may be seen in the large number of visitors, which includes a great proportion of those who enjoy the highest reputation in their own countries and throughout the world. I sincerely congratulate the general and reception committees on this good promise of complete success, and I trust at the close of the Congress they will feel that they have been rewarded for the labor they have bestowed upon it. The report which the honorary secretary general has read will have explained how great has been the toil. It will, however, be well repaid, and I am sure that Mr. MacCormac will feel that he is recompensed for even his constant exertions and care if the important science of medicine be promoted, for any addition to the knowledge of medicine must always be followed by an increase to the happiness of mankind. (Cheers.) I declare this Congress now open." (Renewed cheers.)

The president, Sir James Paget, who is a most gifted and skilled orator, then delivered, without a single reference to paper, in a voice which rendered every word agreeably audible to every ear in that vast hall, that perfect address which all may study with pleasure and profit.

The various sections, which number fifteen in all, afterwards met and were constituted. A second general meeting was held in the afternoon, when Professor Virchow (Berlin) delivered an address on the Value of Pathological Experiment. In the evening a *conversazione* was given by the English members of the Congress to the foreign members in South Kensington Museum. This was attended by a vast concourse, and offered a social reunion of the most pleasant character, in which it is estimated that certainly not less than five thousand persons participated.

The almost illimitable objects of interest which the spacious galleries furnish offered but little attraction for the intellectually thirsty multitude who were fully occupied in mentally photographing the features of the many striking personages mingling together. For a considerable portion of the evening the Prince of Wales and the Crown Prince of Germany, accompanied by one of his sons, promenaded through the courts, losing no opportunity of cordially recognizing the numerous medical celebrities with whom he had previously been brought in personal contact.

Hitherto the exceptional, continued perfect weather has lent a most welcome aid to this very successful session of the Congress, and it would seem difficult for any but an experienced student of human nature to believe that aught but applauding criticism would be meted out to the indefatigable organizers of this stupendous business, but the ladies have furnished the exception necessary to prove that general satisfaction which is the rule. For a protest addressed to the general committee of the above Medical Congress, signed by forty-three women legally qualified to practice medicine in their respective countries, is now in the hands of Sir James Paget. It states, amongst other things, that they desire respectfully to request the general committee of the International Medical Congress to reconsider their decision to exclude duly qualified medical women from the meetings of the Congress.

"The Congress in question (the seventh in number) will be the first held in England, and will also, if the present decision of the committee be acted upon, be the first which has not been open on equal terms to all qualified medical practitioners. The question of the admission of women to the medical profession is settled in England, in America, in France, Switzerland, Russia, Italy, and Sweden. There are now the names of twenty-five women on the English Medical Register, all of whom are practicing medicine. Within the last few years a complete Medical School for Women has been established in London, and has been attached to a large general hospital. The students at this school are at present forty in number, and the examinations and degrees of the Irish College of Physicians and of the University of London are open to them. Under these circumstances we submit that whatever opinion may have been held in England, while the admission of women to the medical profession was an open question, to accept a change which has been effected by the combined action of the Legislature, and of the examining medical bodies, is the course most in accordance with the mode in which affairs are usually conducted in England. And we further submit that the interest of medical science will be best served by excluding no one on the ground of sex."

So far as I have heard, in mingling with all in the centre of the Congress, universal praise is acknowledged to have been earned by the executive of the Congress; though of course not unnaturally more than a few feel disappointed at the fact that the Mansion House does not afford accommodation which will enable the lord mayor to entertain more than ten per cent. of the members of the Congress at the banquet which he gives in their honor this evening.

With very few and conspicuous exceptions, the leaders of the profession here are commendably vying with one another in their efforts to extend hospitality to the vast throng of foreign visitors with whom they are now inundated and honored.

The pleasure trips and excursions have been so well selected and arranged that despite their number their attraction renders the would-be participators in them more numerous than can be accommodated, hence all English candidates for invitations have to be submitted to a ballot which must exclude by far the greatest part.

That world-famed British sanitarian, John Simon, yesterday delivered the opening address in the section on State Medicine, and most happily favored the cause of vivisection, prophesying that the sensational legislation which had recently hindered its prosecution in this country must before long be swept away as knowledge and truth became diffused; he quoted with grand effect the experiment with the polluted water which poisoned the mice, demonstrated the potency of infected water in disseminating the poison of cholera, and justly deduced that the few mice were worthily sacrificed to save countless thousands of human lives.

LETTER FROM ST. LOUIS.

MR. EDITOR, — The City Dispensary occupies a very important position in the St. Louis Health Department, and, as its functions are rather different from those of similar institutions in the East, perhaps a description of its work will not be uninteresting to your readers.

Let us premise by stating that imposition is guarded against by requiring applicants to produce a certificate from some responsible person, stating that they are without means to procure treatment elsewhere.

All patients sent to the city hospitals are admitted only by permit from the Dispensary, except in cases of emergency. Thus the Dispensary holds, with regard to the other city institutions, the position of a distributing office. This has formed but a small part of its usefulness, for attendance and medicine are freely furnished those of the sick poor who have homes but are not able to pay for medical attention. There were treated in this way at home during the year ending April 1, 1881, about 9500 patients.

Regular physicians are furnished with blanks which certify that the prescription written on them was not given at any clinic and that the physician receives no pay for his services in the case. These prescriptions are filled at the Dispensary drug store. The number of these prescriptions filled during the last year was 4640.

Those who are able to come to the Dispensary receive treatment there and the number of this class treated during the year was 11,228. The total number of cases, old and new, treated during the year was 20,728.

From these statements the usefulness of the Dispensary system may be easily appreciated and the effect upon the poor of abolishing it imagined. The appropriation for the Dispensary last year was \$17,500, and for the present one only \$9000. On account of this reduction the Health Commissioner has been compelled to reduce the Dispensary force as much as possible and to close entirely the drug department. Prescriptions are still furnished to applicants but no medicines are put up, and no patients are treated at home. By special arrangement, in case of extreme urgency, a limited number of orders — one hundred and fifty per month — are given on a neighboring drug store. The effect of this step is seen in the largely increased number of patients admitted to the city hospitals during the last two months or since the change was made. A free dispensary, supported by the contributions of private citizens, has been opened, and partially meets the necessities of the case. But the various medical colleges are taking steps to inaugurate or enlarge facilities for the treatment of patients in connection with their lectures.

The St. Louis Medical College, especially, will erect a large and conveniently arranged building on the lot adjoining the college, and it is expected to be ready for occupation in the fall. The building will cost \$7000, and will be furnished with all modern conveniences and improvements.

The closure of the City Dispensary will work much hardship to the sick poor during the summer, but it is hoped that its place will be in great measure supplied by the accessory dispensaries which will be in operation by fall.

Very good results have been obtained at the St. Louis City Hospital in sun-stroke cases by the ice-water plan of treatment. Of a total of thirty, treated during the first half of July, 1881, six died, three were much relieved and twenty-one cured. Eighteen of the thirty cases were severe, the patients being unconscious when admitted, notwithstanding preliminary treatment at the Dispensary. Including the six deaths among these eighteen, we have in the most severe cases a death rate of thirty-three and a third per cent.

Flint places the death-rate where the insensibility or coma is prolonged at forty or fifty per cent.

The details of treatment were as follows. Patients on being received, were at once, if the skin was warm and pulse strong, plunged into a bath of ice-cold water and submerged to the neck. Ice water was poured upon the head and chest from a little height. They were left in the bath until the skin felt cool, then removed and put to bed in a cool place and covered, sometimes with a blanket, sometimes with a sheet only. The object in the first being to promote perspiration. It is undecided which is the better. Immediately on being put to bed the patient was given a hypodermic injection of one milligramme of sulphate of atropia. This was repeated in half an hour if reaction was poor or delayed. Cold applications were constantly made to head and chest, and if the temperature rose again the bath was repeated. In the majority of cases this was the only treatment employed. In one case jaborandi was used with good result.

The after treatment was tonic and stimulant in its nature, and varied according to the individual case.

RECENT EFFORTS AT MEDICAL LEGISLATION.

By a recent decision the medical law of California has been declared unconstitutional. The ground on which this decision is rendered is, that the law grants special privileges and is special legislation. This is one of the medical laws on which the advocates of such laws have based their claims for the enacting of similar laws in other States. Whether this decision be sustained or not, it is evident that, in the present state of things, eternal vigilance and eternal expense alone can make or keep such laws in force. The question may well be asked, Is the law worth all it costs? When the people of themselves make such laws, then the matter will be easy; the laws will be executed by the people, as, indeed, they should be. As it now is, the people care little or nothing about the matter, except as one or other of the medical sects stimulate them. Quacks generally have more money to spend in litigation than the regular physicians, and hence, other things being equal, they are the most likely to get the decision they desire.

In Michigan, the law introduced to regulate the practice of medicine has failed to make any considerable progress. In conversation with a member, who is also a doctor and an earnest advocate of the bill, he said that the real difficulty in the matter lay in the fact that large numbers of petitions were presented from the people against the bill, and but few for it. Hence, legislatures said the people do not want the bill and we should not pass it. Clearly, the way to get medical legislation is to convince the legislature that the people want such legislation. How shall this be done? First, the people need such education as shall enable them to see their needs in this direction. How shall the people be educated? Each individual doctor can do very much. Indeed, we think it clear that if each did all he could the people could be educated to this matter in a very short time. Why does not each do his part in this education? Each can best answer this question for himself. Another agency for the education of the people on this matter is found in our boards of health, local and State. In a great variety of ways

these boards have and are educating the people in this matter. The root of the whole difficulty is to be found in a forgetfulness of the foundations of our government and of our laws. We do not always remember that the people are the law-makers, and that every person who can vote is as a law-maker of power. We do not always remember that the people execute their own laws or not, just as they please. Officers or legislatures cannot with impunity refuse to do in the main as the people desire, nor can they long do what the people do not desire. Let us concentrate all our efforts upon the people, if perchance we may accomplish the objects that we seek in a manner that shall be permanent.—*The Detroit Lancet.*

MEDICAL NOTES.

—It is rumored, according to the *Detroit Lancet*, that a new weekly medical journal is to be started in New York. It is stated that twenty-five thousand dollars have been subscribed to this object. It is said that the *Record* does not contain articles of sufficiently high scientific standard. It is already some months since we first heard it suggested that such a project was under consideration.

—The principal members of the International Medical Congress, now in session at London, were present on Saturday at Folkestone at the unveiling by Professor Owen of the statue of Harvey, the discoverer of the circulation of the blood.

—Does Mary cough in the night? Two or three snails boiled in her barley water, or tea water, or whatever she drinks, might be of great service to her; taken in time they have done *wonderful cures*. She must know nothing of it,—they give no manner of taste. It would be best nobody knew it but yourself, and I should imagine six or eight boiled in a quart of water, strained off, and put into a bottle, would be a good way, adding a spoonful or two to every liquid she takes. They must be fresh done every two or three days, otherwise they grow too thick.—*Correspondence of Mrs. Delany, 1758.*

—M. Henry Clozel de Boyer, a French physician, has fallen a victim to diphtheria, contracted in the course of his duties at the Paris Children's Hospital, at the age of twenty-nine. He was one of the most brilliant students of the Paris Faculty, and was assistant physician at the hospital when he contracted the fatal disease.

—The advertisement column of a late issue of the New York *Herald* disclosed the following: "A physician having two diplomas, medical, will sell one upon liberal terms. Address Allopath, *Herald* Up-town Office."

—An interesting experiment is to be tried in West Central Africa, by the members of the Livingstone Inland Mission. Seeds of the different species of cinchona, from the government plantations in India, are to be sent out to them with a view to ascertaining whether it can be successfully cultivated in the mountain valleys of the Congo.

MEETING OF THE BRITISH MEDICAL ASSOCIATION.

PRESIDENT'S ADDRESS.¹

DELIVERED AT THE FORTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, HELD IN RYDE, AUGUST 9, 10, 11, AND 12, 1881.

BY BENJAMIN BARROW, F. R. C. S.,

Consulting Surgeon to the Royal Isle of Wight Infirmary.

AFTER introductory remarks, mostly of a local character, the president announced the subject of his address:—

The thought which I gave to this matter (the choice of a subject) has resulted in asking the following questions, and endeavoring to reply thereto, in such a manner as to establish an affirmative to the plea I set up in my proposed questions, and to prove to the public that I have grounds for the plea that the medical profession deserve and expect their sympathy and consideration. To establish this affirmative, I must ask you to permit me to pass in review cursorily the habits of medical men, the manner in which, both in ancient and modern times, they have carried on their manifold duties.

The questions I would ask are these: Are not the duties, the honest and honorable performance of them, such as to command for our profession an equality with, if not preëminence above, every other? If the duties are so performed, are we not entitled to the very highest position in the estimation of the public? Has the profession been so esteemed? If not, what are the causes of such defection? . . .

I am led to this topic, too boldly, perhaps, by an experience of half a century; an experience which induces me to think—having no longer any personal interest in the opinion of the public, save that of my never-dying wish for your welfare, collectively and individually—that I might not uselessly speak to you from the fullness of my heart. My only object is to elevate to the loftiest view your thoughts, and those of the public, in reference to the calling of the medical profession. . . .

I propose to consider my observations under two heads, the secular and the sacred; I shall deal with the secular first,—not that I consider it of primary importance, but because it leads up to the other. The secular I shall treat of under two heads: first, the antiquity of our profession: and, secondly, the work done by men of the past, and that being done by men of the present. . . .

After the consideration of the work done in the past, Mr. Barrow proceeded as follows:—

To the names of those I have placed before you, very many others might be added; but there is one who stands prominent, and who must ever hold one of the first, if not the first place, in our estimation—one who, by self-sacrifice of every description, by an unparalleled perseverance, by an unflinching determination of many years' duration, at last convinced the world that the plague of small-pox was to be combatted by the simple process of vaccination. Has any man, in past times or in the present, approached Edward Jenner as a benefactor to the human race? To his memory stands, in the churchyard of his native place, Berkeley, in Gloucestershire, a monument with the following inscription:—

"Within this tomb hath found a resting place
The great physician of the human race—
Immortal Jenner; whose gigantic mind
Brought life and health to more than half mankind.
Let rescued infancy his worth proclaim,
And hush out blessings on his honored name;
And radiant beauty drop her saddest tear,
For beauty's truest, truest friend lies here."

Greatly may we rejoice that the name of Jenner still shines brightly amongst us, and that one hearing that honored name stands conspicuous as the favored trusted physician of the Royal Lady who, if for no other reasons, calls for our loyal gratitude and never-dying respect, certainly on account of the favor with which Her Majesty always regards our profession, and the deep interest she ever evinces in the sufferings, calamities, and distresses of her subjects. A Jenner, then, is still present with us; and long may he be so, benefiting mankind by his ever ready talented help, and upholding, as he has ever done, and at times under most trying and difficult circumstances, the honor and dignity of our profession. The truth of what I have said has been lately so judiciously and wisely expressed by the Fellows of that learned body, the College of Physicians, that I need say no more.

Can I pass altogether in silence the names of some of our living benefactors? To do so would be doing umbrage to my own feelings, and, I can but believe, to yours also. Men whom we delight to honor, and whose works will live after them.

Do we not number amongst the members of our profession a Hooker, a Watson, a Burrows, and such like? Are not such men as Spenceer Wells, Lister, Thompson, Erasmus Wilson, and others, following in their steps, and doing equally good work for the benefit of mankind? Are they not to be noted as men worthy of special sympathy?

Do we not all respect the name of Paget, who by almost unprecedented labor and perseverance, backed by an unusual genius, has raised the practice of surgery—may I not add of medicine—to be considered, much more universally than was the wont, as scientific and philosophic callings? Then, again, we have another series of medical men, those—and they are almost legion—who have devoted themselves to the rearing of the youthful aspirants to medical honors and renown. No men in our profession deserve more consideration from the public; for upon their teaching depend the future health and happiness of the community, when old men have passed away, and younger and still younger men spring up to grapple with disease and death. I cannot refrain from mentioning one name (although, as I have said, they are legion) prominent amongst teachers. I must run the risk of being called partial when I name Luther Holden, an old and valued friend and a fellow-pupil, as a type of what a teacher should be—one who has devoted his life, energies, and talents of no small order, to the instruction of youth. Much is due to him from the public—much to the many such who have followed and are following the same career.

Let me here allude to medical education generally, and to examinations in particular. The value and high standing of our profession stands not alone upon the actual practice of medicine and surgery, but upon the scientific and philosophical knowledge possessed by medical men. I hope, therefore, that none of those subjects coming under the denominations of physical science or natural history will be laid aside or dispensed with at the examinations; and may these ex-

¹ Reprinted from advance sheets.

aminations before long be under one conjoint board, unanimous in one grand thought — how the best advice and assistance can be secured to suffering humanity.

There are many other grounds upon which the services of medical men merit more than ordinary recognition, both from the State and from the public.

What would our many charities be, of whatsoever character, without the medical man, — without the well-trained student? Without the last named our hospitals could not be worked, however good probationary nurses and lady-superintendents may be; these have, we all know, no mean idea of their own capabilities. The thanks of the profession are, I think, due to those who have of late so nobly, and at so much personal anxiety, withstood the attempts to supplant medical authority in the wards of our hospitals.

The senate claims amongst its members now, in almost every country, many men learned in physic — men who have assisted to legislate for the good of the world at large, and so it has ever been. The halls and theatres of science, both at home and abroad, have been the homes, as it were, of medical men — men ever and anon binding themselves together for the advancement of science in its various branches — men who at the present time in our country make up one fourth of the total number of Fellows of the Royal Society, a society which, we learn, had its origin in 1645. In every society for the advancement of scientific education, medical men stand most prominent, most pronounced in their opinions, sound in their deductions, and persevering in the fulfillment of their preconceived notions and the realization of their fondest hopes.

The work of a medical man is never-ending, there is no fear of his mind becoming vacant for want of occupation, as expressed by a poet: —

"Alone, if occupation is not rest,
A mind quite vacant is a mind distressed."

It is not only by the work he does and which is seen, but by that which is done in secret for the poor and helpless, that the medical man ought to be judged. What profession does so much? Are not medical men daily performing deeds of heroism, facing danger and even death whilst beneficently ministering to suffering humanity, assuaging pain, consoling the bereaved and distressed, both in mind and in body? Can a more striking example of the heroism of a conscientious practitioner be found than in David Lowson, a physician of Huddersfield, who, to relieve the loved babe of an anxious impiring mother, sucks the mucus from the throat in a case of diphtheria? Whether such a course of action is justifiable, unperilling, as this brave man must have known, be heath, it not his life, is a question which can only be settled by the man who performed the deed — it is one of conscience, one of heart. We must all sympathize with David Lowson in the loss of health, and, at the same time, congratulate him upon the recognition of his heroism by Her Gracious Majesty in the presentation of the Albert Medal.

Having, I fear, already tried your patience, I must pass as quickly as possible over that portion of my subject, which consists in a record of the many works which fall to the lot of the medical man; works often, too often, combated by the laity, sometimes with the assistance of men from our own ranks. The work which the medical man has necessarily to carry on is

sufficient to occupy his anxious thoughts, without having his time engaged in refuting charges and upholding in his public capacity those principles which he believes to be right, and which, as a law-abiding subject, he is bound to carry out.

Take, then, the temperance question, through which frequent assaults are made upon us, not only by the public, but by some of our abstaining friends. I respect every man who acts up to his principles; but no man has a right to accuse another of leading his patient to an immoral life because, in his judgment, some moderate stimulant is necessary, either to assist in the cure of disease or to maintain the standard of health. The man, I care not who he is, that scares the public by saying "stimulants are of no use in any class of case or disease" says that of which he can produce no sound philosophic or scientific reasoning as proof; he makes a declamation which I should have been sorry to carry out in my years of practice, and which is no sounder than that made by a man who once said "he cured all cases of cholera with salt." Medical men have been traduced on this subject most unfairly, most unscrupulously. Take away stimulants altogether from the treatment of disease, and I believe you take away one of the chief anchors of medical treatment. I know that stimulants were at one time too freely administered, and they may be so still in rare cases; but who dares to say that the prescriber did not do so conscientiously, believing it was for the benefit of his patient? Beware of giving way to doctrines wholesale, which may be prejudicial to health and dangerous to life.

What shall I say of the antivaccinators, and of the advocates for the suppression of the Contagious Diseases Acts?

My opinion of revaccination I have already indirectly expressed. After years of research, it was found to answer the anticipations of its discoverer; it has borne the test of years, in spite of the criticisms of every class of man and woman, still holding its own valued place as the surest preventive against the most loathsome of diseases, alike destructive of life, faculties, and health. Is it because, ever and anon, we have an outbreak of small-pox, a case of the disease or of death after vaccination, that therefore the operation is a useless one? All men may not be equally cautious in the lymph they use, and I am not sure but that vaccination is one of those minor operations which has not received the amount of attention which it commands.

The law of compulsory vaccination is faulty, in not being strict enough; for no man has a right to violate a law which has been framed for the protection of mankind at large, whatever his own peculiar views may be. The breaking of such laws not only endangers his own life (which the law says he shall not jeopardize), but that of his neighbor. I trust that, if there be legislation, it will be to introduce clauses more stringent than at present exist. I hope there will not be found one man in our ranks who will countenance or support the most unphilosophical, unscientific cry which has ever been raised against a grand discovery.

What shall I say of the anticontagionists? Of these I would speak only one degree less strongly than I have done of the antivaccinationists. Although the test of time has not been very extended, still there is evidence enough to prove that much good has been achieved, and that much disease and distress has been stayed. The argument used that the act legalizes sin

is only one-sided. Because men and women will sin, are we, having a remedy at hand, not to apply it? Are we to leave men and women who sin, and, unrestrained by their sin, destroy the life, the health, and the happiness of a race still unborn, shall we not strive to lessen the chances of "the iniquities of the fathers being visited upon the children," not for one, but for many generations? I grieve that the cry against the Contagious Diseases Act should receive the concurrence of any in our profession; I grieve more particularly because one, an old friend of my own, Dr. Nevins, has taken up this position, a position he strives to maintain by statistical reasonings which do not stand the ordeal of strict investigation.

Another class of oppositionists has still to be dealt with, — the antivivisectionists. I have already told you that the great discovery of the lacteals by Vesalius was made by the vivisection of a dog. What should we have known of the effects of poisons upon the coats of the stomach and intestines? — what of the injury to, and destruction of, the nerve-centres? — what of the treatment of diseases and injuries of bones, if our friends of to-day had sprung up half a century ago? How many more benefits might I not enumerate accruing to the human race from the experiments upon animals, experiments not carried on from curiosity, but from a desire to add to the blessings of health. Scientific men are not such brutes as some would have the world believe; they carry on their researches with every regard to humanity. Let me ask, Will the antivivisectionists give up their fishing and shooting, their delicacies of crimped salmon, lobsters, and crabs? I trow not. The experiments carried on by the man of science are none so painful as the indulgences just described entail upon living animals.

Legislate for the total abolition of vivisection, and one of the levers for increasing our knowledge of the action of new remedies is taken away, and mankind must be the losers. Let me, in concluding this subject, add a paragraph from Darwin's answer to Professor Holmgren, who inquires what Darwin's opinion of vivisection was. He writes: "What improvements in medical practice may be directly attributed to physiological research, is a question which can be discussed only by those physiologists and medical practitioners who have studied the history of these subjects; but, as far as I can learn, the benefits are already great. However this may be, no one, unless he be grossly ignorant of what science has done for mankind, can entertain any doubt of the incalculable benefits which will hereafter be derived from physiology, not only by man, but by the lower orders. Look, for instance, at Pasteur's results in modifying the germs of the most malignant diseases from which, as it so happens, animals will in the first place receive more relief than man. Let it be remembered how many lives and what a fearful amount of suffering have been saved by the knowledge gained of parasitic worms through the experiments of Virchow and others on living animals. In the future, every one will be astonished at the ingratitude shown, at least in England, to these benefactors of mankind. As for myself, permit me to assure you that I honor, and shall always honor, every one who advances the noble science of physiology."

One word more on this subject. What would be the balance of human suffering saved by the knowledge gained by vivisection to that endured by animals who have been the victims of experiments?

Those who know anything of the matter, can but admit that they bear no comparison. Legislation cannot, it must not, be allowed to interfere with free scientific research.

I would commend the foregoing to the company of antivivisectionists at their next drawing-room assembly.

Two other subjects of controversy are still present to my mind — that of lady-doctors and lady-nurses, and the compulsory reporting of infectious cases. Of the last, I would say, that in my opinion no such obligation should be imposed upon the medical man who is the confidential adviser of the infected household, and under no state of things ought he to be forced to reveal the secrets of that house, be they what they may. The burden of such revelation ought to be borne by the occupier of the house; to legislate in this direction would be legitimate, and much good would, I doubt not, follow.

The other subject presents many points of delicacy and difficulty. It is one, as you well know, which has given rise to much controversy; it is open to fair argument and differences of opinion. My own views, I believe, are opposed to those of a considerable number of men whose opinions I value; but I shall nevertheless express my own freely in as few words as possible.

I am not over-squeamish, nor am I over-sensitive; but I almost shudder when I hear of things that ladies now do, or attempt to do; when I hear them talk — the old, the middle-aged, and the young — speaking of things, not *sotto voce*, but boldly and loudly, in society made up of both sexes. One can but blush, and feel that modesty, once inherent in the fairest of God's creation, is fast fading away. You, gentlemen, who know the delicacy of woman's organization, you must know that constitutionally they are unfitted for many of the duties which are required from both doctor and nurse. May not habit, may not the performance of duties which entail long watchings, much exhaustion of mind and body — may they not, will they not, so change that fine organization, that sensitive nature of woman, so as to render her dead to those higher feelings of love and sympathy which now make our homes so happy, so blessed? Will not the strain upon the delicately-nurtured female have a prejudicial effect upon the babe still unborn? Will not England's glory fade without its modest sympathizing women, and its race of stalwart youths and blooming maidens? You now, gentlemen, know my views as to the propriety of ladies becoming doctors or nurses.

Turning now for a moment from civil to military life, are not medical men found equally prominent in other relations to the state? Has not the battle-field told many a tale of heroism, the devotion of medical men, total abnegation of self, sacrifice of life, to save that of others? Has the state adequately rewarded these men — equally brave on land or water — for services rendered? Our profession can boast of many Porters. The one who died but yesterday in Afghanistan lives in the memory of not only those who personally knew him, but of the United Kingdom at large. Neither are we wanting in men such as John Frederick McCrea, lately so graciously decorated by our beloved Queen with the Victoria Cross, for his conspicuous bravery in South Africa, who, in the midst of fire and shot, conveyed a wounded burler to the shelter of a large ant-hill, then sought an ambulance for the relief of the wounded soldier, and, whilst thus engaged, was himself severely injured, but, nothing daunted, continued at his

post, assisting to secure the safety of many more wounded and disabled soldiers. Thus, having done his duty, it was only left for him to dress his own wounds, having no medical brother to assist him. Is not the story an honor to our profession, a glory to our calling?

Let me turn for a few brief moments to the second part of my argument, — the sacred.

If I appear to any of my hearers to dwell unnecessarily upon, as it were, the religious portion, let me ask you to withhold a criticism prejudicial to my observations; for I cannot forget that the profession has been, and is even to this day, by some people accused of being skeptical, and of denying the power of God in creation. I therefore venture humbly to crave your indulgence if I place prominently before you the thoughts which are uppermost in my mind, and which, from my knowledge of medical men, I believe to be present in theirs. As I have previously said, life is a tremendous reality, a serious responsibility. How can this be disputed? Are we not born by and in the image of the Almighty? Perfect in all our parts, endowed with the finest organization, can we doubt that we are born to show forth the glory of God in all our works? Can it be possible that there is one man in our ranks who denies or even doubts the existence of a God?

The study, or even the simple observation, of nature — whether it be the animate or the inanimate — ought to prove to the man of science, or the man of ordinary intellect, that all has been created and is preserved by one Almighty power. If such be the case, is not life a serious responsibility, — may I not say a sacred one; and is not every man, be his calling what it may, bound to exercise his best powers to preserve not only his own life but that of his fellow-men; to do his duty in that station unto which he has been called? Is not our calling a sacred one, being obliged, if we fail not in our duty, to go hither and thither, with or without other recompense, save that of a conscience void of reproach, and the feeling of satisfaction that we have succored a suffering body, thus following in the steps of our Lord and Master? Is it possible to aspire or attain to a higher position than that of being instruments for good, under the guidance of the Great Healer?

That we have a right to aspire to such a height I have no doubt, though some may still be skeptical as to our calling, and may, with like irreverent vigor, as Dryden in verse declares: —

"Better to hunt in fields for health unbought,
Than for the doctor for a nauseous draught;
The wise for cure on exercise depend;
God never made *this* work for man to mend."

Once again. Is not our calling sacred, if we consider our admittance into the domestic circle as a sacred position? Is not our intercourse with families a privilege which must not be abused? Are we not often brought into contact with sin as well as suffering? Are we not intrusted, in confidence, with the cause of suffering, mental as well as bodily? Are we not sometimes, too, the happy medium of reconciliation between those most nearly related? Is it not often in our power to sever those ties which ought to be held the most sacred? If we fulfill properly the trust reposed in us, and treat domestic confidences with that silent judgment which becomes the honorable gentleman, I say confidently that we have the right, looking

at all these calls upon our time and upon our hearts, to proclaim our profession as standing upon the highest grounds.

As the Hippocratic oath set forth how the honorable performance of our professional duties are to be carried out, so, I think, with equal force, do the words of Galen bring home to us the sacred view. If I failed to place before you the religious feelings which formed the predominant feature of his character, I should be doing a great injustice to his memory.

Remember, Galen was brought up in the darkness and polytheism of the pagans; and, living remote from those favored regions over which Christianity had just begun to shed her healing dawn, so fully had Galen's anatomical researches impressed him with the conviction that the grand fabric of the human frame could only be the work of the all-wise, as well as all-powerful and beneficent Being, that he gives vent to the following burst of religious feeling, worthy of a Christian of the nineteenth century, no less than of a pagan of the second. He says: "In writing these books, I compose a true and real hymn to that awful Being who made us all; and, in my opinion, true religion consists not so much in costly sacrifices and fragrant perfumes offered upon his altars, as in a thorough conviction, impressed upon our minds, and an endeavor to produce a similar impression upon the minds of others, of his unerring wisdom, his resistless power, and his all-diffusive goodness. For his having arranged everything in that order and disposition, which are best calculated for its preservation and continuation, and his having condescended to distribute his favors to all his works, is a manifest proof of his goodness, which calls loudly for our hymns and praises. His having found the means necessary for the establishment and preservation of this beautiful order and disposition, is as incontestable a proof of his wisdom as his having done whatever he pleased is of his omnipotence." Many similar examples abound throughout this great man's works, and show that a spirit of genuine piety directed all his thoughts. If the record of these sentiments be true, ought not the accusation of skepticism, even as regards men of old, to vanish from the minds of men? And if, as I contend, the same sentiments are still uppermost in the minds of medical men, ought they to be ever branded by the title of skeptics?

Gentlemen, I have thus endeavored, imperfectly I know, to show why we deserve, and why we ought, to be esteemed and respected of all men. If we are not so, what is the cause? Does it rest in ourselves? I can but fear that to some extent this is the case; we have a censorious public to deal with, and, being in a measure their servants, we cannot throw them off; for, although they are not independent of us, still we are dependent upon them; there is mutual dependence, and there ought to be mutual confidence, — indeed, there *must* be, if we are satisfactorily to do our duty. I advise the man who feels he has lost the confidence of his patient to retire immediately from attendance, — he will no loser by thus showing that he respects his own feelings. I say there must be confidence between the patient and the practitioner. How often is this broken by the innuendoes of one medical man in reference to another? Is there no jealousy, no backbiting between man and man living in close neighborhood? Does that brotherly love exist between men which there ought to be, and which I think the very sacred-

ness of our calling demands? How often do we hear it said, "Mr. A. says Mr. B. has treated me all wrong, not understood my case at all." How glad, alas, is Mr. A. to write a prescription altogether different from what Mr. B. has done! Medical men must differ in opinion as to treatment, and this very difference is the greatest safeguard the public can have; but the difference of opinion and the treatment to be followed need not be made the subject of comment to the patient. The difference ought to be sacred, as between man and man; and I pray that the freer communication now possible, as I have expressed in a former portion of my address, may be the means of reconciling many men hitherto kept apart by only a partial knowledge of each other.

Again, how sadly do medical men arouse the astonishment of the public when called upon to give evidence in judicial inquiries; how diametrically opposed are the opinions advanced, without regard for their own character or for that of the profession! The opinion must be in favor of the side of those on whose behalf each man is called to give evidence, whether it be for or against. Can we be surprised that the laity often accuse us of violating the principles of honor? In no class of cases is this brought more prominently before the public eye than in railway accidents. Is it impossible for medical men, before giving evidence in such cases, to come to some mutual understanding? I trust some way may be found to escape from the scandal by which, under the above circumstances, we are now surrounded. As long as these controversies last, just so long will it be before we attain to that position which we ought to hold in the estimation of the public.

How the backbitings, the jealousies, have existed for so long is marvelous, even in times gone by, in reference to the power, the prosperity, and dignity of one college of learning over another, and which, even to this day, are so far existing as to greatly impede, I fear, the cause of education, and the proof, by one combined examination, as to the fitness of men to be intrusted with the health and lives of their fellow-men. How different this from what Harvey anticipated, as expressed by the last Harveian orator, Dr. Barclay, "how in the early days of the College of Physicians, jealousies crept in, instead of that large-heartedness which Harvey hoped would guide the steps of the Fellows of the College."

Can we be surprised, then, that the public, being critical, should look doubtfully upon our profession, and refuse us that meed of just sympathy and position which we certainly deserve? Let us hope that a great future is in store for all our colleges and seats of learning, and that they may be pregnant of great results, both as regards the advance of science and the eligibility of those who are destined to go about doing good, following in the steps of their Great Master. . . .

Permit me now to draw my conclusions from what I have ventured (I hope without offense to any individual, present or absent) to place before you. I trust, moreover, that the sum and substance of my observations may have the effect, which I greatly desire, of clearing away some of the clouds which surround the lay public, and that my observations may bring those who have hitherto looked upon our profession as a necessary evil, rather than a good, to believe at any rate that, although we may differ individually as to treatment of disease, we are not antagonistic collectively; that our feelings towards each other are broth-

erly; and that in the performance of our duty toward our patients and to the public we are actuated by true and honest motives, and the most honorable intentions. Gentlemen, a review of what I have already said cannot fail, I am bold enough to hope, to prove that our profession merits the highest consideration from the world at large, and that it stands upon the topmost pinnacle of fame.

Gentlemen, only a few words more, and I have done. Many thanks for your patient attention to my sayings, which I fear have been dull and uninteresting. I trust that no word has fallen from my lips offensive to any one here. I have spoken from the fullness of my heart, with but one desire, namely, that the high position in which our profession already stands may be maintained and increased, and secure for you, individually and collectively, that respect which, if honestly, honorably, and perseveringly carried on, your calling merits.

In conclusion, I would venture to say, pray each morning before you commence your day's labor, which labor cannot be attended but by much anxiety, and at times by disappointment and sorrow, mingled happily, however, by some bright spots; pray, I say, that you may be blessed by that Divine help which can alone sustain you and carry you successfully through labors and anxieties of no mean order, and when evening comes pour forth thanksgivings that strength and knowledge have been given you, to do your duty, in mitigating to some extent the sufferings of your fellow-men. These are the only sure and safe steps to a happy life and a prosperous career. . . .

ADDRESS IN MEDICINE,

BEFORE THE BRITISH MEDICAL ASSOCIATION AT ITS LATE MEETING AT RYDE.¹

BY JOHN SYER BRISTOWE, M. D.

MR. PRESIDENT AND GENTLEMEN, — There are few more interesting and curious studies than the history of medicine. Taking its origin in the very dawn of human existence, not in the instincts which lead men to obey the dictates of nature, but in the sense of rebellion which the pains and penalties she inflicts engenders, it was cradled in the credulity and superstition which are the first fruits of thought struggling for independence. It is not surprising, therefore, that in the earlier ages, when their origin and nature seemed alike mysterious, diseases should be attributed to the influence of stars and comets, to the malignity of demons, to the wrath of deities; and that their alleviation or cure should be sought in amulets and charms, in sacrifices and prayers. Nor is it surprising that in later times, when the knowledge of disease had advanced, and the influence of drugs had become recognized, a belief came to prevail that for every morbid evil which nature permitted to afflict mankind she had provided an antidote. Nor, perhaps, is it to be wondered at that, even at the present time, in this enlightened age, not merely among the lowly and the ignorant, but amongst the noble, the learned, and even the scientific, credulity and superstition in relation to the common enemy of mankind — disease — should still widely prevail; that diseases should still be attributed to supernatural causes, and to the spleen of

¹ Reprinted from advance sheets.

an offended deity; that still amulets and charms, sacrifices and prayers, should be included in the popular *materia medica*; or that the belief should still be entertained (for which no scientific basis whatever exists) that diseases, which are the necessary correlatives of mortality, are mere puzzles, designed by nature for the exercise of ingenuity in the discovery of remedies, which she has industriously hidden in the eternal rocks, and in the living things which people the face of the earth or clothe it with verdure.

It has been largely held, and is doubtless still believed, that the position of medicine as a science is a discredit to the age in which we live; and it may be freely admitted that, while the arts and sciences generally have been making rapid strides, medicine, in its primary and chief object — namely, the cure of diseases, — has made but scanty and doubtful progress. But those who hold this view have given little real thought to the subject. In no small measure they are persons who have no acquaintance whatever with medicines who judge of it by its failure to accomplish ends which are probably impossible of accomplishment, and who are themselves to a great extent credulous as to the efficacy of measures and of remedies whose use is an outrage on common sense. But largely they are persons who base their judgment on a false comparison of the progress of medicine with that of the exact sciences, and of the natural sciences on which alone scientific medicine is built. They forget that mathematics and geometry are (difficult, no doubt, but) comparatively simple sciences, which men may cultivate in the closet, apart from life and nature, and which the ancients, therefore, were as well able to investigate with success as ourselves. They forget that the physical sciences and chemistry, which deal only with the simple forces of nature and unliving matter, have only within the last hundred years made those gigantic strides which have raised them from the depths of empiricism and quackery to the marvelous position which they now hold among our intellectual and effective possessions. They forget that the natural sciences, the sciences which deal with living nature, — namely, botany, zoölogy, anatomy, physiology, and pathology, — though long cultivated fitly and to little purpose, have only of late years made systematic progress; and that it is mainly within the present century that anatomy, physiology, and pathology have risen into the dignity of sciences, and have worked a very revolution in our knowledge and estimate of life, in both its normal and its abnormal conditions — of health and disease. And, lastly, they forget that the scientific treatment of disease can only be based on a scientific knowledge of the structure and functions of the healthy body, on a scientific knowledge of the causes and processes of diseases in it, and on a scientific study of the methods and means by which those morbid causes and processes can be prevented, counteracted, or destroyed, and that such a study is only now becoming possible.

I confess that to me it seems altogether Utopian and unreasonable to expect either that diseases shall ever be banished from the earth, or that even diseases generally shall become curable by therapeutical or any other treatment. All living things are foredoomed to die; and the more complicated their structure, and the higher and more multitarian their functions, the more liable are they to suffer from those changes of structure and derangements of functions which constitute essential elements of disease. Moreover, the causes of

disease abound, and form, as much as we ourselves do, an integral part of the economy of nature. Why should they cease to exist and act and we survive? Again, assuming the persistence of diseases, what grounds of reason or experience have we to justify the belief that for every disease an antidote or cure will sooner or later be discovered? The history of medicine raises no such hope. There is nothing in the nature of diseases themselves to render such a consummation probable. The immortality of mortal life is neither conceivable nor to be desired. Still less is there any reasonable or sufficient basis for the assumption that diseases, differing absolutely from one another in their nature, and depending on causes which have no mutual connection and act upon the system in various and independent ways, should all be amenable to treatment in accordance with one simple theory of therapeutics.

I am not presuming to question the benefits that medicine has conferred upon mankind; still less to deny the promise of greater things to come. I know that, in the past, many glimpses of therapeutical truth have from time to time been caught; and that veins of bright ore have here and there been discovered in the dreary waste of empiricism and charlatanism. I see that, at the present time, pathology and the investigation of the causes of disease are throwing fresh and unexpected light on the nature of diseases, and are leading us into new lines of successful practice, especially in relation to their prevention. And I cannot doubt that as our knowledge of the processes and causes of disease extends, so will our power to prevent disease acquire a wider range, and attain more certainty of operation; and that here, more than in the direct treatment of disease, our future successes will be found. But neither can I doubt that the progress of this and cognate sciences, aided by well-devised experiments and careful observation of diseases, will lead both to the discovery of new remedies and to the more successful use of those we already employ.

I shall not pursue the subject of the potentialities of medicine, fascinating though it be. It is in the vagaries, and not in the science, of medicine, that for this hour my interest centres. I am not going to investigate or explain how it is that systems of medical treatment of disease have originated, have played their part in the drama of human life, have given place to others, and yet (though henceforth discredited in the eyes of man) have left behind them relics which are still embodied in the therapeutical practice and theories of the present day. It is easy, however, to understand how, on the one hand, the vague beliefs, speculations, and errors — the growth of ages — should have gradually acquired form, and blended into creeds; and how, on the other hand, ingenious and self-reliant minds, speculating on the mysteries of nature, should have gradually evolved out of their inner consciousness elaborate systems in explanation, with nothing but their ingenuity to commend them. Thus it was that, in accordance with the first alternative, the Doctrine of Signatures gradually arose; thus it was that, in accordance with the second, Galen elaborated his celebrated hypothesis respecting the virtues and operations of medicines. It seems marvelous that such fantastic fictions as these were should ever have developed in the minds of men, and for ages have been accepted as true, and adopted in practice, not only by the ignorant and thoughtless, but by physicians of conspicuous ability and eminence.

But, gentlemen, the age of credulity is not yet passed; and doubtless, as long as humanity strives to unravel the secrets of nature, and to explain her actions, there will be men, and men, too, of cultivated intellects, who, in the search after truth, will be led astray by will-o'-the-wisps, and who will end by making idols of the vain pigments of their minds, by pulling down and worshipping the golden images they have themselves set up. Such a man, it seems to me, was Hahnemann, the notorious founder of homeopathy. It is of him, and of the sect he founded, that I propose to speak to-day.

Hahnemann became a medical man from choice, and pursued his studies in respectable schools and under fairly eminent teachers. He acquired some credit as a practitioner while yet young, though probably not more credit than many of his contemporaries, and many who have preceded and many who have followed him, have also obtained, whose names, nevertheless, have never emerged from obscurity. But he appears to have given his mind mainly to the study of chemistry, botany, and therapeutics; and certainly there is no evidence from his writings, or any other source, that the study of disease itself had any interest for him. Though he had friends, he seems, like most physicians, to have failed in early life to make his profession lucrative; and either for this reason, or, as some assert, because he became dissatisfied with the methods and systems of treating disease then in vogue, he retired for a time from practice, and gave himself up to his favorite studies, and to the translation of French and English works relating to them into his mother tongue. However this may be, many will sympathize with him now, as many doubtless would have sympathized with him then, in the dissatisfaction which, about this period, he undoubtedly felt with the chaotic state of therapeutical theory and practice at that time prevalent, and with the aspirations that sprung up within him to make order out of confusion, to discover some intelligible relation between therapeutic agents and morbid processes, to systematize the curative treatment of disease. And many even of those who dissent most widely from his conclusions will still, I think, admire the tenacity, the energy, and the sublime bigotry he displayed in the development of that system of which he was at once the creator and the apostle.

His system took its origin in those scholastic views of the nature of disease, of the nature of remedies, and of the influence of remedies on disease, which more or less have influenced the theory and practice of medicine from the earliest ages down to the present day. Looking upon diseases, not as what they are, but as mere assemblages of symptoms; and upon remedies, not as what they are, but as agents specially given by Providence with the one hand to cure the evils which he had scattered broadcast with the other; and, guided by certain superficial relationships, easily observed, between the effects of certain morbid conditions and the effects of certain drugs, it was not unnatural for observant and thoughtful men to speculate on the hidden laws which might be supposed to underlie such relationships, and to generalize. Thus, some perceiving that constipation of the bowels was overcome by purgatives, diarrhoea by astringents, and that hemorrhages were arrested by styptics, thought that in such facts they recognized the general therapeutical law that all diseases should be treated by their opposites (*contraria contrariis curantur*); some noticing that coma was

relieved by purgatives (that is, that affections of the head were favorably influenced by remedies acting on the bowels); that affections of internal organs were benefited by counter-irritants and such like phenomena, originated the theory that disease was curable by remedies which were unlike in operation to themselves, the theory to which the term *allopathy* was given by Hahnemann; and, again, some observing that diarrhoea was often relieved by purgatives, that constipation was often best treated by remedies having a tendency to restrain the action of the bowels, that inflammation of the skin was frequently cured by the application of remedies which themselves tended to irritate the skin, were pioneers in the alleged discovery which Hahnemann proclaimed to the world in the legend *Similia similibus curantur*, and under the name of *homeopathy*.

It is clear, if one looks only at some of the coarser phenomena of disease and effects of remedies, there is some warrant in fact for each of these three theories of treatment, but none for regarding one or other of them as of universal applicability. It is clear, too, that any one arguing back from such facts as these to the hidden workings of diseases and remedies within the corporeal frame, and at the same time shutting his eyes to the phenomena of life as they exist actually, might bring himself to the belief that there were three modes corresponding to those enumerated above, and three only, in which remedial agents could act upon the processes of disease: namely, one by acting in opposition to them (*antipathy*), one by acting in accordance with them (*homeopathy*), and one by acting heterogeneously to them (*allopathy*). But it is difficult to understand how any one who has followed in any degree the advances, during the present century, of the natural sciences, and especially of those which relate to the structure and functions of the human body in health and disease, and to the aetiology of disease, can see any plausibility in such speculations, any provisional hypothesis even, such as sometimes aids the advance of science — any meaning whatever in them.

Now Hahnemann's special views of disease and its treatment originated, and how they underwent gradual development, until they found exact expression in his *Organon*, the bible of homeopathy, I shall not attempt to discuss. The *Organon* itself, however, is a remarkable work, very interesting also, and very entertaining; for it comprises not only the quintessence of his labors, but reveals the character of the man, as in a mirror, with all his strength and all his weakness, all his wisdom and all his folly.

He was a physician who had a supreme contempt for pathology, and on the whole for aetiology. He inveighs over and over again against the absurdity of those who endeavor to discover, in morbid phenomena within the body, an explanation of the symptoms which persons who are ill present. He says: "We may well conceive that every malady implies a change in the interior of the organism, but this change can only be surmised obscurely and fallaciously from the symptoms; it can never be recognized infallibly in its complete reality. The invisible changes wrought by the malady within the organism, and the changes perceptible to our senses (that is to say, in some of the symptoms), together form a complete image of the malady; but that image is only visible in its entirety to the eye of the Creator. It is the totality of the symptoms which alone constitute the part of it accessible to the doctors; but it is likewise in the totality of

the symptoms that we find everything that it is needful to know in order to cure." To Hahnemann it is a matter of no moment whether ascites depends on cirrhosis of the liver, or tubercle of the peritonæum; whether an attack of constipation and colic arises from lead-poisoning or from a cancerous stricture; whether a paralytic seizure is the outcome of hysteria, or is due to some material lesion of the brain. In each case, to him, what is the condition of things within is an idle speculation: the symptoms for which the patient complains comprise all that the medical man need know; and to treat those according to the true laws of homœopathy is to cure the disease. But he goes further; for, not satisfied with stigmatizing all pathological investigations as mere pedantry and foolishness, he actually objects to all attempts on the part of systematic writers and practical physicians to distinguish and classify diseases. Speaking of pathology in the past, he says: "It created arbitrarily the object of cure — namely, the malady. Men decided authoritatively what are the number of diseases, what their form, and what their genera. Good God," says he, "the infinity of diseases which nature excites in man, exposed as he is to so many different influences, under conditions never to be determined beforehand, and infinitely varied, is reduced to such an extent by pathology that there remains only a handful of them furnished according to its whim." Elsewhere he observes: "We may also pass over in silence the fact that persons have tried to reduce the number of maladies — those infinitely varied deviations from the state of health — to a limited list of denominations, and to give the definite descriptions (which vary, nevertheless, according to different pathological views), in order to afford a ready indication of medical treatment for each form of illness that is artificially defined in therapeutics." And again he says, in reference to the causes of disease (which he regards as innumerable): "Thence come an infinite number of heterogeneous diseases, which are so different from one another that (to speak strictly) any case of illness appears only once, and (if we except the few diseases which originate in a miasm) always of the same kind, or which arise from the same cause, every man who becomes affected suffers from a special malady, to which no specific name can be given, and which has never existed in the same manner as in the present case, in the particular individual and under existing circumstances, and will never be reproduced in exactly the same form."

From these quotations we may fairly gather what his views of the nature of disease were. In the first place, he admitted that diseases originated in causes; but these causes were innumerable, and operated in innumerable combinations, and hence (excepting in the cases of miasmatic affection, and some few specific fevers which he could not deny the existence of, and enumerated) were barren subjects of investigation, and as indications for treatment worthless, if not misleading. Indeed, in one place, speaking of intestinal worms (which we regard as causes of disease), he denies that they are causes of disease at all; and says that when they irritate, they irritate simply from the fact that they are themselves suffering, together with their host, of some malady under which their host labors; professing (in accordance with his preconceived views) to imagine some hidden cause, rather than to acknowledge that, as the cause which offered itself in a visible and tangible form to his senses. For him, I should

think, preventive medicine, which deals specially with the cause of disease, and has been successful only in proportion to its knowledge of them, would have been a delusion and a snare. In the second place, pathology, and more especially morbid anatomy, had no meaning for him. All the laborious investigations conducted in our dead-houses, which we fondly imagine add to our knowledge of disease, and to which (in association with clinical study) we attribute most of the advances that have been made in medicine of late years — such as the differentiation of kidney diseases, the recognition of suprarenal medicine, the discovery of the condition known as embolism, the exact recognition of the nature of tumors, the discoveries which have been made in regard to the diseases of the nervous system — would be looked upon by him with contempt. For what, in the third place, have such investigations and such knowledge to do with diseases as he understood them. His diseases, as I have shown, were, with a few exceptions, simply groups of symptoms — mosaics of what the component pieces admitted of endless rearrangement. Intermittent fever constituted one of the cases in which he recognized the operation of a definite cause; but, notwithstanding this, intermittent fevers were themselves innumerable, and each case that came before him was an independent disease.

I do not wish to misinterpret his views. He recognizes, I admit, the existence of morbid causes; but he seems to liken them to the impulse which propels a ball, and to think that with their initial impulse all this specific influence ceases. Nor does he deny the existence of pathological changes in the interior of the body; but he says that we cannot detect them, that, as a matter of fact, they are correlated with the symptoms which patients present, and together with this are common manifestations of the same disease, and that in the symptoms alone we have a sufficient indication of the nature of the disease and of the treatment to be adopted for its cure.

Of course, in all this there is much that is true, and much that is specious. Were it not so his theories would long ago have been abandoned; for it is the mixture of truth and verisimilitude with error that gives error currency. But how much of wild speculation, how much of absolute ignorance of the matters which he proposes to teach, how much obstinate shutting of his senses to the truths of nature.

Hahnemann's views of the nature of disease were doubtless subservient to his views of the curative operation of drugs. And it is on his therapeutical views, if on anything, that his reputation must depend. He says, in his introduction, "All human maladies have up to the present time been cured, not in accordance with reasonings founded on nature and experience, but in accordance with hypotheses arbitrarily devised, such as (amongst others) the law of palliatives, *contraria contrariis*. Yet it was from this opposite side that the true method of cure was arrived at. It is based on the following principle: to cure gently, promptly, certainly, and durably, we must select, in every case of sickness, a medicine which produces of itself a similar affection to that which it is intended to cure. No one up to the present time has taught this homœopathic method; no one has yet practiced it." And he goes on to add that all the maladies that had heretofore been cured had been cured by homœopathic remedies. Let us see exactly what the nature of his teaching is. He seems to start from the fascinating belief that all symptoms of disease,

and therefore from his point of view all disease, are curable. He seems also to have adopted the belief (already adverted to) that for all diseases nature has provided a cure. And he holds that the only proper and efficient cure for any assemblage of symptoms is a remedy which is capable itself of causing in a healthy person an identical assemblage of symptoms.

Stated generally, his views are as follows: the innumerable diseases which afflict mankind, and which arise out of natural causes, consist, for the purposes of the physician, of groups of symptoms; the innumerable remedial agents which exist in nature, locked up in the animal and vegetable kingdoms, and in the inorganic world, are themselves the causes of a parallel basis of artificial diseases, which again, for the purpose of the therapist, consist of groups of symptoms; in order to cure any natural disease that may come before us it is necessary to administer that particular remedial agent which is capable of producing identical symptoms with it, and of course this must be given in a suitable dose, for if in too minute a dose it leaves a residuum of the original disease uncured; if in too large a dose it cures the disease, but induces after-effects of its own; and, further, inasmuch as we are not yet acquainted with the specific virtues of all remedies, and inasmuch, therefore, as for a large number of diseases the most suitable homœopathic remedy has not yet been discovered, we must in such a case select a remedy the effect of which approximates to the symptoms of the disease, by which means we shall cure a certain area, so to speak, of the primary disease, but we shall leave a new disease behind, compounded of the as yet uncured symptoms of the old disease, and the supernumerary symptoms due to the drug itself, which new disease must be treated *de novo* on homœopathic principles. How curious, how ingenious, how interesting the whole thing is! How excellent, if true! And has it not the simplicity of truth in it? The entire range of diseases, the entire range of therapeutics converted into Chinese puzzles; the phenomena of diseases and the effect of drugs upon them treated as algebraical equations! It is impossible to conceive of any physician working daily by the bedside of patients, and in the dead-house, and seeing diseases as they are, forming such a system, except as a joke. It could only have been, as in fact it was, the serious work of a visionary who had thrown off the trammels of fact, and, allowing his imagination to run riot, mistook its fantastic figments for a revelation from heaven.

That Hahnemann believed in himself and in the absolute truth of all that he taught is beyond dispute. He was a prophet, not only to his followers, but in his own eyes. All other systems of therapeutics but his were folly, and all who pursued them were fools. That he had training, and ability, and the power of reasoning, is abundantly clear. He saw through the prevalent therapeutical absurdities and impositions of the day: he laughed to scorn the complicated and loathsome nostrums which, even at that time, disgraced the pharmacopœias; and he exposed with no little skill and success the emptiness and worthlessness of most of the therapeutical systems which then and theretofore had prevailed in the medical schools; and then he invents and proclaims a system of his own at least as empty and as worthless as any that had gone before. In this, I suppose, there is nothing very strange: for it is only the broadest intellects (and his was an essentially narrow one) which are capable of treating the offspring of

their own brains with the same impartiality they manifest in other cases. But, under the circumstances, it will be interesting to consider, however briefly, the character of the therapeutical facts and arguments which he himself alleges in support of his doctrines, and the methods of investigation which he taught and practiced.

In the first place, in order to prove the truth of his assertion, that all cures which had heretofore been effected by drugs were effected in virtue of their homœopathic action, he ransacks the writings of his predecessors; and, while omitting to quote (probably, in his opinion, as absolutely worthless) any of the multitude of recorded cases in which cures had been attributed to remedies which could in no sense be regarded as homœopathic, he quotes a number of at least equally worthless cases, in which he thinks he recognizes the curative influence of unconsciously applied homœopathic treatment. The following are two of his quotations: "The English sweating disease, at its beginning more deadly than the plague itself, and which, according to Willis, destroyed ninety-nine patients out of every hundred, could not be overcome until doctors had learnt to treat the sick with sudorific remedies; from that moment, as Sennebert remarks, few persons died of it." Again: "Albus informs us that the high temperature of an acute fever, with 130 beats of the pulse in a minute, was much reduced by a hot bath of 100 degrees of Fahrenheit, and that the beats of the pulse consequently sank to 110." I have no doubt the quotations he gives here are essentially accurate. But surely it is well known that all the older physicians claimed to have discovered, towards the close of any epidemic fever, no matter what its virulence, the true method of curing it, which discovery coincided in time with the rational disappearance of the disease. Many men have thought and declared that they had cured plague and cholera and typhus with similar circumstances by remedies, some of which may even have been homœopathic. Does any one believe that such asserted cures of these incurable diseases ever took place? Is there any sufficient reason to admit that the sweating disease was ever more amenable to treatment than this, or that it was, in fact, ever cured by sudorifics, or any other remedies? And as regards the case of the reduction of temperature by the bath, Hahnemann fails entirely to see that the patient's temperature was much higher than that of the bath; that the bath was relatively cold to him; that it relieved him by reducing his temperature; and that the treatment was, not only not homœopathic, but essentially anti-pathic; that the case, if it proves anything, proves the efficiency of one of those very methods against which he pours out the vials of his wrath. These are simply samples. I could run through the whole series of them, and show that, while a large number of them were merely loose and untrustworthy statements of supposed facts, nearly all of them prove nothing whatever, to my unbiased mind, in response to those homœopathic principles which they are assumed to support. Naturally, the recently introduced non-relation of cow-pox, as a preventive of variola, is adduced by him as a homœopathic remedy against the latter disease. He fails to observe that it is preventive alone; and that, so far from acting as a cure of small-pox, it aborts when applied to a variolous patient, while his disease runs its course wholly uninfluenced by it.

In the second place, as regards his own homœopathic observations. These, as given in his *Organon*, are not

very numerous. For the most part, he there lays down the law oracularly, and quotes the more or less questionable and loose statements of other authors in support of his opinions. There are some two or three observations, however, apparently his own, or at any rate confirmed by his own experience, which are really interesting. He speaks, as I have before pointed out, of intermittent pains as being innumerable, and derides the blind pathology which makes of these one disease, and proceeds: "Pathology feigns this in order to give pleasure to her dear sister Therapeutics, who, excepting antimony and sal ammoniac, has, as a rule, no other remedy against intermittent pains than quinine, with which it treats them according to a fixed method, as if they were all identical! It is true," he continues, "that these pains can be suppressed by enormous doses of quinine, that is to say, that their periodical recurrence is overcome by it; but those who are affected with intermittents for which this remedy is unsuitable are not cured by it, but remain continually ill, and worse than they were before. And this is what the vulgar art of medicine calls a cure!" He regards quinine, and mentions it elsewhere, as a homeopathic remedy for ague attended with certain groups of systems. Homeopathic, forsooth! when the most striking therapeutical fact concerning quinine is that it lowers temperatures; while the most striking clinical feature of ague is the extraordinary rise of temperature which attends its paroxysmal attacks. But fancy ague, which (Hahnemann notwithstanding) is in all its forms identically the same disease, being homeopathic to quinine in one case, and allopathic or antipathic in another; being in one case curable by quinine administered in infinitesimal quantities, and in another aggravated by the same remedy in large doses. I do not know what the present views of homeopathic practitioners may be as to the relations of quinine and ague; but I appeal to every one of experience besides as to whether ague ever succumbs to the use of infinitesimal doses of quinine; and whether, in the large majority of cases, it does not yield, with no ill consequence (due to the drug), to quinine in large quantities? What is the experience of our Indian colleagues in this matter? Again, he speaks over and over again of itch, a disease with which he seems to have been familiar, and which he assumes to be an affection pervading the whole organism, but attended, as small-pox is, with a rash; and in reference to it, he insists upon the folly of endeavoring to cure this skin-disease by local applications, a procedure which he says has the effect of aggravating the constitutional disorder; and teaches that the disease is only to be cured by the internal administration of sulphur in homeopathic doses. Now, it is pretty certain that Hahnemann did not very clearly distinguish itch from many other forms of cutaneous eruption; still, many of his cases of itch were true itch, no doubt. But what can practical men think of the insight into diseases, of the power of observation, of that man who discovers that to destroy the local phenomena of itch is to aggravate the patient's illness; that itch itself is even curable by any internal remedy whatever. No doubt he was not aware that itch is due to the burrowing of parasites in the skin; but if he had been it would have made no difference to him; for he would have argued of them, and of their relation to itch, as I have already shown that he argues of intestinal parasites, and the symptoms of disease which are usually attributed to their presence.

But, in the third place, before medicines can be employed homœopathically, their collective effect must of course be ascertained and tabulated; and, before cases of disease can be treated homœopathically, their symptoms must all be accurately determined and tabulated; in order that the appropriate, or at any rate the most appropriate, remedy may be selected for each. We cannot, therefore, quarrel with Hahnemann for requiring that drugs shall be carefully tested or proved, and that cases shall be carefully and accurately recorded. But what does he mean by proving of medicine, and what by testing of cases? Most men accustomed to scientific investigations would say that, in order to determine the precise potential characteristics of any unknown agency, it should be interrogated and cross-examined and tested from all points of view; that, if a drug, its chemical properties should be determined, and its action on the living and on the dead, in health and disease, should be exhaustively ascertained. That is not Hahnemann's notion at all. Drugs being, in his view, agencies which impart disease, must be tested only on the healthy body, in order to determine, in accordance with homœopathic requirements, what natural diseases their effects simulate. And the method of procedure is, that the experimenter, and those who act under his directions, shall take regulated doses of the drugs they wish to examine, and thus note in each case accurately every phenomenon which develops itself during some period, determined more or less arbitrarily, after the reception of the drug. The results to the uneducated eye look, perhaps, fair and reasonable. But we must admit the truth of the homœopathic view of the relations between medicines and diseases before we can admit the special value of investigations conducted only on the healthy body; and, as regards the method of investigation which he teaches, can anything be better calculated to promote self-deception. Think of the innumerable phenomena which a hypochondriacal old man, a youthful enthusiast in experimental research, or a credulous lecturer would find under such circumstances arising from inconceivable doses of the most inert substances — the itching at this joint, the aching at that, the variation in the pulse, the watering of the eyes, the noise in the ears, the muscular startings, the eructations, the swellings in the bowels, and many other matters of the same kind. What pictures of the mimicry of disease may be thus produced and varied *ad infinitum*; of what innumerable pictures of the kind (comprising here and there doubtless accurate and valuable observations) is the homœopathic literature on the processes of drugs made up. The recording of cases, according to Hahnemann's directions, is of a piece with the proving of medicines. He tells us to listen carefully to the account the patient gives of himself, to hear all that the friends and others about the patient say concerning him, and to note down everything accurately, and in tabular form. You are not to interrupt. And then, when the recitals have been completed, you are permitted to ask certain questions, the character of which he carefully specifies. But you are never to suggest anything to the patient; and you are never, so far as I can make out, to cross-examine him. Imagine the picture of her condition that a garrulous old lady would give under such conditions. Imagine the innumerable histories of diseases you would get in which everything accessory and unimportant would be recorded, and everything really distinctive and important for diagnosis and treatment,

as we understand them, omitted. I am not prepared to say the method is a wrong one from the homœopathic point of view, in which diseases as objects of medical treatment are regarded only as an assemblage of symptoms, and in which the interconnection of symptoms is comparatively unimportant. But what a caricature of scientific case-taking it reveals to us. What an unpractical condition of mind it manifests in him who elaborated it. What light it throws on his curious incapacity for exact scientific observation. How like his method is to that of an industrious newly-appointed clinical clerk. How utterly opposed to the procedure of the experienced scientific physician.

Perhaps the most astonishing feature of homœopathy, as Hahnemann bequeathed it to us, is his hypothesis of infinitesimal doses. He discovered, from the results of his experiments and practice, that, when once the true homœopathic remedy for any disease, or rather collection of symptoms, had been ascertained, it was needful, in order at the same time to secure the full effect of the drug and to obviate any ill effects it might leave of its use, to reduce the doses of it to an inconceivable minuteness. The millionth, the billionth, the trillionth of a grain were gigantic quantities compared with some of those which finally he found it best to administer. It has been calculated that a drop from the lake of Geneva, through the waters of which a single grain of medicine had been diffused, would contain one of his ordinary doses; and that a drop from a mass of water similarly treated long enough to filtrate the whole solar system, would contain as large a dose as is furnished by some of these extreme attenuations! When we laugh at these infinitesimal doses, the retort is often made that we ourselves use small doses; and calculations are flung at us, showing how excessively minute must be the amount of any potent drug administered by the stomach which reaches the organ wherein it induces specific effects, and how absolutely inappreciable must be the bulk of odorous particles which not only affect the sense of smell, but even provoke coryza, sickness, and faintness. Wherein, then, is the absurdity of the Hahnemannic dosage? But this is not a retort that Hahnemann would have made; and, indeed, it is one that could only rise to the lips of degenerate followers of his. It is not the amount of any drug which reaches any one part of the organism which is in question, but the amount of it which has to be administered for a dose. And it cannot be denied that the smallest doses employed by us, even such as Dr. Ringer recommends, are gross indeed compared with those of Hahnemann. Where we give a drop or the hundredth part of a grain he would have given the millionth or the billionth part of that quantity, at the very most, and probably millions of billions less than that. Moreover, the principles underlying the two cases are wholly dissimilar.

The limit in the efficacy of infinitesimal doses involved the violation of his theory. It was, indeed, I think, the natural outcome of it. The mystical powers, which for him resided in drugs, bore no quantitative relation to the ponderable element with which they were associated. They are contained in them much as the genius in the fisherman's story in the Arabian Nights was contained in the leaden bottle which was fished up from the bottom of the sea. It is easy, then, if not inevitable, for him to imagine that the power of drugs became more and more developed, in proportion

as the grosser matters which environed the drug were removed. It is easy, too, from another point of view, for a vaguely mathematical mind like his (which had already dealt with diseases as if they were algebraical equations) to conceive that, just as mathematics becomes a more and more potent instrument, according as the encumbrances of arithmetical and ordinary algebraical præcipe are thrown aside, and one comes to deal, as in the differential calculus, with the mere ratios which survive in quantities which have been reduced to zero, so medicine would become a more and more potent art, according as the coarser portions of drugs and of diseases are eliminated from consideration, and we have only to do with the relations or ratios (if I may so express it) between drugs attenuated to nothing, and diseases reduced to mere groups of intangible subjective phenomena! One may, I think, follow Hahnemann's lines of thought; one may trace, I think, without much difficulty, the steps by which his system acquired its full development, and culminated at length in the doctrine of infinitesimal doses. The author of homœopathy himself carried homœopathy to its logical consequences! and was there ever a more amazing *reductio ad absurdum*!

I intended, gentlemen, when I first thought of preparing the address, to devote no inconsiderable portion of it to the consideration of some of the modern developments of homœopathy. But the time at my disposal is insufficient for that purpose; and I shall content myself with only one or two remarks upon the subject. It is only natural that amongst the many followers of Hahnemann, some, though believing in the essential truth and value of his teachings, have ventured, within certain limits, to think for themselves; and that hence sub-sects, or a tending to the formation of sub-sects, should have arisen. It is hardly possible, for example, that all homœopaths, who have received a medical education, should accept Hahnemann's views of the nature of diseases; and many at the present day do, I believe, acquiesce in the teachings of modern pathology. It is hardly possible, again, that every homœopath should believe fully in the efficacy of the infinitely little doses which Hahnemann contended were the most efficacious, or should believe in the potential effect of the shakings of his preparations, to which, in fact, he largely attributed the development of curative energy in them; hence the change with some is much larger than Hahnemann could have sanctioned. Then, again, was it to be expected that any thinking man could admit that remedies cured because they produced identical effects with them (and, indeed, unless one assumes that remedies act like Pharaoh's lean kine, and then die of a surfeit, it is difficult, to say the least, to imagine Hahnemann's process of cure in progress); and hence has arisen a hypothesis with respect to the influence of minute doses in the cure of diseases, which is fully as ingenious as Hahnemann's own, and is probably just as true, but which has the theoretical disadvantage for homœopaths of converting homœopathy into antipathy! It is to the effect that all medicines have opposite effects, according as they are given in large or small doses, and that when, as the consequence of proving on the healthy person, a drug is found to excite the symptoms of a disease it cures that disease by its opposition to it when given in small doses. I shall not stop to consider the propriety or plausibility of these and other like innovations in orthodox homœopathy; and I leave those who advocate them to reconcile them as best they may with

the teachings of their founder; neither shall I quarrel with the homœopaths who choose to maintain that these only represent successive stages in the progressive development of homœopathy. To me, I confess, they seem in direct contravention of homœopathic principles, and fraught with ultimate disaster to the homœopathic cause.

It is perhaps the most difficult thing in the whole practice of medicine to determine in disease whether the drugs which we are giving are directly influencing it for good. This difficulty is specially great when, as sometimes happens even to ourselves, we are, from ignorance of the essential nature of the disease we are treating, or from failure to form an accurate diagnosis, compelled to treat, as Hahnemann only treated, groups of symptoms. It is true that even the most accurate observers constantly deceive themselves. It was mainly by treating diseases simply in groups of symptoms that Hahnemann deceived himself from first to last. And it is mainly thus that homœopathic practitioners continue to deceive themselves down to the present time. When they can show that, by remedies acting homœopathically, they can cure habitually definite diseases, which by other means we cure uncertainly, or fail to cure altogether; that they can cut short, or render less fatal than they are, the fevers that tend to run a definite course, it will be time for us to make homœopathy a serious study. For tetanus, for epilepsy, for hydrophobia, typical homœopathic remedies exist. Was ever tetanus, epilepsy, or hydrophobia cured by homœopathy? They profess to ward off and to cure scarlet fever, by what they hold to be its homœopathic antagonist, belladonna. Is scarlet fever less frequent or less fatal in the families of homœopathy than amongst the general population? What evidence is there which we can accept, that any internal inflammation, any internal growth, any specific fever, has ever been cured, or even ameliorated, by homœopathic remedies? Of course affirmative assertions will be made, of course statistical evidence will be forthcoming. But mere assertions — and mere statistics are simply talanted assertions — are not evidence which a man professing scientific caution would accept in such a case? Nevertheless, did homœopathy possess one tittle of the curative power that Hahnemann claimed for it it must long before now have commanded the homage of even its most inveterate enemies. For it must be recollected that the claims of homœopathy are not in equality of results with those of orthodox medicine, but that they are to alleviate and cure diseases over which we have little or no control, to relieve where we hurt, to save life where we kill.

So far, gentlemen, I have discoursed only on homœopathy as a science and an art; I wish to add a few words on homœopaths as men, and as members of our common profession.

That a very strong feeling of hostility should have arisen early between orthodox practitioners and homœopaths, is not to be wondered at, when we consider, on the one hand, the annoyance and intolerance which Hahnemann displayed, at any rate in his writings, and on the other hand the contempt which experienced physicians felt and freely expressed for him and his whimsical doctrines. Nor is it to be wondered at that the variance should still be maintained; for homœopathy is still a protest against the best traditions of orthodox medical medicine; and there is a natural tendency among us still to look upon homœopathic

practitioners as knaves or fools, but surely this view is a wholly untenable one.

That all homœopaths are honest men, is more than I would venture to repeat, but that in large proportion they are honest is entirely beyond dispute. It is quite impossible that a large sect should have arisen, homœopathic schools and hospitals have been established, periodicals devoted to homœopathic medicine be maintained, and a whole literature in relation to it have been created, if it were all merely to support a conscious imposture. No, gentlemen; the whole history of the movement and its present position are amply sufficient to prove that those, at any rate, who take the intellectual lead in it are men who believe in the doctrines they profess, and in their mission; and who practice their profession with as much honesty of purpose, and with as much confidence in their power to benefit their patients, as we do. That all homœopathic practitioners are men of ability and education, it would be absurd to maintain; but it is absolutely certain that many men of ability and learning are contained within their ranks. If you care to dive into homœopathic literature, you will find in it (however much you may differ from the views therein inculcated) plenty of literary ability; and I have perused many papers by homœopaths on philosophical and other subjects enumerated with homœopathy, which have proved the authors to be men of thought and culture, and from which I have derived pleasure and profit. Again, I will not pretend that even a considerable proportion of homœopaths are deeply versed in the medical sciences; yet they have all been educated in orthodox schools of medicine, and have passed the examinations of recognized licensing boards; so that it must be allowed that they have acquired sufficient knowledge to qualify themselves for practice, and some among them possess high medical attainments.

But it may be replied, If these men are honest and educated, and at the same time duly qualified practitioners in medicine, how can they believe and how can they practice such a palpable imposition as homœopathy? Well, gentlemen, it is very difficult to account for the beliefs and vagaries of the human intellect. It is only occasionally that our convictions are the result of conscious reasoning. For the most part they arise in the mind, and take possession of it, we know not how or why; and our reasonings in regard to them (if we reason at all) are merely special pleadings prompted by the very convictions they seem to us to determine — in other words, they are not the foundations of our beliefs at all, but exhalations from them. It is not surprising, therefore, that, even on matters of supreme importance, irreconcilable differences of opinion prevail, yea, even amongst men of high integrity and cultivated intellect. And if we desire to live broad and unselfish lives, we must be slow to condemn all those who entertain convictions which to us seem foolish or mischievous, and logically untenable, or to refuse to cooperate with them.

There are few, even of the best among us, who have not weak points in intellect or character. And it would be deplorable, indeed, if, for example, those of us who look at spiritualism as one of the grossest follies of the times in which we live, were to scout the distinguished chemists and the great writers who devoutly believe in it; or were to refuse to do homage to the conspicuous abilities and high character of a great judge, because, throwing off the judicial impar-

tiality which befits a judge, and acting under the influence of prejudice, emotion, and ignorance, he has made himself the leader of all the hysterical sentimentalism of the day in a crusade against experimental physiology in the land of Harvey and of Hunter! The remarks just made apply especially to beliefs in relation to those matters which are incapable of exact scientific proof, and in which the feelings are largely involved — pre-eminently, therefore, to religion, to politics, and to medicine.

I ask you, gentlemen, to forbear with me, if I push my argument to the logical conclusion, and venture now to express an opinion which is opposed to the opinion which many, perhaps most, of you entertain. I do not ask you to agree with it; still less do I ask you to accept it. But I ask you to consider it; and I am content to believe that, if it be just, it will ultimately prevail. It is that, when homœopaths are honest, and well-informed, and legally qualified practitioners of medicine, they should be dealt with as if they were honest and well-informed and qualified. I shall not discuss the question whether we can, with propriety or with benefit to our patients, meet homœopaths in consultation. I could, however, I think, adduce strong reasons in favor of the morality of acting thus, and for the belief that good to the patient would generally ensue under such circumstances. I shall not consider at length whether the dignity of the profession would be compromised by habitual dealing with homœopaths. But I may observe that it is more conducive to the maintenance of true dignity to treat with respect and consideration, and as if they were honest, those whose opinions differ from ours, than to make broad our phylacteries and enlarge the borders of our garments, and wrap ourselves up, in regard to them, in Pharisaic pride. I appeal, gentlemen, in support of my contention, to other considerations. It has been held that to break down the barriers that at present separate us from homœopaths would be to allow the poison of quackery to leaven the mass of orthodox medicine. But who that has any trust in his profession, any scientific instinct, any faith in the ultimate triumph of truth, can entertain any such fear? All the best physicians of old times, all the greatest names in medicine of the present day, are with us; and we know that as a body we are honest seekers after truth. What have we to fear from homœopathy? Bigots are made martyrs by persecution; false sects acquire form and momentum and importance mainly through the opposition they provoke. When persecution ceases would-be martyrs sink into insignificance; in the absence of the stimulus of active opposition sects tend to undergo disintegration and to disappear. The rise and spread of homœopathy have been largely due to the strong antagonism it has evoked from the schools of orthodox medicine, and to the isolation which has thus been imposed on its disciples. If false, as we believe it to be, its doom will be sealed when active antagonism and enforced isolation no longer raise it into fictitious importance. At any rate, breadth of view, and liberality of conduct, are the fitting characteristics of men of science.

COMMON DANGERS IN DWELLING-HOUSES.

MESSRS. MAGUIRE AND SOX, of Dublin, who have had large experience in the examination of houses, say in a recent circular: —

"In endeavoring to awaken public attention to the importance of sanitary reform, we here enumerate thirty of the dangers to health which we most frequently detect in our sanitary examination of houses. Any one of these defects, by admitting foul air, constitutes a real danger to health; but, in the large majority of houses, many of these defects may be found existing together, and in some houses they may nearly all be found rendering those dwellings pestilential. (1.) Common built drains under houses; large built drains under or near mansions. (2.) Pipe-drains with leaking joints, or broken, laid under houses, saturating the basement with sewage. (3.) Pipe-drains laid under houses without sufficient fall, or with fall the wrong way. (4.) Drains of every kind, without proper intercepting traps, admitting foul air from sewers or cess-pools. (5.) Drains of every description, without a constant free current of fresh air through them. (6.) Rat burrows from built drains or sewers undermining flags and floors, and admitting foul air to houses. (7.) Rat burrows worked alongside perfect pipe-drain from street sewers, and into houses. (8.) Defective connections between soil or waste-pipes and sewers, admitting foul air to houses. (9.) Soil-pipes passing through interior of house, under almost any circumstances. (10.) Soil-pipes inside or outside houses without any or sufficient ventilation. (11.) Defective water-closet apparatus. (12.) Water-closet cisterns with overflows joined to soil-pipe or drain. (13.) Safe-trays under closets, connected to soil-pipes or drain. (14.) Two or more water-closets or sinks on same soil-pipe, untrapping each other when used. (15.) Sink overflow-pipes joined to soil-pipes untrapped, or with trap liable to untrap. (16.) Water-supplies to sinks taken from water-closet or other contaminated cisterns, and used by careless servants to fill bedroom carafes for drinking. (17.) House cisterns and tanks with overflows direct into soil-pipes or drains. (18.) Traps of every description without ample ventilation to guard them. (19.) Scullery sinks connected direct to drains, admitting foul air to houses, not only through traps, but through joints of brickwork all round, as shown by our smoke test. (20.) Bell-traps, with loose covers, on scullery sinks connected to drains. (21.) Gullies or traps in sculleries, laundries, larders, etc., connected to drains, usually dry and untrapped. (22.) Rain-pipes used as ventilators to drains delivering foul air near bedroom windows, or under eaves or roofs. (23.) Ashpits near larders and pantries; ashpits liable to soak foul moisture through house-walls. (24.) Defects of drainage and rat burrows from neighbors' houses. (25.) Water-tanks in areas, near ashpits or sculleries, and with overflows direct to drains. (26.) Washhand basins in dressing-rooms, connected directly in any way to drains or soil-pipes. (27.) Water-closet cisterns in return rooms, frequently under bedroom or parlor floors, perhaps with overflow direct to drain. (Sixteen years ago the writer thoughtlessly used a room of this kind, and was attacked with typhoid.) (28.) Cess-pools near houses, and cess-pools or defective drains near wells. (29.) Neighbors' drains crossing under houses or joining drains. (30.) Drinking-water defects, and all impurities likely to contaminate milk, meat, or food of any kind."

The list is a long one, but it is only too true that such dangers are common in dwelling-houses, and are often unrecognized until repeated illness has called attention to them. — *British Medical Journal*.

Recent Literature.

A Medico-Legal Treatise on Malpractice, Medical Evidence, and Insanity, Comprising the Elements of Medical Jurisprudence. By JOHN A. ELWELL, M. D., Member of the Cleveland Bar, etc., etc. Fourth edition, revised and enlarged. New York: Baker, Voorhis & Co., 1881. Pp. 600.

If one may be permitted to judge by the enthusiastic statements in the preface to this volume, as well as by the very complimentary testimonials which the author and his publishers have thought it well to introduce not only in the pages usually devoted to such sweetmeats, but also in extraordinary and questionable relations as notes at the end of many of the chapters, this work in its previous editions has been received with remarkable favor. It would not, however, require microscopic vision on the part of the independent and discriminating critic to discover certain defects in the book, both in its literary construction and in its special character as a medico-legal treatise. Many grammatical errors mar its pages, inconsequential and obscure sentences disturb the sensitive reader's equanimity, and a few obviously erroneous statements appear in connection with the citation of adjudicated cases, and indicate that the revision has not been as careful and thorough as the title-page hints. Notwithstanding the author's assertion that "as in former editions, so in this, the knife has been relentlessly applied to all surplus brush, that symmetry and healthy fruit-bearing may be the result," one finds many places where the "brush" was overlooked or has grown with great rapidity since the last relentless pruning was performed, while in other parts (especially in the closing chapters) the application of the knife has left bare poles only, with scarcely enough foliage for decency's sake; in either case, the inequality of the work has made the search for the healthy fruit a matter of some difficulty.

As a medico-legal treatise, the book seems to us to have come somewhat short of fulfilling its destiny. The author having practiced medicine several years, and having then abandoned that "noble profession" (as he calls it repeatedly) to devote his attention to the law, believed himself in a position "to promote the great ends of science and justice by endeavoring to embody in a concise, complete, and comprehensive work all the settled principles and known authorities as well as the result of his own thought and experience," upon certain departments of medical jurisprudence. In thus avowedly attempting to serve at once the needs of both medicine and law, he has inevitably found himself cramped at times by the character of his authority. One is occasionally in doubt concerning the intent of this medico-legal Janus, whether the doctor or the lawyer is addressed chiefly, and it is reassuring to come upon such admonitions as these at the end of some of the chapters: "The foregoing remarks are designed more particularly for the legal profession" (page 54); and, again, "These general suggestions are designed especially for medical men" (page 272). It would save the reader's time if these bits of advice had been placed at the beginning rather than at the end of the sections to which they relate. But perhaps the trouble in this connection lies not so much in the author as in the plan of the book. It is impossible in the compass of six hundred pages to incorporate all

the principles of forensic medicine which shall successfully guide the practitioners of both professions in their service of public morality. The lawyer will not be assisted greatly in his practice by an intimate knowledge of the intricacies of toxicology or the details of pathological anatomy; nor will the medical witness obtain much aid and comfort from any preliminary study of "adjudicated" cases in preparing himself to encounter safely the pitfalls, and sloughs, and quicksands of the court-room. *Ne sutor ultra crepidam.* Let the man of law have the benefit of the medico-legal precedents so fully set forth in the book before us, and when occasion arises let him meet the medical witness courteously and in good faith for a complete and intelligent preparatory rehearsal and mastery of the medical elements then specially involved in the case at issue; and let the medical witness, on his part, insisting that he is none the less a physician and none the more a lawyer because he is at the service of the courts, shun the technicalities of the law, assured that they will not assist him much when he is on the witness-stand, and that he cannot go far wrong if he respects the requirements of his oath.

As a matter of fact, the work under review is essentially a legal rather than a medico-legal treatise, and will serve the distinguished author's brethren of the bar better than his former fellows in medicine; the language of the book has a pervasive legal flavor; it is particularly rich in the citation of cases which have passed before the highest courts in England and America; and even its external appearance, its tawny leather and its red and black labels, establish its claim to the congenial company of Kent and Roscoe and Bouvier. The physician will do better to retain on his shelves his Taylor, and Guy, and Casper, and Beck, writers to whom our author repeatedly refers, with more condescension than grace, as "elementary."

It is not to be understood that we regard Professor Elwell's work as of slight merit. In spite of its deficiencies there is very much in it that is of exceeding interest and value. The opening chapters on malpractice and medical evidence, upon which the author appears to have devoted most of his attention, are elaborated with great care, and the section on insanity is very complete, and will well repay the reader's perusal.

The closing chapter discusses the coroner's office, and contains the familiar refrain about the decadence of that once worshipful adjunct to the judiciary. Some excellent arguments are adduced for the regeneration of the coroner's function. It does not appear to have come to the author's knowledge that Massachusetts long ago solved the problem satisfactorily; it is possible that before another edition of his work is prepared for the press he will have learned the details of the inquest method here in vogue, and will esteem them worthy of mention in a foot-note at the least. D.

The Compend of Anatomy, for Use in the Dissecting Room and in Preparing for Examinations. By JOHN B. ROBERTS, M. D. Second Edition. Philadelphia: C. C. Roberts & Co. 1881.

The fact that the first edition of this little work was exhausted in a few months shows that it meets a want. If we remember rightly we spoke of it as very good of its kind, for we do not like compends. The second edition is revised and enlarged.

Medical and Surgical Journal.

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CARBONIC OXIDE: DANGERS TO HEALTH FROM CAST-IRON FURNACES AND STOVES.

In a recent number of the National Board of Health Bulletin Professor Ira Remsen reports the results of an investigation lately undertaken by him for the purpose of determining, if possible, whether carbonic oxide is a constituent of the air of rooms heated by cast-iron stoves and hot-air furnaces. The conclusions to which he arrives, in so far as they relate to the dangers to be apprehended from the passage of carbonic oxide through heated cast iron, are interesting, since they differ from those which have been reached by other investigators and generally accepted as final. It is the prevailing belief that the injurious effects produced by breathing the air of rooms heated by cast-iron stoves and hot-air furnaces are due chiefly to the inhalation of carbonic oxide, and that the presence of this gas is explained partially by the fact that cast iron, at a red heat, takes it up from anthracite coal and permits its passage directly through its substance.

MM. St. Claire Deville and Troost first stated, as the result of experiments undertaken by them to determine whether cast-iron stoves were objectionable or not, that carbonic oxide may and does pass through cast iron heated to redness.

A little later the subject was thoroughly investigated by a committee appointed by the French Academy. The conclusion reached by this committee was that cast-iron stoves, as soon as their temperature reaches dark-red heat, cause the escape of not inconsiderable quantities of carbonic oxide. Although these conclusions have been pretty generally accepted as true, still different results have been obtained by some of the later investigators. H. Vogel was unable to find any evidence of carbonic oxide in the air of certain school-houses in Berlin, although by the method employed by him he could with certainty detect 2.5 parts of the gas in 1000 parts of air. J. Gottschalk in 1877 examined the air of certain school-houses in Leipzig; he found no evidence of carbonic oxide, although by the method which he employed he claimed to be able to detect 0.22 parts of the gas in 1000 parts of air. In 1878 S. Wolffhügel made some experiments with a cast-iron stove, on the side of which was a box covering one square decimetre of cast-iron that could easily be heated to redness. The air drawn from this box was then examined by means of Vogel's blood test. In all his experiments the results were negative.

It was in view of the uncertainty connected with the subject, and its importance, that it seemed to Professor Remsen desirable to undertake a new investigation, which he did at the request of the National Board of Health. In his report he calls attention to the work of previous investigators, criticises the methods employed by them, and gives his reasons for doubting the conclusions arrived at by Deville and Troost, and by the French commission. His first step in the investigation proper was to carefully study the methods which had been used, in all the earlier experiments for the detection of carbonic oxide, and he is convinced that Hempel's method is the best one now at our command for this purpose. Hempel's method, which is a modification of Vogel's blood test, consists in allowing mice to breathe the air under examination, killing the mice, and examining the diluted blood with the spectroscope. By this method he could with certainty detect four parts of carbonic oxide in ten thousand parts of air.

The next step in his investigation was to apply the method to the examination of the air of such buildings as seemed to be the most suspicious. The air in a comparatively large number of rooms was examined. The result of the examination was that carbonic oxide was not detected in a single case, and the conclusion is justified that in rooms heated by cast-iron stoves and furnaces there is not present in the immediate vicinity of the hot-air flues as much as 0.04 per cent. of carbonic oxide.

Experiments were also made with cast-iron stoves for the purpose of determining whether carbonic oxide passes through cast iron heated to redness or not. All these experiments gave negative results, and showed that under apparently the most favorable conditions not as much as 0.04 per cent. of carbonic oxide passes through heated cast iron.

These results are in accordance with those reached by Vogel, by Gottschalk, and by Wolffhügel, and at variance with those obtained by the French commission; and Professor Remsen thinks it desirable that the work of the commission should be repeated, account being taken of the influence of the possible sources of error to which he calls attention in his report.

It would seem, then, that the reference to carbonic oxide as a source of danger by reason of its passage through cast iron heated to a high temperature should be modified to some extent. A question arises whether carbonic oxide in smaller quantities than those which can be detected by Hempel's method may not be present. As there seems to be no reliable method for detecting smaller quantities the question must, for the present, remain unanswered. Professor Remsen thinks the hypothesis perhaps justifiable that carbonic oxide is present in quantities less than 0.04 per cent.

It is also a question whether such small quantities of the gas are injurious to health or not. Vogel and Wolffhügel think that as long as the air does not contain 2.5 parts carbonic oxide in 1000 it may be regarded as uninjurious. Von Fodor, on the other hand, thinks that even 0.25 parts of the gas in 1000

parts of air must be regarded as injurious to health, basing his opinion upon the results of experiments upon animals, in connection with the fact shown by Friedburg that man is more sensitive to the action of carbonic oxide than animals.

In case it is shown that carbonic oxide is present, but in quantities too small to prove injurious, it remains to be discovered what the real cause of the bad effects of furnace air is. All these questions are important, and it is desirable that the whole subject be further investigated. It should be borne in mind, however, in considering the investigations just referred to, that the escape of carbonic oxide, when there is an insufficiency in the draught or when the heating apparatus is mismanaged, is not denied.

Miscellany.

LETTER FROM LONDON: INTERNATIONAL MEDICAL CONGRESS.

PROFESSOR HUXLEY'S ADDRESS. — DISTRIBUTION OF COMMEMORATIVE MEDALS. — CONCLUDING EXERCISES, ETC., ETC.

London, August 9, 1881.

THIS day is the last of the seventh session of the International Medical Congress, which has been fortunate in enjoying perfect weather during its assembly, with the single exception of a few hours yesterday afternoon. Last night the Royal College of Surgeons of England invited to a *conversazione* all the members of the Congress, who thus enjoyed a rare and grand opportunity of intellectual intercourse and entertainment amongst their many-tongued confrères and the endless collection furnished in the world-famed Hunterian Museum. Immediately within the entrance there stood in line the president, vice-presidents, and council of the college, ready to greet each comer. Thus all had an opportunity of shaking by the hand many a distinguished surgeon who had previously been known to them only by reputation.

The concluding meetings of the International Medical Congress were held in St. James's Great Hall to-day, Sir James Paget occupying the chair. Sectional meetings were held in the morning, and in the afternoon Professor Huxley addressed the sixth general meeting on *The Connection of the Biological Sciences with Medicine*. The great body of theoretical and practical knowledge, he said, which had been accumulated by the labors of some eighty generations, since the dawn of scientific thought in Europe, has no collective English name to which an objection may not be raised, and he used the term *medicine*, as that which is least likely to be misunderstood, though, as every one knows, the name is commonly applied, in a narrower sense, to one of the chief divisions of the totality of medical science. Taken in this broad sense, "*medicine*" not merely denotes a kind of knowledge, but it comprehends the various applications of that knowledge to the alleviation of the sufferings, the repair of the injuries, and the conservation of the health of living beings. In fact, the practical aspect of medicine so far dominates over every other, that the "*healing art*" is one of its most widely received synonyms. It is so difficult to think of in doing otherwise than as something which is necessarily connected with curative

treatment, that we are apt to forget that there must be and is such a thing as a pure science of medicine, — a "*pathology*" which has no more subservience to practical ends than has zoology or botany. The logical connection between this purely scientific doctrine of disease, or pathology, and ordinary biology, is easily traced. Living matter is characterized by its innate tendency to exhibit a definite series of the morphological and physiological phenomena, which remain the same, within narrow limits, for each kind of living thing. They furnish the normal and typical characters of the species, and as such they are the subject-matter of ordinary biology. Outside the range of these conditions the normal course of the cycle of vital phenomena is disturbed; abnormal structure makes its appearance, or the proper character and mutual adjustment of the functions cease to be preserved. The extent and the importance of these deviations from the typical life may vary indefinitely. They may have no noticeable influence on the general well-being of the economy, or they may favor it. On the other hand, they may be of such a nature as to impede the activities of the organism, or even to involve its destruction. All that can be said is, that whatever change of structure or function is hurtful belongs to pathology. Hence it is obvious that pathology is a branch of biology; it is the morphology, physiology, the distribution, the ætiology of abnormal life.

However obvious this conclusion may be now, it was nowise apparent in the infancy of medicine. For it is a peculiarity of the physical sciences that they are independent in proportion as they are imperfect, and it is only as they advance that the bonds which actually unite them all become apparent. Thanks to the intimate alliance of morphology with medicine, the natural history of disease has, at the present day, attained a high degree of perfection. Accurate regional anatomy has rendered practicable the exploration of the most hidden parts of the organism, and the determination during life of morbid changes in them; anatomical and histological post-mortem investigations have supplied physicians with a clear basis on which to rest the classification of diseases, and with unerring tests of the accuracy or inaccuracy of their diagnoses. If men could but be satisfied with pure knowledge, the extreme precision with which in these days a sufferer may be told what is happening and what is likely to happen, even in the most recondite portions of his bodily frame, should be as satisfactory to the patient as it is to the scientific pathologist who gives him the information. But Professor Huxley expressed his fear that it is not; and even the practicing physician, while in nowise underestimating the regulative value of accurate diagnosis, must often lament that so much of his knowledge rather prevents him from doing wrong than helps him to do right. Disease is the perturbation of the normal activities of a living body, and it is and must remain unintelligible so long as we are ignorant of the nature of these normal activities. In other words, there could be no real science of pathology until the science of physiology had reached a degree of perfection unattained, and, indeed, unattainable, until quite recent times. Modern, contrasted with ancient, physiology, offers physical explanations of vital phenomena, or frankly confesses that it has none to offer.

So far as the professor knows, the first person to give expression to this view was René Descartes. The body, he holds, is a machine of the nature of an army,

not that of a watch or of a hydraulic apparatus. Of this army each cell is a soldier, an organ is a brigade, the central nervous system headquarters and field telegraph, the alimentary and circulatory system the commissariat. Losses are made good by recruits born in camp, and the life of the individual is a campaign, conducted successfully for a number of years, but with certain defeat in the long run. The efficacy of an army at any given moment depends on the health of the individual soldier, and on the perfection of the machinery by which he is led and brought into action at the proper time; and, therefore, if the analogy holds good, there can be only two kinds of diseases, the one dependent on abnormal states of the physiological units, the other on perturbation of their coördinating and alimentative machinery. Hence the establishment of the cell theory in normal biology was swiftly followed by a cellular "pathology" as its logical counterpart; and henceforward Professor Huxley regards the connection of medicine with the biological sciences as clearly defined. Pure pathology, he sets forth, is that branch of biology which defines the particular perturbation of cell life, or of the coördinating machinery, or of both, on which the phenomena of disease depend. But the last form of the battle between the animistic and the physical views of life is seen in the contention whether the physical analysis of vital phenomena can be carried beyond this or not. There are some to whom living protoplasm is a substance, even such as Harvey conceived the blood to be, "*Summa cum providentia et intellecta in finem certum agens, quasi ratiocinio quodam*," and who look with as little favor as Bichat did upon any attempt to apply the principles of growth, metabolism, and contractility. They stand, said the speaker, on the ancient ways; only in accordance with that progress towards democracy which a great political writer has declared to be the fatal characteristic of modern times. They substitute a republic formed by a few billion of "animalæ" for the monarchy of the all-pervading "anima." Others, on the contrary, supported by a robust faith in the universal applicability of the principles laid down by Descartes, and seeing that the actions called "vital" are, so far as we have any means of knowing, nothing but changes of place of particles of matter, look to molecular physics to achieve the analysis of the living protoplasm itself into a molecular mechanism. If there is any truth in the received doctrines of physics, that contrast between living and inert matter, on which Bichat lays so much stress, does not exist. In nature nothing is at rest, nothing is amorphous; the simplest particle of "brute matter" is a vast aggregate of molecular mechanisms, performing complicated movements of immense rapidity, and sensitively adjusting themselves to every change in the surrounding world. Living matter differs from other matter in degree and kind; the microcosm repeats the macrocosm, and one chain of causation connects the nebulous original of suns and planetary systems with the protoplasmic foundation of life and organizations. From this point of view pathology, Professor Huxley said in his closing observations, is the analogue of the theory of perturbations in astronomy; and therapeutics resolves itself into the discovery of the means by which a system of forces competent to eliminate any given perturbation may be introduced into the economy. And, as pathology bases itself upon normal physiology, so therapeutics rests upon pharmacology, which is, strictly

speaking, a part of the great biological topic of the influence of conditions on the living organism, and has no scientific foundation apart from physiology. It appears to me that there is no more hopeful indication of the progress of medicine towards the ideas of Descartes than is to be derived from a comparison of the state of pharmacology at the present day with that which existed forty years ago. If we consider the knowledge positively acquired in this short time of the *modus operandi* of curare, of atropia, of bromide of potassium, of phosphorus, of physostigmin, of veratria, of cascra, of strychnia, there surely can be no ground for doubting that sooner or later the pharmacologist will supply the physician with the means of affecting in any desired sense the functions of any physiological element of the body. It will, in short, become possible to introduce into the economy a molecular mechanism, which like a very cunningly contrived torpedo shall find its way to some particular group of living elements and cause an explosion among them, and leave the rest untouched. The search for the explanation of diseased states in modified cell life, the discovery of the important part played by parasitic organisms in the aetiology of disease, the elucidation of the action of medicaments by the methods and the data of experimental physiology, appear to me to be the greatest steps which have ever been made towards the establishment of medicine on a scientific basis. I need hardly say they could not have been made except for the advance of normal biology. There can be no question, then, as to the nature or the value of the connection between medicine and the biological sciences. There can be no doubt that the future of pathology and of therapeutics, and therefore that of practical medicine, depend upon the extent to which those who occupy themselves with these subjects are trained in the methods and impregnated with the fundamental truths of biology. And I venture to suggest that the collected sagacity of this Congress could occupy itself with no more important question than this. How is medical education to be arranged so that without entangling the student in those details of the systematist which are valueless to him he may be enabled to obtain a firm grasp of the great truths respecting animal and vegetable life, without which, notwithstanding all the progress of scientific medicine, he will still find himself an empiric?

CONCLUDING MEETING.

A vote of thanks having been accorded Professor Huxley, the concluding meeting of the Congress was held. The honorary Secretary-general (Mr. MacCormac) brought forward the following resolutions for the Physiological Section, which were submitted by the president and carried: "That this Congress records its conclusion that experiments on living animals have proved of the utmost service to medicine in the past, and are indispensable to its future progress; that, accordingly, whilst strongly deprecating the infliction of unnecessary pain, it is of opinion that alike in the interests of man and all animals, it is not desirable to restrict competent persons in the performance of such experiments." (Cheers.) The second resolution was from the Ophthalmology Section, and it contained a series of tests most applicable to persons employed in observing signals by land and by sea, where the lives of others were involved. These resolutions asked that the suggestions should be forwarded to the President

of the Board of Trade, first Lord of the Admiralty, and Secretary of State for Foreign Affairs, with the expression of the desire that they might be favorably entertained, and, if thought well, be recommended for adoption by foreign ports. As stated, the proposition was unanimously affirmed.

Commemorative medals were presented to Professor Donders and Dr. Guye, president and secretary-general of last Congress, and to Madame Raynaud, as a souvenir of her late husband. Commemorative medals were also presented to Professor Virchow, Berlin, Dr. Férrol, Paris, Dr. Billings, Washington, Professor Volkmann, Halle, Professor Pasteur, Paris, and Professor Huxley.

The fixture of the next place of meeting was left to the executive committee. On the motion of Dr. Billings a hearty vote of thanks was accorded Mr. McCormac, and the president (Sir James Paget), having delivered his farewell address, the proceedings were brought to a close.

In the evening the members of Congress dined together informally at the Crystal Palace, and thus was brought to an end the greatest international meeting of medical men that has ever been held.

The brief speech in which Dr. Billings proposed the best of all thanks to the honorary secretary-general was of the happiest possible character. The speaker stated that he had been asked in the morning his estimate of the amount of permanent good which would result from the Congress. He felt bound to liken the week that he and other members of the Congress had just passed through to an express railway journey through a richly cultivated land teaming with spots of interest, which, despite their undeniable individual importance or magnificence, could not help becoming a little blended together so as to leave for the moment but a confused visual and mental impression upon the semi-perplexed observer, who was not capable of at once recognizing the particulars of the very numerous impressions which he could not have failed to receive. Dr. Billings likening his own mental condition to the photographer's sensitive plate, declared that time and thought would effect a change, as by a developing solution, with the result that most valuable additions would have been made permanently to each individual store of available knowledge.

Professor Von Langenbeck, seconded by Mr. Prescott Hewitt, suitably proposed a cordial vote of thanks to those non-members of the Congress who had materially contributed to the great success and enjoyment of its session.

Dr. Guye, of Amsterdam, seconded by Sir Risdon Bennett, late president of the London College of Physicians, proposed hearty thanks to the officers of the Congress.

Mr. Bowman, the Nestor of ophthalmologists in this country, seconded by Professor Lister, announced the names of those before mentioned to whom medals of honor commemorative of the Congress were presented. Both proposer and seconder very briefly and as appropriately alluding to the most prominent causes of distinction attaching to each recipient of the souvenir, the audience, which even on this occasion in great part filled the principal galleries as well as the arena of the hall, showed by their always hearty but nevertheless modulated applause the proportion of high appreciation attaching to each one.

When the occasion arose for the president of this

Congress to finally address his admiring and distinguished audience, he must have indeed astonished most of them by the announcement that in the single week of the session the Congress had devoted more hours to the labor in its sections than were occupied during a whole year in the work of the whole thirteen medical societies of London, while the numbers attending each section far outstripped the average of those present at the most popular of the London medical societies; further, that the quality and the number of papers contributed during the week was unexampled, while very many of them came from authors who, independent of the Congress, would alone command a vast audience whenever they vouchsafed to lend themselves to afford intellectual entertainment to their hearers.

The change to Ryde to-morrow will indeed be an agreeable relaxation and delightful recreation for the many members of the Congress who will go to the annual meeting of the British Medical Association, of which Professor Humphrey is the president and Mr. Benjamin Barrow the president-elect. The address in medicine will be by Dr. Bristowe, while Mr. Jonathan Hutchinson will contribute that in surgery.

After the unprecedented sectional labors of the Congress, it has been wisely arranged that there shall be but four sections, medicine, surgery, obstetric medicine, and public medicine, as without doubt special sections would have been labor thrown away, as a most meagre attendance would have been unavoidable under circumstances which do not offer attraction to the mass of the general practitioners of the healing art.

LONDON LETTER: FROM A SPECIAL CORRESPONDENT.

LONDON, August 10, 1881.

MR. EDITOR.—The International Medical Congress for 1881 has just closed, and in compliance with your kind invitation I will notice some of the more salient points connected therewith, principally from a surgical point of view.

The smoke of the battle has not yet cleared away, and events have transpired in such rapid succession that details are for the moment very much confused. To borrow the simile that Dr. Billings used yesterday, it is like riding through the beautiful green fields and picturesque villages of England on an express train. The houses, fences, and other objects are passed so swiftly as to leave a blurred image on the brain. But time will bring out the details in our memory as the developing solution of the photographer makes the picture plain.

But certain things even now stand out in full relief.

There is no question that in the number and character of its delegates, and in the quality and amount of scientific work done, this Congress will always stand distinctly individualized as compared with any preceding one; and for many reasons, especially those of time and location, it will probably be a long time before it is equaled.

The register shows over three thousand names, but this is no guide to the number of actual attendants.

Very many registered, some by proxy, and never went near the meetings, but went sight-seeing and traveling over the country instead. Many others merely "looked in."

But the *real, working* attendance was very large.

Of course Great Britain contributed the great majority; next in numbers came the Germans; then the French; then Scandinavia, Russia, Italy, and Spain, counting these four as one — and next America. I am a little surprised that the United States was not more *largely* represented — I mean in all the departments. Only about a dozen men of national reputation in *general surgery* were among the active delegates. But with Bigelow of Boston, Little, Otis, and Sands of New York, Gross of Philadelphia, Weiss of Richmond, Gunn of Chicago, and Hodgen of St. Louis, you may be sure that American surgery was *properly* represented.

Tuesday afternoon was the time of the general reception at the College of Physicians. There the men from all parts of the globe who had only known one another through correspondence or by their contributions to the general fund of professional knowledge, met for the first time *vis-à-vis*. And a most interesting time it was — to shake hands with men whom you you have admired and revered for a life-time, and for the first time *talk* with them, and so many of them, is a rare experience.

I must not stop to tell you of the opening meeting. St. James's Hall was well filled. Everything was well done, but of course the report of committees was tedious. But the President's (Sir James Paget) address was worthy of his grand, noble self. At its close, as he said in the most impressive manner, "God help us in our work," I saw many eyes wet with tears, and I believe that every sincere worker in this Congress had his zeal and devotion quickened and warmed by the stirring appeals of our President to make the most of this rare opportunity.

Of course the real work was done in the sections. And here let me say a very pleasant thing. Although I spent most of my time in the Surgical section, yet once at least every day I dropped in to those of Medicine, Ophthalmology, and Gynecology, and often into others; and during the entire session I never saw nor heard of a single instance of anything but the kindest feeling and the most gentlemanly deportment.

The three topics of greatest interest in the Surgical section were Abdominal Surgery, "Intra Peritoneal," the programme had it, Modern Lithotripsy, — they wont say "Litholopaxy" over here, — and the Treatment of Wounds to secure Union by First Intention.

I may say parenthetically that the mode of procedure was for some one, or more, who had previously promised it, to read a paper upon the subject, and the discussion of those papers was taken up by the gentlemen appointed for that duty, whose names were printed upon the programme, and who were called in regular order by the president. And I may also say, right here, that every delegate was anxious to ascertain the exact position of "Listerism" in the convention. It was noticeable that early in the sessions when certain men, who shall be nameless, *seemed* to try to test the matter by initiating applause at every allusion to antiseptic surgery there was very little response. Mr. Lister himself was always and everywhere heartily received. But it required no great sagacity to see that the large majority of surgeons were *reserved* in the matter. But more of this further on.

Spencer Wells read a paper. He took strong Listerian ground, and said that now he had given up drainage altogether, so great was his faith in antiseptic

surgery. Several others, Volkmann especially, followed in a similar strain. Then Marion Sims arose, and while he declared for Listerism he advocated drainage, and reminded Mr. Wells of a case (ovariotomy), in which he assisted him in a bad operation, — had on account of adhesions, — and the patient *almost* died, but at last nature opened the abdominal wound and discharged a large amount of fetid fluid, and immediately she recovered. Finally came Mr. Keith to close the discussion. Never in the history of surgery did a few modest words make such a recoil in the "currents of expectant thought" as his.

It has been said, and was repeated by Volkmann and Kuget, in this discussion, that intra-peritoneal surgery was the "touchstone of Listerism." Professor Keith has been quoted the world over, again and again, as not only a warm disciple of Lister, but as illustrating in his remarkable success in ovariectomy, *more than any other surgeon*, the value of the antiseptic, or rather, the Listerian method. No one can deny this.

So slowly were his few words uttered that I can almost repeat every one *verbatim*.

You can imagine the effect much better than I can describe it when he said that for several months past he had "abandoned the antiseptic treatment altogether." "True," he said, "I had eighty successive recoveries under Lister's method, and *stopping there* it would be a wonderful showing. *But out of the next twenty-five I lost seven.* One died of acute septicaemia, in spite of the most thorough antiseptic precautions; three of "unquestionable carbolic acid poisoning; one of renal hæmorrhage." He went on to say that out of the eighty consecutive cases (or rather he said it first) many came too near dying; that a large number got a high temperature — 105°, 106°, 107° Fahrenheit — the evening following the operation, but, he said, "they happened to pull through." He then said that since he had for four months past abandoned the antiseptic method, and relied upon perfect cleanliness, care in controlling hæmorrhage, and thorough drainage, his cases were giving him much less trouble, and he was getting more satisfactory results.

He now stopped for a few moments, hesitating, as he must have realized the importance of his words, knowing that the whole world — surgical — was lending a "listening ear" to his utterances. The silence was "audible." Then he raised his head, and looking his audience squarely in the face, he said, "Gentlemen, I have felt it my duty to make these statements, for *they are true*," and took his seat. I shall not attempt to describe the applause, nor the effect of his statements. Professor Keith, by the way, told me privately that he almost died himself from using the carbolic acid so much. He got renal hæmorrhage and debility to an alarming degree. He said, moreover, that he never had great faith in it, and should not have continued its use so long — I mean the "Lister method" — but for the fact that so many eminent men were carried away with it; and if, after his remarkable series of cases, he had changed, and lost seven out of twenty-five, as he did, without Listerism, all the world — he himself — would have attributed the result to the change.

One thing is certain: Mr. Keith's statements, in connection with those of others and *his own experience*, put Mr. Lister in a very unpleasant position; for he was put down on the programme to close the discussion on the treatment of wounds to secure union

by first intention, which took place on Monday, 8th inst. Although four days had elapsed, he had no answer. To show how deeply he was impressed by all that had been said, he began his remarks, which were extemporaneous instead of written, as was expected, by saying that he never had admitted that abdominal surgery was the "touchstone of Listerism," and to the surprise and dismay of his followers went on to argue that, with the rapidity with which wounds of the peritoneum heal and the remarkable absorbing power of that membrane, and therefore its ability to take care of its exudates, he "doubted very much" whether, in the hands of a skillful, careful operator, it was not better to dispense with the antiseptic plan. I realize how important are the statements I am making, and lest some of your readers may think that they are open to criticism as to accuracy, I will say that I sat near enough to hear every syllable uttered, and I pledge my honor as a man and surgeon for the absolute accuracy of every statement, though I took few notes.

Then, seeming to realize the danger of admitting such wonderful absorbent qualities to the peritoneum, he went on to say that he had recently made some experiments that surprised him very much, which proved that serum or bloody serum was "a very poor soil for the development of germs from contact with air-dust, and that blood clots were still more sterile. Indeed, it was very difficult to make them grow or develop at all, unless diluted with water." By the way, he declared that he had witnessed free cell development in a blood clot.

And these remarkable facts, said he, "at once call in question the necessity of the spray."

He then went on to say that he was not yet ready to give up the spray, but if simple irrigation or lavation should prove as good, he would say, "*Fort mit dem spray*;" and he further said, "I am not certain but I shall give it up. I am not at all sure but that before the next meeting, two years hence, I shall have abandoned the spray altogether." (His recent house surgeon says that he has lost all confidence in its utility.)

As to carbolic acid, he said, "I am forced to admit its unfortunate character." That was all; not a word about oil of eucalyptus or any other substitute. He kept referring again and again to abdominal surgery, but his manner showed to everybody that he was upset.

He gave no statistics, no large comparisons, as was expected by his disciples. He referred to the excellent results in two cases of recent operation, saying that "I could hardly believe I should have got such results without the antiseptic plan; I did not before I used it."

And this is the fault that the best surgeons here find with him. They are all ready and glad to give him or any other man credit for all he has really done, and they all admit that Mr. Lister has done much to improve surgery, especially German surgery. I need not explain. But they very properly say, "With his unprecedented opportunities, both in his own practice and in that of his host of followers, why don't he give us large and complete statistics? Instead, he only gives either isolated cases or a small group of successful ones, such as may be found under almost any plan." I quote one of London's most eminent and fair minded men.

It was curious to watch the effect of the thing. I have alluded to the impression produced by Keith's remarks. As Lister was speaking, one of his ardent adherents — I mean an adherent of his mode of dressing; I am not discussing the man, who is an earnest hard-

working, accomplished gentleman — turned to me, and said, "My God, I would never have believed Professor Lister would have admitted that." Another said, "Well, if Lister abandons the spray and carbolic acid giving us no substitute, where is 'Listerism'? We had drainage, we had animal ligatures, we had air-proof dressings, before." And so on. Every little group of surgeons was discussing the matter; those who had never accepted the Listerian method being quite as much surprised as its warmest adherents.

"Mein Gott!" said a German whom I did not know, "Listerism ist todt." "Fort dem Spray? Fort dem Acid Carbolique? Was giebt's zu bleiben?" And so the pendulum swings.

The papers on Lithotrity, by Sir Henry Thompson and Professor Bigelow (I name them in the order in which they came), attracted much attention.

Sir Henry's was a clear, logical paper of trenchant quality, and he gave Dr. Bigelow credit for having demonstrated the heretofore unknown or unsuspected tolerance by the bladder of instrumentation. He was not inclined to accept his modifications of instruments for crushing or evacuating, and he protested very emphatically against the use of the larger-sized tubes. He claimed that they were unnecessary and dangerous, and that the smallest possible instruments should be used, both for crushing and evacuation, compatible with the prompt and complete removal of the stone.

Professor Bigelow's views are too well known to your readers to need repetition. Although he had a large display of instruments, lithotrites, and his evacuating apparatus in its various stages of "evolution," yet he admitted and insisted that the main point in his instruments was the large catheter or tube. He gave a beautiful demonstration of evacuation with his model, having a glass bladder filled with water, and using pulverized hard coal to represent the crushed calculus.

The venerable Mr. Clover claimed that his simple bulb and smaller tubes were all-sufficient, and that the projection of his tube into the bulb a little way, prevented the possibility of any return of fragments into the bladder, to prevent which Professor Bigelow has recently added a "Trap valve," which was shown in his illustration.

Mr. Brown, Sir Henry Thompson's partner, read a short paper denouncing the use of large and complicated instruments, and so on.

Sir Henry Thompson had his collection of stones present most artistically mounted and arranged. *Eight hundred calculi*, all labeled with the date of operation. All well communitated but one, that of the Emperor, part of which, in fragments, lay on one side of the cup, while, separated by a thin slip of brass, on the other lay the balance, as large as a pullet's egg, which he did not live to have removed.

The general feeling was that the *spirit* of Sir Henry Thompson's paper was open to criticism, while Bigelow won many friends by his calm, fair, candid manner and method; and whatever may be the final outcome as to detail in lithotrity, every surgeon gives Bigelow hearty praise and full credit for demonstrating not only the safety but, as a rule, the propriety of "lithotrity at one sitting" or "litholapaxy," as you please, while there can be no doubt that at this meeting of the Surgical Section, so far as sympathy and conviction on the part of a majority of the members go, Bigelow was in the ascendant.

But I must stop this rambling talk. I should like

so much to tell you of many things. Of Virchow's argument for vivisection, which, in the adoption of a well-framed and properly guarded resolution was unanimously and enthusiastically indorsed yesterday in the last general meeting. I would like to tell you of Professor Pasteur's remarkable address upon protective vaccination of the lower animals. Fowls protected against *chicken cholera*! sheep against *anthrax* and *charbon*! But I am not going to anticipate. Your pleasure is to come in the deliberate reading of these things. Finally, yesterday afternoon, came Huxley's memorable address upon the Relation of Biological Science to Medicine. While all were delighted with it—that is a commonplace expression—every one whom I have heard speak of it was amazed at his profound knowledge of the history and developmental progress of medical science. Do you know that he insisted on using the term pathology in its broad sense as synonymous with medicine in this address? I wish every man, practitioner and student, could have burned into his brain the words he used in his plea for a "*thorough knowledge of anatomy and physiology in the broadest sense as the essential fitness for the study of medicine.*"

A great admirer of Descartes is he, although he does not hesitate to criticise him freely. Said he, after declaring that there was no dividing line between health and disease, between physiology and pathology, except that which separated the comfort and safety of the organism from its discomfort and danger, and after a clear statement of the cellular doctrine, with a most graceful allusion to Virchow, "The first man who gave expression to this modern view of physiology, and who was bold enough to enunciate the proposition that vital phenomena, like all the other phenomena of the physical world, are, in ultimate analysis, resolvable into matter and motion, was *René Descartes.*"

Some of his metaphors were exceedingly felicitous. The following will sound somewhat familiar, but I quote it to give point to the next and last one that I noted. And I quote both because of his wonderful hope for and confidence in the therapeutics of the future. Constantly applauded as he was, yet when, by logical deduction from his premises, he prophesied for the coming man who thoroughly understood a true pathology the power to combat every form of disease he was cheered to the echo. Said he:—

"The body resembles an army; each cell, a soldier; an organ, a brigade; the central nervous system headquarters, a field telegraph; the alimentary and circulating system, the commissariat, and in which losses are made good by recruits born in camp, and the life of the individual is a campaign, conducted successfully for a few years, but with certain defeat in the long run."

Again he says, "I think I see how in the future it will become possible for the pharmacologist to enable the physician to affect in any desired way any function. It will become possible to introduce into the economy a molecular mechanism, which, like a cunningly contrived torpedo, shall find its way to some particular group of living elements and cause an explosion among them, leaving the rest untouched." Pregnant prophecy that, to him who is imbued with the doctrines of molecular physics.

"But," says our president, Sir James Paget, after all the graceful compliments have been paid and, in the persons of Charcot and Donders, Paris and Berlin have most delicately and elegantly tendered, in the

name of the Congress, our appreciation of his unexceptionable services, "all things come to an end, and the time has come to say 'good-by,' not good-by from me to you, but from each one of us to all. May all good and happiness go and abide with you; especially that greatest of all good that comes from doing good." And so it ended.

Very truly yours,

WM. WARREN GREENE.

THE BRITISH MEDICAL JOURNAL ON THE PRESIDENT'S WOUND.

THE above journal seems to have arrived at a pretty correct estimate of the character of the President's wound as early as July 30th, as the following extract from an editorial of that date shows:—

"The inference from this description is that the bullet never entered the abdomen at all, but that it passed into and is still lodged among the muscles of the back in the lumbar region. The tenor of all the symptoms which have followed the injury seems also to confirm this view of the case. There seems not to be the slightest ground any longer for suspecting the liver to have been involved in the wound. If it be true that the projectile, after striking the rib, was deflected into a path among the spinal muscles, its lodgment among them may give rise to comparatively slight inconvenience. The wound may in time become healed over it, the bullet may become encysted, and, unless excited into causing irritation by undue movement, or casual injury of neighboring parts, may lie quietly dormant for years. Or, in the process of the suppurative action during the treatment of the wound, the bullet may advance towards the opening with the discharges, be brought into view, and in this way an early opportunity of removing it may be afforded. Considering the nearness of the intended assassin to the President at the time the wound was inflicted, the pistol-bullet, it must be presumed, struck the rib with considerable force; and under these circumstances, inflammatory mischief will probably have been set up in the bone, which may render the healing of the wound a more tedious process than seems to be anticipated. The repair of a rib that has had a gun-shot injury, especially if it have been deprived of its fibrous investment, and have happened to be severely contused by the shot, is always a slow matter. But these complications are relatively unimportant when compared with those which must have been anticipated had the original suppositions regarding the nature of the wound and the course of the projectile been proved to have been well founded."

— At the request of the professors, the gentlemen of the English Army Medical School at Netley were addressed by Dr. Yandell, Professor of Surgery in the University of Louisville, at the close of the last session. According to the *British Medical Journal* the speech had every quality the occasion demanded—it was eloquent, manly, and sincere; and coming as it did from one who had done good service on many fields of battle in his country's cause, every sentence of it struck home, appealing, as the professor did, to the best and most generous sympathies of his audience.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 6, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	838	470	46.30	29.36	7.52	5.01	.72
Philadelphia.....	846,984	398	194	32.66	23.37	1.76	1.76	3.77
Brooklyn.....	566,689	401	215	43.14	31.92	6.23	4.49	.25
Chicago.....	503,304	527	357	54.27	34.72	2.66	3.61	4.36
Boston.....	362,535	194	117	54.64	48.45	4.12	1.55	1.03
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	188	97	38.83	23.94	5.32	.53	4.26
Cincinnati.....	255,708	142	50	36.62	21.13	2.82	4.23	8.46
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,688	115	64	38.26	27.83	.87	4.35	4.35
Pittsburgh.....	156,381	105	64	40.00	14.29	2.86	2.86	1.90
Buffalo.....	155,137	113	62	45.13	26.55	3.54	5.31	3.54
Milwaukee.....	115,578	80	57	38.75	27.50	1.25	2.50	1.25
Providence.....	104,855	46	29	45.65	36.96	—	4.30	—
New Haven.....	62,882	33	15	27.27	12.12	—	—	—
Charleston.....	49,999	41	24	24.39	12.20	—	2.44	4.88
Nashville.....	43,461	19	10	21.05	21.05	—	—	—
Lowell.....	59,485	44	24	34.09	20.45	4.55	6.82	2.28
Worcester.....	58,295	31	19	45.16	35.48	—	—	—
Cambridge.....	52,740	48	27	52.08	43.75	6.25	—	2.08
Fall River.....	49,006	32	20	43.75	34.38	—	3.13	3.13
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	22	12	54.55	22.73	9.09	4.55	4.55
Springfield.....	33,340	25	13	52.00	40.00	—	4.00	—
Salem.....	27,598	27	17	44.44	40.74	3.70	—	—
New Bedford.....	26,875	11	5	45.45	27.27	—	—	—
Somerville.....	24,985	15	11	66.67	60.00	6.67	—	—
Holyoke.....	21,851	15	8	53.33	40.00	—	—	—
Chelsea.....	21,785	7	1	28.57	—	—	—	—
Taunton.....	21,213	3	2	33.33	—	33.33	—	—
Glocester.....	19,329	11	5	36.36	27.27	9.09	9.09	—
Haverhill.....	18,475	7	5	57.14	57.14	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	6	1	—	—	—	—	—
Fitchburg.....	12,405	1	0	—	—	—	—	—
Twenty-four Massachusetts towns..	191,402	90	40	37.78	27.78	4.44	1.11	1.11

Deaths reported 3635 (no reports from St. Louis or New Orleans); 2035 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1593, diarrhoeal diseases 1066, consumption 332, diphtheria and croup 152, lung diseases 126, typhoid fever 89, scarlet fever 68, small-pox 57, cerebro-spinal meningitis 41, malarial fevers 39, measles 32, whooping-cough 31, puerperal fever 10, erysipelas eight. From *scarlet fever*, New York 28, Philadelphia nine, Pittsburgh eight, Brooklyn and Chicago five, Buffalo four, Milwaukee and Charleston two, Baltimore, Cincinnati, District of Columbia, Worcester, and Westborough one. From *small-pox*, Chicago 25, New York 12, Philadelphia 11, Pittsburgh seven, Brooklyn two. From *cerebro-spinal meningitis*, Chicago 10, New York five, Cincinnati and Lynn three, Philadelphia, Buffalo, Milwaukee, Worcester, and Fall River two, Boston, Providence, New Haven, Lowell, Springfield, New Bedford, Holyoke, Chelsea, Chicopee, and Woburn one. From *malarial fevers*, New York 11, Brooklyn eight, Baltimore five, Chicago four, District of Columbia, Buffalo, and New Haven three, Philadelphia and Charleston one. From *measles*, New York and Chicago 10, Pittsburgh four, Brooklyn and Milwaukee two, Philadelphia, Cincinnati, Buffalo, and Lynn one. From *whooping-cough*, Chicago nine, New York six, Baltimore four, Pittsburgh and Providence three, Philadelphia, Boston, Buffalo, Springfield, Chelsea, and Pittsfield one. From *puerperal fever*, Buffalo and Lowell two, Brooklyn, Chicago, District of Columbia, Milwaukee, New Bedford, and Holyoke one. From *erysipelas*, Chicago two, New York, Brooklyn, Cincinnati, District of Columbia, New Haven, and Springfield one. Eight deaths from sunstroke occurred in Chicago and six in Cincinnati.

Eight cases of small-pox were reported in Brooklyn, 40 in Chicago, 41 in Pittsburgh, scarlet fever 14, diphtheria four, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,033,140 (population of the State 1,783,086), the total death-rate for the week was 29.16, against 23.12 and 22.56 for the previous two weeks.

For the week ending July 16th in 149 German cities and towns, with an estimated population of 7,739,972, the death-rate was 31. Deaths reported 4678; under five 2212; diarrhoeal diseases 458, pulmonary consumption 420, acute diseases of the respiratory organs 263, diphtheria and croup 101, scarlet fever 81, typhoid fever 52, whooping-cough 48, measles and röteln 46, puerperal fever 12, typhus fever (Elbing, Erfurt) two, small-pox (Essen) one. The death-rates ranged from 12.8 in Metz to 49.3 in Berlin; Königsberg 36.9; Breslau 44.3; Munich 32.3; Dresden 29; Leipzig 25.4; Hamburg 25.2; Hannover 19.5; Bremen 25.1; Cologne 28.4; Frankfurt 20.8; Strassburg 41.8.

For the week ending July 23d in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 23.8. Deaths reported 3465: diarrhoea 652, acute diseases of the respiratory organs 152, measles 108, whooping-cough 90, scarlet fever 85, small-pox (London 43) 44, fever 30, diphtheria 20. The death-rates ranged from 14.7 in Bradford to 29.1 in Nottingham; Bristol 17.1; Birmingham 18.4; Sheffield 19; Manchester 22; Liverpool 23.5; Leeds 25.9; London 26.5. In Edinburgh 15.7; Glasgow 22.9; Dublin 24.3.

In the 21 chief towns of Switzerland, for the week ending July 23d, population 479,934, there were 50 deaths from diarrhoeal diseases, acute diseases of the respiratory organs 17, typhoid fever 10, diphtheria and croup six, measles three, whooping-cough one. The death-rates were: Geneva 22; Zurich 22.3; Basel 23.4; Berne 36.3.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
July 31- August 6, 1881.																				
Sun., 31	30.252	64	71	59	100	90	95	95	Calm.	SE	S	S	0	1	1	G	O	F	6.05	.09
Mon., 1	30.140	76	88	66	94	51	85	77	S	SW	W	W	4	8	6	O	F	F	1.50	.02
Tues., 2	30.111	71	83	67	79	85	85	83	SW	S	S	S	8	8	7	F	R	C	1.20	.02
Wed., 3	30.057	69	80	65	89	80	92	87	W	E	Calm.	Calm.	4	4	0	G	C	C	—	—
Thurs., 4	30.029	73	80	66	82	73	85	80	Calm.	E	SW	SW	0	4	7	G	S	C	—	—
Fri., 5	29.998	80	95	71	80	58	84	74	SW	SW	SW	SW	1	8	4	G	H	C	—	—
Sat., 6	29.947	77	87	71	85	74	85	81	SW	SW	SW	SW	7	13	6	O	H	H	—	—
Week.	30.076	73	95	59															9.15	.13

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 13, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.
New York.....	1,206,590	849	456	43.11	29.68	5.65	4.95	1.19
Philadelphia.....	846,984	450	209	28.44	17.78	4.44	1.78	3.33
Brooklyn.....	566,689	326	189	42.94	28.53	6.44	6.13	.31
Chicago.....	503,304	381	248	54.33	32.28	5.25	4.20	5.51
Boston.....	362,535	222	112	47.30	37.39	4.95	5.41	1.80
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	207	110	37.68	23.19	1.45	7.25	2.90
Cincinnati.....	255,708	137	59	28.47	18.98	6.57	1.46	5.84
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	93	43	29.03	22.58	2.15	1.08	3.23
Pittsburgh.....	156,381	95	54	56.84	23.16	2.10	6.32	6.32
Buffalo.....	155,137	119	67	44.54	34.46	5.04	4.20	2.52
Milwaukee.....	115,578	78	57	46.15	38.46	5.13	—	—
Providence.....	104,857	54	25	35.19	27.78	1.86	1.86	1.86
New Haven.....	62,882	30	15	40.00	20.00	6.67	6.67	3.33
Charleston.....	49,999	49	25	14.29	10.20	6.12	2.04	—
Nashville.....	43,461	19	11	42.11	31.58	5.26	—	5.26
Lowell.....	59,485	32	22	31.25	28.13	3.13	3.13	—
Worcester.....	58,295	30	19	40.00	26.67	6.67	6.67	—
Cambridge.....	52,740	31	18	41.94	38.71	—	3.23	—
Fall River.....	49,006	20	9	10.00	5.00	—	—	—
Lawrence.....	39,178	21	12	47.62	47.62	—	—	—
Lynn.....	38,284	18	10	38.89	27.78	5.56	5.56	—
Springfield.....	33,340	11	7	54.55	45.45	—	—	—
Salem.....	27,598	29	18	48.28	48.28	—	—	—
New Bedford.....	26,875	21	12	47.62	38.10	—	—	4.76
Somerville.....	24,985	7	4	85.71	71.43	14.29	14.29	—
Holyoke.....	21,851	12	5	41.67	33.33	8.33	—	—
Chelsea.....	21,785	11	6	—	—	—	—	—
Taunton.....	21,213	19	14	73.68	63.16	—	5.26	—
Gloucester.....	19,329	4	1	25.00	25.00	—	—	—
Haverhill.....	18,475	4	3	75.00	75.00	—	—	—
Newton.....	16,995	4	3	100.00	50.00	—	25.00	—
Newburyport.....	13,537	6	3	16.67	16.67	—	—	—
Fitchburg.....	12,405	8	5	37.50	37.50	—	—	—
Twenty-two Massachusetts towns..	172,821	67	33	44.78	38.81	7.46	4.48	1.49

Deaths reported 3464 (no reports from St. Louis or New Orleans); 1884 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1430, diarrhoeal diseases 980, consumption 342, lung diseases 164, diphtheria and croup 142, typhoid fever 82, small-pox 54, scarlet fever 53, whooping-cough 38, cerebro-spinal meningitis 24, measles 21, malarial fevers 15, erysipelas 10, puerperal fever six, typhus fever five. From *small-pox*, Chicago 23, Philadelphia and Pittsburgh 12, New York seven. From *scarlet fever*, New

York 24, Brooklyn 10, Chicago five, Philadelphia four, Pittsburgh three, Baltimore and Worcester two, Buffalo, Milwaukee, and New Bedford one. From *whooping-cough*, Brooklyn nine, New York eight, Chicago six, Philadelphia four, Boston, Baltimore, District of Columbia, and Providence two, Cincinnati, Pittsburgh, and Newton one. From *cerebro-spinal meningitis*, New York six, Chicago four, Philadelphia and Pittsburgh three, Buffalo two, Boston, Milwaukee, Fall River, Lynn, Springfield, and Taunton one. From *measles*, New York eight, Chicago five, Milwaukee four, Baltimore two, Cincinnati and Pittsburgh

one. From *malarial fevers*, Brooklyn, Chicago, and Baltimore three, Philadelphia two, Buffalo, New Haven, Charleston, and Holyoke one. From *erysipelas*, New York four, Brooklyn three, New Haven two, Cincinnati one. From *puerperal fever*, Boston three, Brooklyn, Chicago, and Nashville one. From *typhus fever*, New York five. Deaths from sunstroke: Cincinnati three, Lowell and Amherst one.

Ten cases of small-pox were reported in Brooklyn, 32 in

Chicago, and 24 in Pittsburgh; scarlet fever seven, diphtheria five, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,090,732 (population of the State 1,783,086), the total death-rate for the week was 27.58, against 29.16 and 23.12 for the previous two weeks.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 7	29.850	72	77	66	85	76	82	81	SW	SW	NW	W	7	5	7	O	O	F	6.35	.17
Mon., 8	29.931	67	76	61	79	55	71	68	NW	NW	W	W	9	10	8	O	F	C	—	—
Tues., 9	29.821	71	83	59	68	44	78	63	SW	SW	SW	SW	3	8	13	F	C	R	2.00	.01
Wed., 10	29.649	74	88	65	76	42	58	59	SW	NW	W	W	10	15	8	C	F	F	.30	.03
Thurs., 11	29.866	70	81	58	58	30	61	50	NW	NW	W	W	8	6	7	C	C	C	—	—
Fri., 12	29.841	74	88	58	68	29	67	55	W	SW	S	W	8	14	5	C	F	F	—	—
Sat., 13	29.625	80	93	69	71	40	51	54	SW	SW	W	W	9	11	4	F	F	F	—	—
Week.	29.798	73	93	58															9.05	.21

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 6, 1881, TO AUGUST 19, 1881.

STERNBERG, GEORGE M., major and surgeon. Relieved from duty in connection with the National Board of Health, to proceed from Baltimore, Md., to San Francisco, Cal., and report to commanding general, Department of California, for assignment to duty. S. O. 182, A. G. O., August 10, 1881.

CORSON, J. K., captain and assistant surgeon. The leave of absence granted him in S. O. 61, May 31, 1881, Department of Arizona, extended two months. S. O. 179, A. G. O., August 6, 1881.

HALL, J. D., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply for three months' extension, to take effect on final adjournment of general court martial, of which he is judge advocate. S. O. 141, Department of Dakota, August 4, 1881.

SEMG, B. G., captain and assistant surgeon. Granted leave of absence for six months, with permission to leave the Department of the Platte. S. O. 182, C. S., A. G. O.

PERLEY, H. O., captain and assistant surgeon. Granted leave of absence for four months. S. O. 178, A. G. O., August 5, 1881.

GARDNER, E. F., first lieutenant and assistant surgeon. The operation of paragraph 3, S. O. 171, C. S., A. G. O., in his case, suspended one month. S. O. 177, A. G. O., August 4, 1881.

WHITE, C. B., major and surgeon. Died at Wilton, Conn., August 10, 1881.

HUNNARD, V. B., assistant surgeon. Promoted to the rank of major and surgeon in the medical department, to take effect from the 10th of August, 1881, vice White, deceased.

BUSHNELL, GEORGE E., assistant surgeon. Granted leave of absence for fourteen days. S. O. 145, headquarters, Department of Dakota, August 9, 1881.

BUSHNELL, GEORGE E., assistant surgeon. Relieved from duty at Fort Yates, D. T., and to report to commanding officer, Fort A. Lincoln, D. T., for temporary duty, on expiration of leave of absence. S. O. 146, headquarters, Department of Dakota, August 11, 1881.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at Medical Library Rooms, 19 Boylston

Place, on the first Thursday of September, at 10.30 A. M. Paper by Dr. Field: Reports of Gynæcological Cases. Profession cordially invited. HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — Rheumatism: Its Nature, its Pathology, and its Successful Treatment. By T. J. MacLagan, M. D. London: Pickering & Co. 1881.

On the Surgical Anatomy of the Sheaths of the Palmar Tendons. By Roswell Park, M. D. (Reprint.)

Coulson on the Diseases of the Bladder and Prostate Gland. Sixth Edition. Revised by Walter J. Coulson, F. R. C. S. New York: William Wood & Co. Wood's Library of Standard Medical Authors. Vol. VII.

First Annual Report of the Astronomer in charge of the Horological and Thermometric Bureau of the Winchester Observatory of Yale College, presented to the Board of Managers at their Meeting, June 3, 1881. By Leonard Waldo.

A Probable Cause of Tardy, Painful Labor not hitherto Recognized. By George H. Rohé, M. D. (Reprint.)

Transactions of the Maine Medical Association, 1853-1862. Transactions of the Maine Medical Association, 1880. Vol. VII. Part I.

Constitution, By-Laws, and Code of Medical Ethics of Maine Medical Association.

The Microscope and its Revelations. By William B. Carpenter, M. D. Sixth Edition, illustrated by twenty-six Plates and five hundred Wood Engravings. Philadelphia: Presley Blakiston. 1881.

A Guide to the Use of the Laryngoscope in General Practice. By Gordon Holmes, L. R. C. P. Edin. Philadelphia: Presley Blakiston. 1881.

The Functional and Morphological Relations of the Cerebellum. By E. C. Spitzka, M. D. (Reprint.)

Address delivered to the South Western Branch of the British Medical Association at Redruth, June 29, 1881. By William MacCormac, F. R. C. S.

A New Form of Nervous Disease, together with an Essay on Erythroxylon Coca. By W. S. Searle, M. D. New York: Forbes, Howard & Hurlburt. 1881.

On Eye Affections from Malarial Poisoning. By Charles J. Kipp, M. D. (Reprint.)

Lectures.

CLINICAL LECTURE ON SOME OF THE RESULTS OF CHRONIC INDURATION OF THE LUNG.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY A. JACOBI, M. D.,

Clinical Professor of Diseases of Children.

GENTLEMEN. — We have here a lad fourteen years of age, who comes to us to get relief for headache and bleeding from the nose, to which he is subject, and it must be our endeavor to find out, if possible, what the condition is upon which these symptoms depend. The history which he gives of himself is a very meagre one, and the only acute disease that he tells us of is an attack of inflammation of the lungs which he is said to have had when he was very young. You observe that he looks markedly anæmic, and that his general appearance is altogether that of one not in the enjoyment of good health.

When his chest is stripped you notice that there is more or less depression in the infra-clavicular spaces, and that there is a marked prominence of most of the external veins of the thorax. From the latter circumstance we naturally look for some obstruction in the lungs or heart, to which such a condition may be attributed. This enlargement of the veins indicates passive local congestion, and the headache of which he complains might well be dependent upon a similar condition about the head or brain. If there were, in conjunction with this, passive congestion of the pharynx a catarrh would result, and as the nasal mucous membrane is exceedingly well supplied with veins the nose-bleeding might easily ensue. Epistaxis is, therefore, very common in diseases of the heart and lungs.

But this state of passive congestion is not confined to the upper part of the body. The abdominal circulation is also impeded in consequence of such disease, which produces more or less disturbance there also, as we shall no doubt find in the present instance. In boys and girls epistaxis is not at all uncommon as a result of merely sitting for a considerable time with the body bent forward at school. This is attributable to the interference with the abdominal circulation caused by the position in which they are accustomed to sit; and hence in such cases, where there is frequently-recurring nose-bleed, it is often sufficient simply to take the children away from school and allow them to run freely about in the open air.

But, as I remarked before, in a case like this, where there is chronic enlargement of the superficial veins, we must look for the source of the trouble in some disease of the thoracic organs, and we will therefore institute a careful and thorough physical examination here. Beginning with the spleen, we find by percussion that it is considerably enlarged, measuring about four inches in length. This may possibly be the result of some former disease, such as intermittent or typhoid fever (although we have the history of no such attack), or it may be due to venous obstruction.

When we come to examine the liver we find that it is markedly enlarged, and that there is very considerable tenderness on pressure over the hepatic region.

On palpation the area of tenderness is somewhat circumscribed, occupying a sort of parallelogram about four inches in length and a little less in width, whose upper corner reaches to the bottom of the ensiform cartilage, and is bounded on either side by the lower border of the ribs. When percussion is resorted to, however, it is found that this area of tenderness becomes much greater in size, extending more than one inch lower (almost to the umbilicus), and also beyond the border of the ribs to the right, in the ordinary position of the right lobe of the liver. We should say, then, that there was some abnormal condition about the liver which affects the entire mass of the organ, which is greatly enlarged beyond its usual limits.

We notice also that the impulse of the heart can be perceived over an unusually large area, and on mapping out the heart by means of its percussion-dullness, we find at once that the organ is considerably enlarged. The dullness, however, does not extend very far to the left, though it reaches beyond the right edge of the sternum. When the ear is placed over the cardiac region we get a different murmur on both sides of the heart; but this I should conclude was due to the general anæmic condition of the lad rather than to any organic lesion. In young children it is very rare to find sufficient anæmia to produce such a murmur, or, rather, functional murmurs are rare in young children; but here, you must remember, the patient is no longer a child. We must look, therefore, for some other cause of the cardiac hypertrophy than an organic lesion. Sometimes this condition is due to over-exertion on the part of the heart in consequence of a long-continued obstruction of the lungs which has resulted in their partial imperviousness. On account of this the heart is obliged to do so much work in overcoming obstacles that it becomes permanently enlarged. Hence, in this case, if we should find present a pleuro-pneumonia of any extent, it would amply explain the condition of the heart.

On percussion we meet with a certain amount of dullness, both anteriorly and posteriorly, all the way down the chest on the right side; and on auscultation on this side we find also diminished respiration, both front and back, though somewhat coarser in the clavicular region than posteriorly. The signs point, then, to more or less solidification and induration of the lung, and it is altogether probable that there has been some thickening of the pleura also, though this does not appear to be the case at present. In this connection you will recall the fact that an attack of inflammation of the lungs was mentioned as having occurred in early life.

But, as has been indicated, the vena cava inferior, as well as the cava superior, is affected by this obstruction in the lung, and hence the trouble in the liver is explained. When the impediment to the circulation is very marked there is not only dilatation of the vessels, but effusion also results, so that the liver becomes permanently enlarged, as well as the heart. The liver would swell very much more easily, indeed, were it not for its comparatively unyielding peritoneal covering. As it is, the latter is put upon the stretch, thus giving rise to no little pain, because it will not expand to the same extent as the liver itself.

As to the condition of the spleen found in this case, this is due not so much to the trouble in the lungs or heart as to the abnormal state of the liver. You know

that in the third stage of cirrhosis of the liver, with contraction, enlargement of the spleen is exceedingly apt to occur, and the same result has here followed the engorgement of the organ produced by the thoracic obstruction.

What the boy comes to us for is simply to have his epistaxis relieved. If this is profuse it ought to be stopped at once, on account of the drain which is thus kept up upon his system. In such cases it is a very bad plan to wash out the nose freely with water and weak astringents, since this interferes with coagulation, which is essential for the control of the hæmorrhage. Styptic cotton (which is steeped in perchloride of iron), or the persulphate of iron would be a serviceable application. The closing up of the entire nasal tract by means of Belloc's canula is a safe procedure, and sometimes is necessary to effectually stop the bleeding. In connection with such measures we must not neglect to take care that there is no tight pressure about the body, and that the patient takes very deep inspirations, so as to fill the chest to the utmost extent, in order that there may be as small an amount of blood as possible for the nose.

The indications here are to do away, primarily, with the obstruction in the lungs, and, secondarily, with that in the heart and liver. The patient has had interstitial trouble in the lungs for twelve years, and though there is now no anphoric respiration, and not even bronchial breathing, it has been sufficient, as we have seen, to set up very considerable trouble in his system at large. If such pulmonary trouble were of syphilitic origin I would recommend mercurial inunction; but in this case there is no evidence whatever of this being the case, and such a course of treatment would not be of any service, especially as the boy is already very anæmic. On account of his anæmic condition iodine would also be contra-indicated, unless it were given in the form of the syrup of the iodide of iron. He certainly requires iron, and this is a preparation which is easily digested; but perhaps the most appropriate in such a case as this would be the pyrophosphate or dialyzed iron. The tincture of the chloride of iron would not answer, as it is a vascular stimulant.

Then the heart needs attention. When there is epistaxis depending upon mitral regurgitation it can often be stopped soon by the administration of iron and digitalis. A few small doses will often regulate the action of the heart in cases like this, and a lad of this age might safely take from five to six grains of it daily, or two minims of the fluid extract three times a day. On account of the stomach I would also give subnitrate of bismuth here.

Finally, as to the liver. The possibility of the presence of hepatic abscess may have occurred to some of you; but I find now that the temperature is only ninety-nine and a half degrees, while it would no doubt be considerably higher if such were the case. But though there is no abscess, there is, as we have seen, a decided irritation of the organ, producing great swelling and consequent stretching of the peritoneal covering. In normal digestion you know that the liver will swell more or less after every meal. With such a condition as is here present there is very apt to be some gastric catarrh, and therefore the bismuth will no doubt be of considerable service. Cold applications should be made over the region of the liver, and I would recommend that for the first day or two cold water should be used in this way continuously, and after that for a few hours

of each day. We have thus gone over a pretty large field in connection with this case, but I trust that you will feel that the time thus devoted to it has not been altogether misspent.

Original Articles.

DESCRIPTION OF A DOUBLE MONSTER.¹

BY A. W. BLODGETT, M. D., BOSTON.

FÆTUS DICEPHALUS, HYDROCEPHALUS, ANENCEPHALUS, MICROCEPHALUS.

Mrs. R. E., a native of England, came to America while quite young; has always been in good general health. She is below the average height, is small in every way, but is very active. Married eight years ago, and in August, 1874, I was called to attend her in her first confinement. The labor was normal in all essential particulars excepting the fact that the head was slow to descend into the pelvis owing to a narrow condition of the upper antero-posterior diameter, it being reduced to about two and one half inches. After waiting a reasonable time forceps were carefully applied, under ether, and the head was easily brought down and delivery at once accomplished. The child, a small girl, was in a somewhat asphyxiated condition, but was revived and is still living. The mother was considerably prostrated, having suffered a considerable rupture of the perinaeum, and was for some days unable to micturate, but eventually made a good recovery. In November, 1875, I was again called to attend this patient during a miscarriage at the fourth month, brought on apparently by overwork. From this she made a rapid and complete recovery. November 25, 1875, I again attended this lady in confinement at full term. She had been very well during her pregnancy and took entire charge of all her household affairs until the night of her confinement. Pains had been severe for four hours, the os was slowly dilating, the occiput was toward the left acetabulum, the membranes not ruptured. After three hours the membranes were ruptured and the head descended somewhat, but became firmly fixed upon the brim of the narrow pelvis and did not subsequently move, although the pains were vigorous. Six hours later forceps were applied, under ether, and after about fifteen minutes' hard labor a living child was extracted. The child, a large boy, was deeply asphyxiated but was resuscitated and is still living. Considerable hæmorrhage took place upon the delivery of the placenta, but was controlled by means of brandy and ergot. The perinaeum was slightly lacerated and the child's head sustained considerable bruises, but these soon disappeared without any consequences. The mother made a somewhat slow recovery owing to the strain, and pressure in the pelvic region, but she escaped any serious disease, and in a few weeks was as well as before her confinement. January 3, 1881, I was again summoned to attend this patient in childbirth. This pregnancy had been more burdensome to her than any previous one, owing to an unusual protrusion of the abdomen forward over the pubes, a so-called "pendulous abdomen." The prominence was so great that the axis of the uterus inclined forward at about the angle of 45°. The discomfort of the patient was no doubt materially increased by the

¹ Read before the Obstetrical Society of Boston and published at their request.

apprehension of trouble at the time of delivery. Patient says she has felt the motions of the child principally in the left epigastric region. It is impossible to make out the position of the child by external palpation, owing to the high position of the head and the large amount of liquor amnii. The os was found dilated to about five cm. and the occiput to the right acetabulum. Fœtal pulse strong and regular. Labor pains were moderately intense, the mother's condition was good. From eleven p. m. to five a. m. January 4th, there was no change in the position of the head. At this time the mother began to show signs of exhaustion and ether was administered when the membranes ruptured and an enormous quantity of liquor amnii was evacuated, but there was no material change in the position of the head. At seven a. m. Dr. Reynolds was called in consultation, and coincided in the opinion that artificial assistance was necessary, as the condition of the child was becoming perilous. Long curved forceps were at once applied and took firm hold, but repeated powerful traction produced no effect upon the position of the head. Dr. Reynolds then suggested farther consultation, which could not be obtained. Version was then attempted, and after a time was successfully accomplished and the right foot brought down. The left was soon brought down also, and the trunk followed. The right arm was delivered and the body turned so as to release the left arm, which was delivered with some difficulty. There was a strange malformation in the neck and shoulders which somewhat hindered the delivery of the head, and which it required some traction to overcome. The head was born after a short interval, and with it came a gush of blood in which the placenta and membranes were expelled entire. The child was stillborn. Examination disclosed the astonishing fact that the child was a monster of a very rare and interesting character.

The lower end of the vertebral column was open, forming the condition known as *spina bifida*. A space about five by two cm. was devoid of all external bony inclosure, the only coverings of the vertebral canal at this point being the membranes of the cord. The skin terminated abruptly at the margins of the fissure by a well-defined edge. The vertebral column was divided into two at the level of the superior angles of the scapulae. One vertebral column extended upward in the line of the body and supported a well-developed head with all the features of the face perfect and well formed. The cranium was hydrocephalic to a marked degree, the bones of the skull being separated by the distension, so that the two lateral halves of the frontal bone were freely movable upon one another. There was considerable œdema of the scalp. The second vertebral column followed a direction to the left at an angle of about 30° and passed into a second neck which protruded from the body at a point between the proper neck and the left shoulder. Its circumference was about half that of the natural neck. It supported a second head which bore the proportion of about one half in all measurements in comparison with the natural head, except in those special relations which will be noticed further on. The mouth and tongue were perfectly formed, the eyes were present, the pupils and irides had a normal appearance, and all the details of facial structure were well carried out. From a line just above the eyes the head was perfectly flat from before backward to a point near the junction of the head and neck. Upon this portion of the head there

was only a soft membranous covering, and upon raising this at the border, where it was folded to join the external skin, the bones of the base of the skull were felt covered only by the membranes above alluded to. In the centre could be felt the foramen magnum of the occipital bone. There was no brain substance contained in the membranes, nor could the medulla oblongata be detected. The ears were situated in their natural position on both sides but were very near the border of the cranial bones. The lobes were turned or rolled inwards upon themselves and appeared as if deformed, but they could easily be unrolled, when they were seen to be normal in shape and only proportionally small in size. The nose was pervious, there was neither cleft palate nor hare lip, or any other indication of defective formation. The hands and fingers as well as the feet were perfectly normal. The external genitals were those of the female and consisted of well developed labia and a perfect hymen. Dr. W. F. Whitney made a careful study of the relations of the internal organs and has presented the following admirable report, which he has kindly given me permission to include in the account of the case.

Externally the monstrosity presented two separate heads and necks with but two arms, the spinal columns from neck to sacrum distinct but closely united side by side. This condition is known as *Dicephalus Dibrachius Dianchinus*. (Foerster.) One of the heads was hydrocephalic, the other anencephalic, and there was a common *spina bifida* of both spinal canals from the lower lumbar region. The length of the fœtus was fifty cm. and its weight 3530 grammes. One head (which with the viscera standing in direct relation to it will be called A) measured fifty cm. in circumference. The sutures were wide, the bones parchment-like in feeling, and the cranial cavity filled with watery serum in which was softened brain substance.

The second head (called B) measured sixteen cm. in circumference. The vault of the cranium was entirely wanting, and replaced by a dark reddish mass of softened tissue resting directly upon the base of the skull. The frontal bone was very narrow, and directed almost horizontally backwards, thus rendering the orbits very shallow, causing the eyes to protrude, and giving to the whole face a frog-like aspect. Upon dissection it was found that the muscles of the right side of the neck of A had their origin in the normal manner, while the muscles of the *left* side of A and of both sides of B had a common origin, and afterwards subdivided. There were but two omohyoids, passing to the right side of A and the left side of B respectively. With each head was an œsophagus distinct throughout its course, with which was connected a stomach with its fundus directed outwards. The duodenum from stomach A was very short, and opened into that of B about 3.5 cm. from its point of origin. From this point the intestinal tract was single and normal. The liver was large, with two gall-bladders and ducts, which opened separately into the duodenum of B just above the point of entrance of the duodenum of A. Lying above the diaphragm in the space between the vertebral columns behind and the pericardium in front, and in the same sac as the lungs and just below them, was a portion of liver three cm. long by two cm. broad, of a roughly oval shape. This was apparently connected with the large liver by vessels passing downward through the diaphragm. Whether this is to be considered as a distinct rudimentary

mentary liver or as merely a misplaced lobe I cannot state, but the existence of the two gall-bladders on the larger portion points rather to a doubling, with fusion, and in that case the latter hypothesis is more correct. Attached to each stomach in a relatively normal position was a pancreas. The spleen was single, and attached normally to the stomach of B. Each head had a separate larynx and trachea. Each trachea divided into two bronchi, each of which stood in communication with a lung. The two pairs of lungs lay one on each side of the two vertebral columns in



a common pleural cavity. The right lung of pair A and the left lung of pair B were smaller than their fellows. The hearts, partially doubled, lay in a common pericardial sac. The auricular portions were united into a common cavity divided by two partial septa into three compartments, one connecting directly with the ventricular portion of A, and the other two with the right and left ventricles of B. Into the compartment opening into the right ventricle of B there emptied the vena cava superior, which received the blood from the two heads and the upper extremities;

the vena cava inferior and the pulmonary veins from the lung of A; the pulmonary veins of B emptied into the compartment connected with the left ventricle of B. The ventricular portions of the two hearts were separate; the portion belonging to A presented but one cavity, subdivided by a septum reaching three quarters of the distance from the apex to the mitral valve (the tricuspid being wanting). From this ventricle passed off the aorta, and there was a small fibrous string (probably the remains of the main trunk of the pulmonary artery) connecting the ventricle with one of the pulmonary branches. The aorta arched in the usual way, and after giving off the two carotids, the subclavian for the right arm, and the ductus Botelli, it passed into the furrow between the two vertebral columns, where it was joined by its fellow, and was normal in its further distribution. In consequence of the obliteration of the pulmonary artery the lungs of A received their blood from the aorta through the ductus Botelli, it connecting with the branches passing to both lungs. The ventricular portion of B was normally divided, and from the two ventricles were given off the aorta and pulmonary artery. The arch of the aorta gave off a short, thick trunk from its summit, which soon divided into the two carotids. At the commencement of the descending portion the left subclavian was given off, and opposite to this the ductus Botelli received. The pulmonary artery presented no marked deviation, except that it was directly continued as the ductus Botelli, the right and left branches being small.

In summing up the changes found in the viscera they are seen to consist of a doubling of all the organs above the spleen, and of special note are the portion of liver above the diaphragm in the pleural cavity and the fusion of the ventricular portion of the heart A, with obliteration of the pulmonary artery, necessitating the blood passing to the lungs from the aorta through the ductus Botelli.

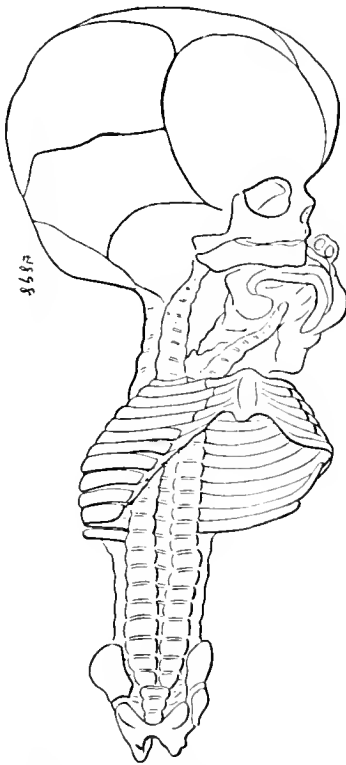
This monstrosity belongs to a class of beings described by Foerster in his work *Die Misbildungen des Menschen* in the following terms: Order, *Terata katadidyma*, being one of the group of monsters with downward cleavage. Genus: dicephalus, double headed. Species: dibrachius dipus, possessing but two arms and two feet. Variety: dianchenos, possessing two vertebral columns and two distinct necks.

The further designations of hydrocephalus and anencephalus relate to the accidental conditions of the cranial cavity in the two heads, both of which have been the seat of dropsical effusion, either into the ventricles of the brain or outside the cerebral substance in the subarachnoidal space. In one case the early embryonic cerebral matter has been entirely disintegrated and destroyed by the effusion, with subsequent rupture of the cranial envelopes and collapse of the membranes of the brain, so that complete anencephalus results. In the other head the same condition of dropsical effusion has existed, but to a less extensive degree. The pressure within the cranial coverings was not sufficient to rupture the membranes, the cranial coverings have been developed in a normal manner, the squamous bones are present, the tissues of the scalp are well developed, and the head though large is still intact, and many cases of hydrocephalus in the more moderate degree survive for months or years.

The lack of closure of the vertebral column, constituting the condition of spina bifida, is due also to the

presence of a large effusion within the spinal membranes, which prevents the proper closing of this canal. The membranous sac containing the fluid usually ruptures before birth, though by no means always, when the sac collapses into a mass of wrinkled membrane at the seat of the fissure. Cases of spina bifida generally succumb to inflammatory processes of the membranes of the cord or brain, or both. Cases sometimes survive to adult life, but generally are afflicted with some functional disability in parts supplied from the spinal cord.

Dicephalic monsters are among the most frequent varieties of double development. Foerster states that of five hundred cases of double monsters one hundred and forty were dicephalic, of which thirty-four were males and sixty females. There is a far greater frequency in deformities of all kinds in the female sex, and fully two thirds of this class of monsters are of the feminine gender. The dicephali are viable unless some accidental defect in the internal organs exists which interferes with the functions of the nervous, circulatory, or alimentary systems. Cases have been known to survive through a long life, and several are at present living, among which perhaps the one best known is the negro girl called the Two-headed Nightingale.



The duplication of the vertebral columns is complete to the sacrum, constituting the condition termed *dianchenos*. The medial ribs from each vertebral column are fused, and extend as short horizontal processes from one vertebral column to the other. Each medial rib has a head and articulating surface on each end, by which it is attached to the two vertebral columns in the normal manner. The lateral ribs are attached to the outer surface of each vertebral column in the usual manner, and pass around the chest to be united to a common sternum in front. Their appearance

is in no way peculiar, excepting that they are curved somewhat differently from the normal ribs, giving the chest a more cylindrical appearance than usual. Only two clavicles are present, corresponding to the two scapulae. The musculature of the two necks is in a general way normal in each, the variations being only those to accommodate the duplication of the parts.

The condition of the thoracic and abdominal organs is very interesting as showing the effort at unity of function in duality of organization. The lungs were double, but were fused in their medial portion. It is doubtful if the air channels of one side had any communication with those of the other. There was no apparent obstruction to respiration in either set of respiratory organs. The hearts were contained in the same pericardial sac, and were fused in such a way that the cavities were more or less common to both organs, but presented nothing which would have been an obstacle to a sufficient function to sustain life. The stomachs were each complete, and each opened by a pervious canal into a common duodenum. The livers were plainly fused, coming into contact at a point near each gall-bladder, so that the two gall-bladders and separate gall-ducts lay side by side and opened by similar orifices into the duodenum. A portion of the liver was misplaced, and lay above the diaphragm in the cavity of the thorax. It is not a very rare thing to observe the large viscera divided and located in abnormal positions, this being quite frequently noticed in the spleen, but I have not before seen any of the abdominal organs transposed into the thorax. The genital organs show no signs of duplication. They are those of the female, and are complete and normal.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.

BY F. I. KNIGHT, M. D.

TUBERCULOSIS IMPLICATING THE MOUTH AND THROAT.

MR. LENNOX BROWNE and Dr. Dundas Grant have a very interesting and beautifully illustrated paper on this subject. (*Archives of Laryngology*, vol. ii., No. 1.) They say, in the beginning, that, thanks to the recent researches of our fellow-workers, more especially those of Isambert, Wendt, and Heinze, so much advance has been made in the pathological study of tuberculosis as affecting the pharynx and larynx, that it may now be considered an accepted fact among laryngoscopists that tubercle, as such, does exist, and does pass through all its pathological phases in these regions—a point on which they venture to think the writings of Louis, Rokitansky, and Virchow should have sooner obtained a general consensus of opinion. There does not, however, seem to be the same amount of unanimity on certain points of clinical interest in connection with the subject; as, for example, whether the throat can be affected primarily, and whether tuberculous ulceration assumes such a type that it can with certainty be diagnosed by means of the laryngoscope during life, and independent of other commemorative signs and symptoms, in the firm assurance of confirmation on autopsy. Details of five cases, by no means specially selected, are given, and then follow opinions founded upon them and oft-repeated similar observations. In the first place they call attention to the fact that the cases have

not been described under the heading of laryngeal or pharyngeal phthisis, because it did not seem to them desirable, in the present state of our knowledge, to enforce the theory that there can be tuberculous disease in either of these regions, independent of a similar lesion in the lungs. At the same time, it cannot be stated for certain that such manifestations arising in any part are necessarily secondary to the occurrence of disease in the chest. Nor can either of these questions be definitely settled until an opportunity occurs of dissecting subjects of tuberculosis of the throat in whom there are no evidences of disease in the chest. The clinical evidence at present in our possession, in favor of a possible primary occurrence of tubercle in the throat, is of a two-fold character, commemorative and objective. Of the former kind is the not unfrequent account given by patients of the loss of voice, laryngeal pain, and difficulty of deglutition prior to the appearance of any symptom of pulmonary disease. The objective evidence is well illustrated in several of the cases reported, but especially in one, in which the disease was diagnosed in the larynx when the lungs were still healthy, or, at all events, at a time when the eye could distinguish the visible changes in the larynx long before the changes, if any, in the lungs, were appreciable to the faculty of hearing.

The causes of the disease are fairly illustrated in these cases. We find, as an invariable element, a low state of vitality either inherited or acquired. Less invariably is there some local irritation, in which the continued strain on the patient's vocal organs in the pursuit of his calling (as in the case of the auctioneer) produced what in an individual of greater power would, with proper care, have passed off as a simple laryngitis. In another instance the local irritation of diseased teeth, as proved by the improvement following extractions, was the exciting cause of tuberculous ulceration of the gums and mouth. In several there was temporary improvement in summer or on favorable change of residence. The symptoms in the cases narrated are so typical as to enable even those unaccustomed to the use of the laryngoscope to diagnose the condition with tolerable certainty. Briefly, the emaciation and loss of weight, night-sweats, aphonia, cough with profuse laryngorrhoea of semi-purulent character, pain only in deglutition, more marked in the case of fluid, with tenderness on pressure of the larynx, afford an unmistakable picture of the disease in question. In cancer, besides its more marked cachexia, the disease is distinguished by the constant presence of pain, independent of functional acts, as well as its occurrence during deglutition, being more intense in the case of solid than of fluid. Syphilis gives a hoarse rather than an aphonic character to the voice, is on the whole free from pain, and has other symptoms of its own sufficiently distinctive to afford a reliable guide. It is, however, only by a recognition of the characteristic appearances as reflected in the laryngoscope, that a certain diagnosis can be made. These appearances are the peculiar semi-solid swelling and worm-eaten ulceration of the epiglottis and aryepiglottic folds. The swelling is often much greater on one side than on the other, but we never see tumefaction of the tissues covering one arytenoid cartilage much advanced without a similar condition existing to some extent over the other side also, thus distinguishing it from cancer, and from non-tuberculous perichondritis. The authors do not agree with Ziemssen, Mackenzie, Cohen and others

that there is nothing definitely characteristic in the appearance of the tuberculous ulcer. They say that with the exception of laryngeal growths, they know no disease in which, with the laryngoscope, we can be so sure of our diagnosis. They hold that, given the characteristic gray semi-solid infiltration of epiglottis, aryepiglottic folds or both, — an appearance almost invariably the precursor of ulceration, — there is a form of ulcer superimposed on the swollen tissue, which they believe distinctly characteristic, and which we are able to foretell is incurable. In the absence, however, of the thickening, the character of the ulceration is hardly less typical. The points to which they call especial attention are these: The floor of a tuberculous ulcer is pale and granular and slightly depressed, the margins are fairly well-marked but not deeply excavated, the surrounding parts pale and "languid," and there is an appearance of a spreading process of erosion very comparable to that of the nibbling of a small rodent animal. This is due to the confluence of small ulcers produced by the slow incurable inflammation of the mucous and closed follicles of the mucous membrane, and also to the ejection of minute tubercles which have worked their way to the surface. Very different from this is the punched-out areolated excavation which is seen in tertiary syphilis, and which may be considered suggestive of a bite rather than of continued nibbling. The prognosis of the disease is considered unfavorable both as regards recovery and duration of life.

In regard to treatment, the authors have found iodide of potassium and local scarification recommended so highly by Schmidt, of Frankfort, injurious rather than beneficial. Their experience leads them to subscribe cordially to the opinion expressed by Krishaler, Ziemssen, and others, that although a tuberculous ulceration in the throat may heal, as in other parts, such a process is certain to be followed, sooner or later, by an outbreak in close proximity. The disease may even become chronic and lie dormant, but not even the most sanguine throat specialist is yet justified in giving even a moderately hopeful opinion as to result.

The treatment recommended is cod-liver oil, especially combined with maltine and the hypophosphites. Locally, a well-thickened mixture containing small doses of morphia is most efficacious, when slowly sipped, in allaying pain and cough. The most generally useful application to be made with the brush is one of chloride of zinc, morphia, glycerine, and water. This is considered a better mode of application of morphia than the usual insufflation with powdered starch, etc. One patient was apparently much relieved in deglutition by the frequent application of a mixture of the compound tincture of benzoin, compound tincture of camphor, tincture of belladonna, and yolk of egg. Galvano-cautery, while it gave no relief in a case of tubercular ulcer of the tongue, certainly proved beneficial in a case of faucial tubercle. Scarifications seemed urgently called for in one case, and possibly relieved immediate risk of complete obstruction to the larynx, but certainly the rapid spread of ulceration at the punctured spots proved the inadmissibility of this plan of treatment. In regard to rest of the larynx by adopting the rectal mode of feeding and tracheotomy, the authors say that the insufficiency of nutrient enemata for the support of an individual whose assimilative power is at a minimum seems too obvious to require much experimental proof, but in case where the diag-

nosis was doubtful it would be only right to give this plan of treatment a fair trial. As regards tracheotomy it is only necessary to bear in mind the essentially unstable condition of the lungs in a subject of laryngeal phthisis, to restrain us from admitting cold air through any shorter warming passage than that supplied by nature. Again, from a pathological point of view, the rapid degeneration of cartilage met with in this disease would offer little inducement to the infliction of a wound on the windpipe with the subsequent retention of an irritating foreign body in the shape of a tracheal canula. Soft, thick food is generally the most acceptable, such as raw eggs, whole or beaten up. Oysters, thickened soups, and milk will suggest themselves as suitable in less extreme cases.

SURGICAL TREATMENT OF HYPERTROPHIC NASAL CATARRH.

Dr. Wm. C. Jarvis, of New York, gives an account¹ of his method of removing hypertrophied mucous membrane from the posterior ends of the turbinated bones. As is well known, the swelling of the posterior ends, particularly of the inferior turbinated bones, causes oftentimes complete obstruction to nasal respiration, and the greatest annoyance to the patient. A radical cure can be effected only by the removal of the hypertrophied tissue. Dr. Jarvis's instrument bids fair to be a permanent addition to the armamentarium of all who treat these affections properly. It is a wire snare *écraseur*. It consists of two metal canulae, the large one is six inches in length, and flexible, the smaller about four inches long, slides freely upon that part of the main one nearest the operator. The surface of the main canula occupied by the secondary one is threaded for the movement on its surface of a milled nut. Wire is passed through the main canula and attached to two retention pins fixed to the proximal ends of the small one. A slight indentation upon the small canula fits a corresponding surface on the large one. This arrangement prevents rotation of the secondary canula, and so overcomes the tendency of the wire to twist and become loosened from its attachment to the growth. The nut, when turned, pushes the outer canula before it, its speed ranging from an imperceptible advance to a rapid motion along the thread. In using the *écraseur*, pass the two ends of the wire through the main canula, entering them at its distal extremity, and twist them around the retention pins. A loop is formed, whose size, of course, depends upon that of the growth. Giving the wire loop a twist toward the side of the nose occupied by the growth, it is fixed by a turn of the nut, and passed into the nostril. Holding the rhinoscopic mirror in one hand, the position of the wire loop in the posterior nares is carefully watched, while it is steadily advanced with the other hand until seen to encircle the growth. On drawing the wire home the tissue is cleanly divided, and if not too large to pass through the nares it will generally be drawn out clinging to the snare. Make traction very slowly, stopping at short intervals in order to cause the slightest amount of hæmorrhage. The hæmorrhage is trifling provided slow traction is made. It consists usually of one or two small clots blown out upon the handkerchief. [Our experience with the instrument has been that considerable though not alarming hæmorrhage may follow the operation, even when very slowly performed, profuse hæmor-

rhage if it is done at all quickly. An hour or more should be consumed in the operation, a few twists only being given at a time. *REP.*] For the wire No. 5 piano wire is usually employed. Sometimes, on account of the tendency to gag, it is necessary to tie up the soft palate. The wounded surfaces rapidly heal, and the good results of the operation soon manifest themselves. The immediate result of the operation is a restoration of free nasal respiration. As the nature of turbinated hypertrophies renders their return almost impossible, the establishment of free nasal breathing is apt to be permanent. This is made more certain by the cicatricial contraction which follows. Since the most intense inflammatory processes are centred in the tumefied tissues their removal does away with the active source of the disease. The remarkable cessation of the catarrhal secretion, which often follows the removal of these growths, points to the cause and seat of this disease. Pressure exerted by the hypertrophied turbinated tissue is of itself an active agent toward the excitation of undue nasal secretion. Relief of the pressure naturally relieves the discharge.

(To be concluded.)

INTERNATIONAL MEDICAL CONGRESS, 1881.

AN ADDRESS ON THE VALUE OF PATHOLOGICAL EXPERIMENTS.²

BY RUDOLF VIRCHOW, M. D.,

Professor in the University of Berlin.

As reporter on Medical Education at the last International Medical Congress, held in Amsterdam, I raised the question, how far the experimental method is necessary to instruction; and the result at which I arrived was, that the use of this method to its greatest extent, and especially of vivisection, is an indispensable means.³ In a still higher measure, however, I had to raise into prominence the importance of this method in research; and, in opposition to those who, with constantly increasing vehemence, brought accusations against the experimental investigators on account of the direction and method of their researches, I was able to say, with the lively assent of the numerous members of the Congress, and without one word in contradiction: "All those who attack vivisection as a means of science, have not the least idea of the importance of the science, and much less of the importance of this aid to knowledge."

In the two years which have since passed away, the agitation of the opponents has grown both extensive and important in its object. One country after another has been drawn into their net, and international combinations have been formed, in order by united force to obtain greater results. No increase of satisfaction has been produced by the concessions made in 1876 by the legislation in England. The demands have increased: a petition from the new Leipzig Society for the Protection of Animals, dated March 8th of the present year, desired of the German Reichstag the enactment of a law by which "cruelty to animals under the pretext of scientific research" should be punished "with imprisonment for periods of not less than five

² Slightly condensed from the British Medical Journal.

³ *Congrès Périodique International des Sciences Médicales*, 6 Session, Amsterdam (1879), 1880, p. 145, *Archiv für Pathol. Anat.*, Band lxxxv, Heft 3.

¹ Transactions of the American Laryngological Association, 1880.

weeks to two years, and with simultaneous deprivation of civil rights." All, indeed, do not go so far. Many do not demand that all experiments on living animals should be at once suppressed, but that there should be limitations, some demanding more, others less. But even these do not make it secret that this concession is only provisional; and they demand that even the official laboratories of the universities should be placed under the control of the members of the Society for the Protection of Animals, so that the members may be at liberty to enter the laboratories at any time.

It would be a mischievous delusion to believe that this movement is without prospect of success, and devoid of danger because of its manifest exaggeration. On the contrary, unmistakable signs indicate that it has gained powerful allies, and that there is an increasingly impending danger in many countries that even the state institutions, created expressly for the purpose of experiment, may have the scientific freedom of their methods attacked. So much the more does it seem to be incumbent on the representatives of medical science to defend their position, and to meet international attacks by international weapons. *The most powerful weapon, however, is truth*; and here, above all, *truth founded on competent knowledge*. If we cannot demonstrate our good right before all the world, and come to a mutual agreement on the ground of this right, our cause must henceforth be looked on as a lost one.

The attacks which are directed against us fall, when closely examined, into two categories, according to the principal point. On the one side, it is alleged that the experimental method — yea, modern medicine altogether — is materialistic, if not nihilistic, in its ultimate object; that it offends against sentiment, against morals. On the other side, it is denied that the introduction of experiments on animals has had any actual use, that medicine has been really promoted thereby, and especially that the cure of diseases has in consequence made any recognizable progress. Even those who admit that there has been some progress, yet believe that just as much information could have been imparted by anatomy alone as by experiments on living animals.

Such objections are not new to one who knows the history of medicine. For hundreds of years, on similar or identical grounds, the dissection of human bodies was impeded, and anatomists were confined to the dissection of dead animals; if, indeed — as was done by Paracelsus, the contemporary of Vesalius — the insulting question were not asked, whether anatomy was of any use at all. The feeling of the masses was raised against the dissection of human bodies; and it is known that, at the commencement of the fourteenth century, the church for the first time gave permission for this to be done, but only under limitations which were still greater than those under which the larger number of our modern opponents would permit vivisection. It was no accident that the period of the reformation in the church first created for the great Vesalius a free field, so that he might test the truth of Galen's traditional dogmata by his own investigation of human bodies, and place true human anatomy in the stead of the anatomy of animals, which had during centuries formed the groundwork of all medical ideas on the internal arrangement of man.

And now, first of all, pathological anatomy — what obstacles it has had to overcome even in the present time! Nothing is more instructive in this respect than the narrative which Wepfer, the celebrated discoverer

of the hæmorrhagic nature of ordinary apoplexy, gives of the acts of enmity with which he was persecuted when — it was towards the middle of the seventeenth century — the council of the town of Schaffhausen had allowed him to dissect the bodies of those dying in the hospital. The only reply which he made to those who said to him that it is injurious and disgraceful to soil his hands with blood and sanies, was, that he could cleanse his hands with some water; but that much more disgraceful and injurious is ignorance of anatomical facts, which inflicts on inexperienced physicians and surgeons a disgrace that not the Rhine, not the ocean itself, can wash away.¹ Hence the study of anatomy is much rather to be praised, and to be supported by those who exercise the executive power in the State.

In fact, one government after another has recognized the decided importance of anatomical science. As far as the civilized world extends, so far at the present day are human bodies dissected. Even the laity comprehends that, without the most accurate knowledge of the structure of the human body and of the changes which disease and recovery produce in it, skilled action on the part of the physician is impossible. Any one who can only take a general survey of the history of science, must know that both the greatest epochs of the resuscitation and reformation of medicine commenced with the definite establishment of both the principal branches of human anatomy, and were even essentially brought about thereby. In the sixteenth century, it was physiological anatomy which brought about the definitive victory of empiricism over dogmatism, of science over tradition; in the eighteenth century, it was pathological anatomy which replaced mysticism by realism, speculation by necropsy, obscure groping and guessing by systematic thought.

No one can be more disposed to concede the high value of anatomical studies to the development of medicine, than one who has made it a part of the task of his life to place anatomy and histology in that commanding position in the recognition of his contemporaries which they deserve. Nothing lies further from me than to discourage those who still expect the greatest benefit to the practice of medicine to arise from following out these studies. May indeed the growing youth, who will have to follow us in assuring the progress of medicine, learn from our example how useful it is to lay the true foundation of our science in anatomy. Assuredly, much of that which remains dark to us will then be rendered clear.

But we must not allow ourselves to be forced back on this way as the only permissible one. Were the attempt to hinder totally or in great part researches on living animals to become successful, the same procedure which has been now entered on against vivisection, would also be commenced against mortisection. There would no longer be societies for the protection of animals, which we see opposed to us, but societies for the protection of human bodies. There would no longer be thunderings against the tormenting of animals, but against the desecration of corpses. Under the standard of humanity, which is just now unfurled even for animals, there would be preached in a still more impressive manner the campaign against the barbarity of med-

¹ Joh. Jac. Wepfer. *Observ. Anat. ex Cadaveribus eorum quos sustulit Apoplexia*. Schaffhusen, 1658. *Præcipio: Turpius et damnosior rerum anatomicarum ignorantia est, quæ imperitis Medicis et Chirurgis ignominiam parit, quam nec Rhænus, nec Oceanus ablucere potest.*

ical men. People would appeal to the feeling of the masses — to the mother on behalf of the body of her child, the son on behalf of the dear remains of his parents. It would be proved that the dismembering of human bodies is injurious to morals and opposed to Christianity. It would be shown that the anatomy of man is useless for the treatment of disease; and perhaps there would be found ignorant or timid or egotistical medical men, who would come forth as witnesses against science. The mildest of our opponents would perhaps propose to us the compromise, that we should again make the dissection of animals the foundation of instruction. In short, we should be thrown back to the time before Mondini, before Erasistratus.

Such thoughts are by no means the productions of an alarmed fancy. The study of history teaches us sufficiently that victorious fanaticism knows no limits. It desires to heap to the full the measure of its victories; and, even when the leaders are contented, the irritated masses press on to obtain the whole results. It is, indeed, not at all necessary for us to go back to antiquity in order to bring before our eyes the condition of such minds. In no country of modern time are there wanting examples which are recognizable by the eye; for, along with the societies against "scientific tormentors of animals," there exist everywhere, but mostly in a more unassuming form, brotherhoods and associations of all kinds, which labor most zealously against the scientific examination of dead bodies. It needs only an impassioned and exciting agitation, such as is now going on against the "torture-chambers of science," to denounce to popular indignation the dissecting-rooms as places where the youths under instruction are made barbarous. Whoever undertakes, with the same extravagant fancy as is now used in delineating the physiological laboratory, to describe the post mortem examination of a man, or an anatomical theatre, will not fail to have readers, who will turn away with horror and amazement at the misdeeds of anatomists.

In vain will an appeal be made to the fact that not one single school of medicine has existed, which has, without a fundamental knowledge of anatomy, established lasting advances in the science or the art of healing. The homeopaths and the so-called nature-doctors (*Naturärzte*), who indeed are already on the scene to strengthen the ranks of the antivivisectionists, will step forth and praise their results. Skepticism, which from time to time grasps about even in medical circles, and which only too easily finds there followers who have in vain called on medical aid for themselves or their belongings — it will scornfully point out how often the physician is powerless against disease. Therapeutics will be thrown aside as useless lumber; and it will be pointed out to us, as is now already done in the petitions of the societies for the protection of animals, that therapy is to be replaced by hygiene, the treatment of individual patients by general measures of public sanitation. And the attempt will then be made to excite the belief, that prophylaxis can exist without anatomy or experiments on animals.

In so large an assembly of medical men as this is, a glance at those present teaches in how many special directions the medicine of to-day has gone. Not every one of these directions is in like measure and as constantly in want of all the means of inquiry and scientific preparation, which are indispensable to cure disease as a whole. Hence, from time to time, a perceptible

one-sidedness becomes manifest in certain of these special arrangements. One believes in his own sufficiency, and looks with indifference, sometimes with a kind of polite contempt, on the rest of medicine. Even the truly scientific studies are not exempt from such one-sidedness; on the contrary, human pride, the tendency to overestimation of one's self, prevail more readily in these than in partial disciplines. We ourselves have seen that organic chemistry, by a most partial use of a very moderate store of knowledge, has made the attempt — and, indeed, not without some temporary result — to prescribe its laws to medicine; and that numerous practical physicians, unmindful of the history of our science, have in fact sought safety in a new kind of iatro-chemistry. Yes, I have a very lively remembrance of the fact that, when I myself was entering on the scientific career, the hope of giving a purely physical aspect to biology was so powerful, that every attempt at morphological study was treated as something antiqua ed.

We have not allowed ourselves to be prevented by this from carrying on anatomical research with every exertion; and we are now in the happy position of seeing it everywhere acknowledged, that every advance in minute anatomy sees behind it an advance in physiological knowledge. Physiologists themselves are more and more becoming also histologists. No one, however, must say that physiology is becoming totally dissolved in histology. No attempt must be made to replace one special subject by another. What is necessary to all branches of medical science in general, is the *knowledge of life*. But this can as little be attained by a simple external examination of the living, as by a partial investigation of the dead. It can be reached by no single study or specialty; it is much rather the collective result of the cultivation of all individual branches of science.

What is to be attained by a mere external examination of the living body has been thoroughly taught by the older medicine. For centuries, sick and healthy have been observed with assiduous diligence, and in fact most valuable material has been collected in the most ingenious manner; but, on the whole, no advance has been made beyond "symptoms." What was perceived were the signs of something internal which was not perceived — indeed, the possible perception of which was hitherto doubted. Life itself stood as it were outside observation; it was only a subject of speculation. Intellectual formulæ were laid down, spiritualistic or materialistic, according to the general tendency of the mind of the individual or of the time; but all agreed in the conviction, that life itself is a transcendental and metaphysical problem. For the practical physician, knowledge that was founded in fact began with symptomatology; for disease as such was apparently not less transcendental than life itself, whose antitype it constituted.

How has it now come to pass that symptomatology has entirely lost the high position in which it still stood little less than a generation ago, to such an extent that in most universities it is no more taught as a specialty? Have symptoms no more any importance for the physician? Can a diagnosis be made without a knowledge of symptoms? Certainly not. But, for the scientific physician, the symptoms are no more the expression of a hidden power, recognizable only in its outer workings: he searches for this power itself, and endeavors to find where it is seated, in the hope of ex-

ploring even the nature of its seat. Hence, the first question of the pathologist and of the biologist in general is, Where? That is the anatomical question. No matter whether we endeavor to ascertain the place of the disease or of life with the anatomical knife or only with the eye or the hand; whether we dissect or only observe, the method of investigation is always anatomical. For this reason the thoroughly logical founder of pathological anatomy named his fundamental book *De Sedibus Morborum*, and hence this book became the starting-point of a movement which, in a few decades, has changed the entire aspect of science.

This change has been carried out to the greatest extent in ophthalmic surgery. Who could limit himself to perceiving that modern ophthalmology has scarcely a single point of similarity with that of the last century? Who contents himself with the symptom of amaurosis? Who despairs of recognizing in it the existence of glaucoma? Every ophthalmic surgeon has in his hands the means of studying the thing itself, and not merely its signs. Even the antivivisectionists acknowledge that ophthalmology is a study that is capable of effecting something. But they forget that every organ of the body is not so favorably placed and arranged for the observation of its inner processes as is the eyeball. Since the wonderful discovery of the ophthalmoscope, anatomical analysis, even without the use of the knife, has become capable of penetrating so far into the individually remote that we can immediately observe and study by themselves the smallest features of the fundus oculi, even, indeed, its single cells, or groups of cells, just as in an artificial preparation of an eye that has been excised. But it must not be forgotten that long anatomical and physiological studies have been a necessary preliminary to the interpretation of that which is now so easily perceived. The structure, arrangement, and function of each single part had first to be laboriously established before it was possible, by a transitory glance at the altered tissue, to recognize what is especially changed; and no medical man will attain to a true comprehension of the essence of these changes if he have not previously learned to recognize most accurately the anatomical and physiological nature, and the possible pathological changes, of the individual constituent parts of the eye.

They speak lightly who object to us that not all the branches of medicine stand on the same height with ophthalmology. That will never be the case. Just as it is easier to explore the sea in its depths than the solid land, so will the most transparent organ of the body always be the most convenient place for medical diagnosis and treatment. While it is possible to observe without difficulty a cysticercus in the hinder part of the retina, one will always be taught to bring a cysticercus of muscle or a trichina in a patient to light by vivisection. Never can it be required that every medical specialty should altogether equal ophthalmology in security of treatment and diagnosis; but any measure of success can only be sought in the use of the ophthalmological method in a corresponding manner in the other special departments. This method, however, is anatomical, or, as it has otherwise been expressed, localizing.

With this we have reached the point which denotes the boundary between ancient and modern medicine. *The principle of modern medicine is localization.* To those who still constantly ask of what use modern science has been to practical medicine, we can simply

point out that every branch of medical practice has accommodated itself to the principle of localization, not only in pathology, but also in therapeutics, and that thereby the greatest benefit has accrued to the sick. It is quite superfluous to seek out single examples in order to show what profit the new knowledge has brought. Such examples are abundant. But we do not require them, for we can point to the general character of modern medicine. All those studies which already at an earlier period had a natural tendency to localization, such as special surgery and dermatology, have in this way been raised to their present state of perfection. These, however, which have retained from the old humoral pathology a tendency to the establishment of generalizing formulae, gradually renounce the favorite tradition; and the fact is more and more comprehended that generalization in truth is nothing else than *multiplication of foci*, and that the cure of a so-called general disease signifies just as much as the eradication of a single focus. That was in fact a reform in head and limbs, and he who has not grasped it ought not to say that he has consciously followed the progress of science.

The notion of the general validity of the doctrine of the localization of disease and of the multiplication of foci of disease in the same individual, stands, as was often objected to me in the beginning of my career as a teacher, in strict opposition to the idea of the *unity of disease*, or, as it is expressed in customary language, to the *ens morbi*. My former colleagues still retained large portions of this idea; they believed that the practical physician entered into arbitrary, and therefore dangerous, speculations, when, in the presence of a single case of disease, he assumed the disease to be a plurality. To me it seems rather the reverse; that the physician enters on a fruitless project (*schematismus*), and one dangerous to his patients, if he suppose each individual case of disease to correspond to the opinion of his school or his own private view, and calculate his prognosis and treatment thereby. Meanwhile, these considerations, derived from medical practice, on the *utility* of a certain way of perceiving disease, can lead to no decision as to its *truth*, and yet at this result only is it possible to arrive. How shall we establish it?

All the world is at one on this point, that disease presupposes life. In a dead body there is no disease. With death life and disease disappear simultaneously. This consideration led the older physicians to assume disease to be a self-living or even animated essence, which took its place in the body along with the vital principle. Many went so far as to define disease as a combat between two contending principles, the innate life and an intrusive foreign body. But all came back to life as a preliminary condition of disease. The view was first lost in the old Layden school; from Boerhaave emanated the dogma, which his pupil Gaubius placed at the head of his long used *Handbook of General Pathology*, the first written on the subject: *Morbus est vita prater naturam*. Disease is life itself; or, to speak more correctly, it is a portion of life.

This assumption displaced the unfortunate dualism which had so long dominated medicine; or, at least, it ought to have displaced this dualism between life and disease. If, nevertheless, it has not completely done this, and if more than a century has been required to break up the still constantly existing dissonance, the reason lies in the difficulty of finding a satisfactory conception of life. And here the question must not be

passed by, Where has life its special seat? *Ubi sedes vite?* John Hunter went back to the ancient view, already expressed in the Mosaic formula: "The life of the body is in its blood." Flourens believed that he had found the seat of life, the *ædud vital*, in the central nervous system, in the medulla oblongata. The one, like the other, found himself obliged to institute experiments on living animals for the investigation of this difficult question. Therewith the experimental method in the more strict sense began to pass into the practice of pathologists. Vivisection became a regular aid to research.

Certainly the consideration that a knowledge of life can only be obtained on the living being was long present. Beyond doubt, it was already formed in antiquity. But it is difficult to determine with accuracy the time when it first became practically active. Uncertain statements only on the subject are available. Zacharias Sylvius, a physician of Rotterdam, who wrote the preface to the Dutch edition of Harvey's *Exercitationes*, calls to mind the tale of Democritus, whom the Abderites regarded as insane, because they saw him constantly engaged in vivisection; when, however, the great Hippocrates was sent for to cure him, he fully recognized the value of his proceedings, and declared that all the Abderites were lunatics, and that Democritus alone was sane.¹ Probably this story has been narrated at the expense of the good Abderites; but it still shows that vivisection already "lay in the air." I will not attempt to decide whether it is true that the teachers in the Alexandrian school actually availed themselves of the permission of their king to dissect criminals. The only conclusion which I can derive from these tales is, that researches on animals must surely have at that time been already practiced. For whoever reflects on the vivisection of men, must acknowledge that, especially at a time when the anatomy of animals formed the foundation of medical study, vivisection had certainly been previously done on animals. In the school of the empirics, which proceeded from that of Alexandria, and in which necropsy was taught as the chief means of knowledge, experiment also appears as having a recognized claim. Only it is not evident to what extent this research on living animals was carried on.

In fact, the first great and distinctive example of successful vivisection which the history of medicine knows, is that of William Harvey. The foundation of the doctrine of the circulation, which in the main was experimental, has radically changed the whole direction of the thoughts of physicians. Had we this one example alone, it would be sufficient to prove brilliantly the utility, yea, the indispensability, of vivisection. Never has a dogma firmly established by the tradition of centuries and every kind of authority, which in truth formed the central point of a powerful and generally acknowledged system, been annihilated with such a headlong downfall. In complete recognition of the importance of such a man, Albert von Haller said that Harvey's name was the second in medicine, that of Hippocrates being the first. But it was a difficult step, to advance a new and unheard of doctrine which

interfered with science in so revolutionary a manner. Having hesitated long whether he should publish his discovery; and when he at last carried his resolution into effect, the great vivisector cried: "*Utenunque sit, jam jaeta est alca, spes mea in amantium veritatis et doctorum animorum candore sita.*"²

It is certainly due, even in the present day, to the purity of a truth-loving and cultivated mind, to exonerate Harvey from the reproach of heartlessness, perhaps of brutality, of which our antivivisectors are so liberal. His new knowledge had cost the lives of many animals; he started, as he himself says, "*ex vivorum (experienti causa) dissectione, arteriarum apertione disquisitioneque multimoda.*" And yet that was the least thing with which he was reproached; even kings at that time were so little tender-hearted, or, I may say, with an opponent, were so brutalized, that King Charles I. found pleasure in seeing the experiments of his body-physician.

On the other hand, after Malpighi had, still in the same century, demonstrated the flow of blood in the capillaries of living animals, and after our century has added the knowledge of the existence of an actual capillary wall, the doctrine of the circulation appears so self-evident, it has so thoroughly entered into the ideas of all, that it already requires a peculiarly trained mind to comprehend the opinion of the older physicians on the local relations of the current of the blood. The widely comprehensive doctrine of inflammation and new growth, within which nearly the greater part of practical cases occur, was founded on experiments on the capillary circulation; not less so was the doctrine of the cure of local diseased processes of most varied kinds.

Even the worst opponents of vivisection recognize Harvey's services. But, say they, since then, nothing more of importance has been accomplished by vivisection. They do not know that it is precisely that department of the doctrine of the process of the circulation which embraces the vital properties of the organs of circulation, which is entirely unmentioned by Harvey.

On what does the activity of the heart depend? What influence do the vessels exert on the propulsion and distribution of the blood? What share falls to the arteries, what to the veins, what to the capillaries? All these questions are of the highest practical importance, and none of them can be investigated otherwise than by experiments on animals. But Harvey could not attack these questions, because in his time minute anatomy was not yet developed. Who knew anything of the nerves of the heart, or of the vessels? Who had any notion as to the participation in the manifestations of the action of the heart and blood-vessels, on the part of the nerves, which supply the parietal structures, especially the fine muscles?

An interval of two centuries again intervened, before Edward Weber, by experiment on the vagus nerve in a living animal, first revealed the mystery of the innervation of the heart; and this, again, in a quite unexpected and unprecedented manner; and before our now so much abused friend Claude Bernard likewise showed on a living animal the influence of the sympathetic nerve on the vessels of the head and neck.

Now for the first time, and through numerous other experiments which have tended to this end, we understand the circulation in its special characters. The

¹ Harvey *Exercit. anat.* Roterod. 1671. Prefatio: Democritus solertissimus operum naturæ perscrutator, cum assidue secundis animalibus occuparetur, existimatus fuit insanus ab Abderitis; qui miserati sortem hominis advocarunt Hippocratem, ut illi medicum faceret mentemque alienatam restitueret. Rogatus decurrit et offendit Democritum animalia secantem, quo spectaculo mirum in modum oblectatus, omnes Abderitas insanire pronuntiavit, solum sapere Democritum.

² Loc. Cit., page 81.

pulse, that so highly treasured object of the old symptomatology, allows itself to be interpreted. It is to us no longer the sign of this or that disease, but the sign of the existence or non-existence of certain activities, of strength or weakness, of irritation or relaxation of certain tissues. Nor for the first time we can understand in its individual peculiarities the action of the heart itself and the operation on it of certain substances—for example—cardiac poisons; and it is not almost alone the department of diseases of the valves, to which alone, and with a scorn that cannot be rightly understood, the antivivisectors point on account of their incurability, but also the department of febrile diseases, which we are in a position to survey as well with regard to their symptoms as to their nature and their results.

The length of the interval of time between Harvey and the more recent experimenters on the innervation of the vascular apparatus is explained by the circumstance, that in that intermediate time two entirely new studies had to be created, to both of which the discovery of the circulation was an impulse and a preliminary condition. I mean physiology and general pathology; thus, indeed, both these studies which are to be regarded as the chief support of the experimental method, and which it was originally the custom to comprise under the name of "Institutiones Medice." Hermann Boerhaave had, in his professorship, combined them, and, indeed, had even united them with practical medicine; under his pupils the division of labor commenced, and the formal separation of the studies. Haller was the special creator of physiology. His experiments went first in the direction of exploring the vital properties of individual parts of the body, of single tissues, as would now be said. Among these properties, following the distinguished Glisson, a man, it seems to me, not even now sufficiently honored in his country, he assigned a prominent place to irritability. It would lead me too far, if I in this place desired to attempt to show forth individually these memorable researches, the comprehension of which was rendered extremely difficult by the then not yet sufficiently complete explanation of the notions "irritability" and "contractility." For our purpose, it is sufficient to point out that here for the first time nerve and muscle, the two most highly developed and thereby most energetic portions of the animal body, were made the subjects of experiment with regard to their special forms of activity. Contraction and sensibility appear as the special signs of living activity. Therewith the question of the basis of living activity was so nearly approached, that Gaubius, who at the same time laid the foundations of general pathology, indicated the vital force as the source of contraction, without going further.¹

From these beginnings was developed, at first in a very obscure and equally unprofitable manner, especially clouded by speculative vitalism, the doctrine of life in its modern form. It has required much longer labors, mostly experimental, to arrive at a great and practical result in spite of all deviations. From the conception of irritability, originally created by Glisson, that of contractility has gradually become separate; and the contrast in which Haller placed irritability and sensibility with regard to each other has been dissolved, by the fact that contractility and sensibility are regarded

as two special forms of expression of life connected with various elements, and are subordinated to irritability as the general expression. In this sense, irritability and vitality are nearly identical. Both are properties of tissue, and as such directly or indirectly accessible to treatment and experiment.

In fact, experimentation is now rather directed to the tissue itself. Galvani's discovery of electric contractions, the labors of Alexander von Humboldt on irritated muscle and nerve-fibre, and many other contemporaneous researches, afford evidence of the changed direction in which the new biology labored. More and more sank down the mysticism of the spirits of life and of disease, the speculation as to an individual vital force; and from generation to generation medicine assumed more and more the character of a real natural science. The obscurity which had dominated especially the nervous system, disappeared under the common labors of anatomists and experimenters; and especially since Charles Bell taught the difference of the nerves hitherto considered as similar in nature, and thereby opened the road to research on the special importance and power of the single divisions of the central nervous system, one work after another has appeared, which has diffused new light on this difficult and complicated subject. It is impossible to go through all these works on this occasion, and it would be superfluous in an assembly of such accomplished men, many of whom have themselves labored in this glorious work.

I will now only briefly point out that among these labors a constantly clearer and more triumphant idea has advanced, which in its beginnings reaches far back into past time, namely, the idea of the proper life (*vita propria*) of the tissues. Every new form of experiment which is devised renders new parts accessible to scientific examination, and with each step in advance we become more clearly convinced that life, regarded as a great unit in the established sense, is a pure fiction, arising from the observation that in the hierarchical organization of the human body certain organs attain so elaborate a structure, and therewith so great importance, that they with complete right merit the name of vital organs. And as among these organs the medulla oblongata possesses the greatest importance, it is easily comprehensible that the idea should arise that it might really be the seat of life. But we know now that life is a collective functional action of all parts of the higher or vital as well as of the lower and less important; and that there is no one seat of life, but that every true elementary part, especially every cell, is a seat of life. In biological research also, as well as in pathological, we have arrived at a multiplication of foci. Of course the number of vital foci is much greater than that of foci of disease can ever be; and hence disease and life, or, to speak more accurately, diseased and healthy life can very well coexist in the same organism; always, however, so that disease signifies a reduction, a *minus* of healthy life. By this research we have even rediscovered the long-lost essence of disease, not, indeed, in a spiritualistic form, but as a quite material *ens*, a genuine incarnate thing—the altered cell.

Has all now produced advantage? Was it worth the trouble to inflict pain on so many animals? to kill so many animals? Is there a really justifiable claim for allowing the experimental method to proceed still further? We can answer all these questions confidently in the affirmative. Not every experiment on

¹ Gaubius, loc. cit. Path. Med., page 71. "Vis vitalis solidi est, quæ ab affectione irritationis se contrahit."

animals has results as great as that of Galvani, results which have not merely led to a new and effective method of treating disease — electrotherapy; which have not only disclosed a large new territory of vital processes, but have supplied the first preliminary condition for an incalculable number of the most important technical arrangements, the knowledge of the natural course of events. But galvanism might yet appear to limited and timid heads as an instructive and refreshing play, for the reason that not every result of true observation of nature is usually brought forward at once, and that nevertheless it may be of the highest practical value. The cellular theory and the proof of the *vita propria seu cellularis* are in themselves very abstruse things, and no one can cure patients by their means without understanding something further. And yet they have become the foundation, yea, in a certain measure the security, for localizing therapeutics, and they will surely become more so from day to day, when first *materia medica* in its wider extent shall have gone on the way which toxicology has already for a long time followed in a manner so rich in results.

How, then, can a great result to the science of healing be expected if research in animals be cut off? For a long time no remedy has been more rapidly recognized, or more extensively used, than chloral, the effects of which were discovered and established experimentally by Herr O. Liebreich in my laboratory. How would it have been possible to know how to ascertain those effects without experiments on animals? The animals' friends say to us, "Then try the new medicine on yourselves!" They refer us to the provings of medicines by the homeopaths. But, quite independently of the fact that the provings of the homeopaths have not taught us to recognize one single new remedy which can be compared even at a distance with chloral, and that these provings, even in regard to already known remedies, do not in the least correspond to scientific investigations; that thus they cannot be altogether regarded as an original example — one will yet not be able to earnestly desire that very different, possibly poisonous bodies, should be made the subject of self-experimentation by physicians or other men. This kind of morality, which forbids experiment on animals, and counsels experiment on one's own life or on sick men, misses, in fact, the first foundations of intelligent examination.

The proof of the great importance of hygiene and prophylaxis is rather superfluous. If any class of men has been active in this direction it is surely medical men. Never has there been a want of zealous hygienists among them; and when a great problem of prophylaxis was to be solved one might be sure of finding medical men engaged in the work. We are so accustomed to this obligation that we always regard hygiene and prophylaxis as belonging to medicine, and to no other science. But it is empty talk when it is said that prophylaxis will render therapeutics — yea, even in a certain degree, medicine — superfluous. The arrangement of this imperfect world is such that there surely will be sick as long as men exist; and we are not afraid because of the threat that there will be no further need of us. Not even through the assistance of hygiene will people be able to do without us; and still less without experiment on animals. Will even the hygienists be condemned to test the various "causes," cold and warmth, dryness and moisture, dust and noxious gases, micrococci and bacteria on their

own persons, in order that they may from such self-observations determine their effects, and formulate laws? Intelligent governments will comprehend that it would be an act of madness to sacrifice human life merely because it occurs to a small number of persons that it is criminal to sacrifice the lives of animals. Medical men are already more exposed in epidemics of all kinds, in the performance of their duties in hospitals, in the country, in their nocturnal visits to the sick, in operations and necropsies, than any other class of the community, as a rule; and it requires all the blindness of the animal fanatics to require also of them that they should test on their own bodies the remedial, or poisonous, or indifferent action of unknown substances, or that they should determine the limit of permissible doses by observations made on themselves.

In the name of humanity, of morality, of religion, the suppression of experiment on animals is demanded. For, in fact, it is not merely vivisection that is in question, but experiment on animals; that is, the experimental method in general. When the term vivisection is used, it is made to include in like manner all painful actions in which there is no cutting; indeed, to prevent any misconception, not only physiological, but also pathological and pharmacological, experiments are expressly included. *The criterion is pain. Everything by which, in the way of experiment, pain is inflicted on an animal is torture of animals*, and so far immoral, and contrary to religion. With this definition of torture of animals, it might be possible to arrive at exceptional results by applying it to other callings or men. The dog-fanciers, who in the rearing of their dogs often use, or cause to be used, methods full of torture and painful chastisement would readily come into great danger. The improvement of horses for certain purposes would have to be entirely put down. A great part of our domestic animals would have to remain untrained, so that pain might be spared to them. We should perhaps arrive at conditions similar to those produced by the wild dogs in Turkey.

Individual antivivisectors are at least so far consistent that they would see the slaughter of animals also forbidden. From the vegetarian standpoint, the opposition gains a kind of systematic aspect. Thus Herr von Seefeld¹ demands a vegetable diet and the prohibition of vivisectors; but as he, as a vegetarian, has no need of flesh he is strongly inclined to make still further concessions. Thus he rejects hunting for the purpose of pleasure, but cannot altogether dispense with it as a means of defending life. Others go still further, and sacrifice also war. The principle can scarcely be denied that death is worse than torture. There could scarcely be a criminal code which punishes the premeditated killing of a man less severely than the torture of a man. Not without reason is it alleged that a man who still remains alive after his misdeeds, may recover and attain to a complete or entire enjoyment of life. Grounds of mitigation in cases of murder and manslaughter are allowed also to men; but, as a foundation, the extremest injury which can be inflicted on man is always and everywhere the most severely punished.

As regards animals, the antivivisectors, on the contrary, consider torture to be worse than death. Although they reject every torturing or painful method of death, even for cattle, they without the slightest con-

¹ Alfred von Seefeld. *Altes und Neues über die vegeterianische Lebensweise*. Hanover. 1889.

sideration cause animals, even highly organized ones, to be slaughtered or killed, not only for eating, but also for other purely subjective reasons. They go, indeed, so far as to demand that an animal which has survived vivisection shall be killed, although it might possibly still enjoy a long and happy life. Is there any logic in this, or any morality? How? may we have the right to kill an animal on any ground of public utility, to eat its flesh, to sell its skin, to pound its bones to manure for the field? and are we not to have the right of subjecting it to scientific research, which we institute on entirely ideal grounds, or on the grounds of the public weal, in which we even perhaps run the risk of becoming diseased? It will be difficult to assume that we institute researches on glanders or splenic fever for pleasure, or to pass away time, or without knowledge of the great danger of inoculation. Whoever allows himself the right to kill animals has no right to forbid physicians to vivisect animals for experimental purposes, or to undertake painful operations of any other kind.

Of course, we cannot desire that the misuse of this right should escape punishment. For it is with such an abuse, not with the production of pain, that torture of animals first comes into operation. Were every production of pain in itself an act of torture, punishment ought to be inflicted on a veterinary surgeon when he operates on a sick horse for the purpose of curing it. Culpable torture of animals lies before us, when pain is inflicted on an animal in a useless manner, and without purpose. Hence nothing can be said against the view that every experimenter should be subject to official inspection, but surely this does not require a society for the protection of animals. He who has a greater interest in domestic animals than in science, that is, in the knowledge of truth, is not qualified to be an official controller of scientific affairs. To what would it lead, if an experimenter, who had commenced his experiment in good faith, had perhaps to answer to some layman during the experiment, or to a magistrate afterwards, the charge that he had not selected some other method, or some other instruments, or perhaps some other experiment.

Not here is no question of objective right. So long as perfect liberty is left to every possessor of animals to kill his animals, be they wild or tame, at any time, and according to his own judgment, so long must it also be permitted that, for scientific ends, and thus on purely internal grounds, experiments should be made on living animals. But the necessity of such experiments can naturally only be decided by the inquirer himself; as to the choice of place, time, the admission of strangers, he may be required to communicate with the inspector; but the carrying out of the experiment must remain in his own hands. So we understand the expression of the freedom of science.

What is objected to is, that it is the outraged feelings of the possessor of horses, pet dogs, and parlor cats, that excite him to the belief that the same thing may happen to his beloved animals as to the animals in the learned institute. We can sympathize with him. We would force no one to deliver to us his favorites, nor would we steal them. Were either of the two to occur, probably in every country the intervention of the magistrate would be called on with effect. But we also require that the disposal of the life and maintenance of those animals which have come into our possession in a legitimate way, should not be lessened

to us, and that we should not be considered or declared to be *à priori* rough, void of moral feeling, and barbarians standing almost on the threshold of crime. The evidence that moral earnestness is failing in modern medical circles is nowhere afforded. The reproach that Christianity is imperiled by vivisection, is worthy of Abdera. The assertion that the medical youth are inevitably "brutalized" by dissection and vivisection, is, as usual, snatched from the air; as it is also a calumny that the vivisection teachers have suffered injury to their morality.

At least, however, there is no ground to fear for science itself. To it is applicable what Bacon said of the sun: "*Palatia et cloacas ingreditur, neque tamen polluitur.*"

AN ADDRESS ON VACCINATION IN RELATION TO CHICKEN CHOLERA AND SPLENIC FEVER.¹

BY M. PASTEUR, PARIS.

GENTLEMEN,—I had no intention of addressing this admirable Congress, which brings together the most eminent medical men in the world, and the great success of which does so much credit to its principal organizer, Mr. MacCormac. The good-will of your esteemed president has decided otherwise. How could one, in fact, resist the sympathetic words of that eminent man whose goodness of heart is associated in no small degree with great oratorical ability? Two motives have brought me to London. The first was to gain instruction, to profit by your learned discussions; and the second was to ascertain the place now occupied in medicine and surgery by the germ theory. Certainly I shall return to Paris well satisfied. During the past week I have learned much. I carry away with me the conviction that the English people is a great people; and as for the influence of the new doctrine, I have been not only struck by the progress it has made, but by its triumph. I should be guilty of ingratitude and of false modesty, if I did not accept the welcome I have received among you and in English society as a mark of homage paid to my labors during the past five and twenty years upon the nature of ferments—their life and their nutrition, their preparation in a pure state by the introduction of organisms (*ensemencement*) under natural and artificial conditions—labors which have established the principles and the methods of *microbie* (microbism), if the expression is allowable. Your cordial welcome has revived within me the lively feeling of satisfaction I experienced, when your great surgeon Lister declared that my publication in 1857 on milk-fermentation had inspired him with his first ideas on his valuable surgical method. You have reawakened the pleasure I felt when our eminent physician Dr. Davaine declared that his labors upon *charbon* (splenic fever or malignant pustules) had been suggested by my studies on butyric fermentation and the vibrio which is characteristic of it.

Gentlemen, I am happy to be able to thank you by bringing to your notice a new advance in the study of micro-organisms as applied to the prevention of transmissible diseases—diseases which for the most part are fraught with terrible consequences, both for man and domestic animals. The subject of my communication is inoculation in relation to chicken cholera and splenic fever, and a statement of the method by which

¹ This translation originally appeared in the London Times.

we have arrived at these results — a method the fruitfulness of which inspires me with boundless anticipations.

Before discussing the question of splenic fever vaccine, which is the most important, permit me to recall the results of my investigations of chicken cholera. It is through this inquiry that new and highly important principles have been introduced into science concerning the virus or contagious quality of transmissible diseases. More than once in what I am about to say I shall employ the expression virus-culture, as formerly, in my investigations on fermentation, I used the expressions, the culture of milk-ferment, the culture of the butyric vibrio, etc. Let us take, then, a fowl which is about to die of chicken cholera, and let us dip the end of a delicate glass rod in the blood of the fowl with the usual precautions, upon which I need not here dwell. Let us then touch with this charged point some *bouillon de poule*, very clear, but first of all rendered sterile under a temperature of about 115° cent. (239° Fahr.) and under conditions in which neither the outer air nor the vases employed can introduce exterior germs — those germs which are in the air or on the surface of all objects. In a short time, if the culture vase be placed in a temperature of 25° to 35° cent. (77° to 95° Fahr.) you will see the liquid become turbid and full of tiny micro-organisms, shaped like the figure 8, but often so small that under a high magnifying power they appear like points. Take from this vase a drop as small as you please, no more than can be carried on the point of a glass rod as sharp as a needle, and touch with this point a fresh quantity of sterilized *bouillon de poule*, placed in a second vase, and the same phenomenon is produced. You deal in the same way with a third culture vase, with a fourth, and so on to a hundred or even a thousand, and invariably within a few hours the culture liquid becomes turbid and filled with the same minute organisms. At the end of two or three days' exposure to a temperature of about 30° cent. (86° Fahr.), the thickness of the liquid disappears, and a sediment is formed at the bottom of the vase. This signifies that the development of the minute organism has ceased — in other words, all the little points which caused the turbid appearance of the liquid have fallen to the bottom of the vase; and things will remain in this condition for a longer or shorter time, for months even, without either the liquid or the deposit undergoing any visible modification, inasmuch as we have taken care to exclude the germs of the atmosphere. A little stopper of cotton sifts the air which enters or issues from the vase through changes of temperature.

Let us take one of our series of culture preparations — the hundredth or the thousandth, for instance — and compare it in respect to its virulence with the blood of a fowl which has died of cholera; in other words, let us inoculate under the skin ten fowls, for instance, each separately with a tiny drop of infectious blood and ten others with a similar quantity of the liquid in which the deposit has first been shaken up. Strange to say, the latter ten fowls will die as quickly and with the same symptoms as the former ten: the blood of all will be found to contain after death the same minute infectious organisms. This equality, so to speak, in the virulence both of the culture preparation and of the blood is due to an apparently trivial circumstance. I have made a hundred culture preparations — at least, I have understood that this was done — without leav-

ing any considerable interval between the impregnations. Well, here we have the cause of the equality in the virulence.

Let us now repeat exactly our successive cultures with this single difference, that we pass from one culture to that which follows it, from the hundredth to, say, the hundred and first, at intervals of a fortnight, a month, two months, three months, or ten months. — If, now, we compare the virulence of the successive cultures, a great change will be observed. It will be readily seen from an inoculation of a series of ten fowls, that the virulence of one culture differs from that of the blood and from that of a preceding culture, when a sufficiently long interval elapses between the impregnation of one culture with the micro-organism of the preceding. More than that, we may recognize by this mode of observation that it is possible to prepare cultures of varying degrees of virulence. One preparation will kill eight fowls out of ten, another five out of ten, another one out of ten, another none at all, although the micro-organism may still be cultivated. In fact, what is no less strange, if you take each of these cultures of attenuated virulence at a point of departure in the preparation of successive cultures and without appreciable interval in the impregnation, the whole series of these cultures will reproduce the attenuated virulence of that which has served as the starting point. Similarly, where the virulence is null, it produces no effect.

How, then, it may be asked, are the effects of these attenuated virulences revealed in the fowls? They are revealed by a local disorder, by a morbid modification more or less profound in a muscle, if it is a muscle which has been inoculated with the virus. The muscle is filled with micro-organisms, which are easily recognized because the attenuated ones have almost the bulk, the form, and the appearance of the most virulent. But why is not the local disorder followed by death? For the moment, let us answer by a statement of facts. They are these: the local disorder ceases of itself more or less speedily, the micro-organism is absorbed and digested, if one may say so, and little by little the muscle regains its normal condition. Then the disease has disappeared. When we inoculate with the micro-organism the virulence of which is null there is not even local disorder: the *natura medicatrix* carries it off at once, and here, indeed, we see the influence of the resistance of life, since this micro-organism, the virulence of which is null, multiplies itself.

A little further, and we touch the principle of vaccination. When the fowls have been rendered sufficiently ill by the attenuated virus which the vital resistance has arrested in its development, they will, when inoculated with virulent virus, suffer no evil effects, or only effects of a passing character. In fact, they no longer die from the mortal virus, and for a time sufficiently long, which in some cases may exceed a year, chicken cholera cannot touch them, especially under the ordinary conditions of contagion which exist in fowl-houses. At this critical point of our manipulation — that is to say, in this interval of time which we have placed between two cultures, and which causes the attenuation, what occurs? I shall show you that in this interval the agent, which intervenes, is the oxygen of the air. Nothing more easily admits of proof. Let us produce a culture in a tube containing very little air, and close this tube with an enameled lamp. The micro-organism in developing itself will speedily

take all the oxygen of the tube and of the liquid, after which it will be perfectly free from contact with oxygen. In this case it does not appear that the micro-organism becomes appreciably attenuated, even after a great lapse of time. The oxygen of the air, then, would seem to be a possible modifying agent of the virulence of the micro-organism of chicken cholera; that is to say, it may modify more or less the facility of its development in the body of animals. May we not be here in presence of a general law applicable to all kinds of virus? What benefits may not be the result? We may hope to discover in this way the vaccine of all virulent diseases; and what is more natural than to begin our investigation of the vaccine of what we in French call *charbon*, what you in England call splenic fever, and what in Russia is known as the Siberian pest, and in Germany as the *Milzbrand*.

In this new investigation, I have had the assistance of two devoted young *savants*, MM. Chamberlain and Roux. At the outset, we were met by a difficulty. Among the inferior organisms all do not resolve themselves into those corpuscle-germs which I was the first to point out as one of the forms of their possible development. Many infectious micro-organisms do not resolve themselves in their cultures into corpuscle-germs. Such is equally the case with beer-yeast, which we do not see develop itself usually in breweries, for instance, except by a sort of fissiparous production. One cell makes two or more which form themselves in wreaths; the cells become detached, and the process recommences. In these cells, real germs are not usually seen. The micro-organism of chicken cholera and many others behave in this way, so much so that the cultures of this micro-organism, although they may last for months without losing their power of fresh cultivation, perish finally like beer-yeast which has exhausted all its aliments. The anthracoid micro-organism in artificial cultures behaves very differently. In the blood of animals, as in cultures, it is found in translucent filaments more or less segmented. This blood or these cultures freely exposed to air, instead of continuing according to the first mode of generation, show at the end of forty-eight hours corpuscle-germs distributed in series more or less regular along the filaments. All around these corpuscles matter is absorbed, as I have represented it formerly in one of the plates of my work on the diseases of silkworms. Little by little all connection between them disappears, and presently they are reduced to nothing more than germ-dust. If you make these corpuscles germinate, the new culture reproduces the virulence peculiar to the thready form which has produced these corpuscles, and this result is seen even after a long exposure of these germs to contact with air. Recently we discovered them in pits in which animals dead of splenic fever had been buried for twelve years, and their culture was as virulent as that from the blood of an animal recently dead.

Here I regret extremely to be obliged to shorten my remarks. I should have had much pleasure in demonstrating that the anthracoid germs in the earth of pits in which animals have been buried are brought to the surface by earthworms, and that in this fact we may find the whole etiology of disease, inasmuch as the animals swallow these germs with their food.

A great difficulty presents itself when we attempt to apply our method of attenuation by the oxygen of the air to the anthracoid micro-organisms. The virulence establishing itself very quickly, often after four-and-

twenty hours in an anthracoid germ which escapes the action of the air, it was impossible to think of discovering the vaccine of splenic fever in the conditions which had yielded that of chicken cholera; but was there, after all, reason to be discouraged? Certainly not. In fact, if you observe closely, you will find that there is no real difference between the mode of the generation of the anthracoid germ by fission and that of chicken cholera. We had, therefore, reason to hope that we might overcome the difficulty which stopped us by endeavoring to prevent the anthracoid micro-organism from producing corpuscle-germs, and to keep it in this condition in contact with oxygen for days, and weeks, and months. The experiment fortunately succeeded. In the ineffective (*neutre*) *bouillon de poule* the anthracoid micro-organism is no longer cultivable at 45° cent. Its culture, however, is easy at 42° or 43° cent., but in these conditions the micro-organism yields no spores. Consequently it is possible to maintain in contact with the pure air at 42° or 43°, a mycelian culture of bacteridia entirely free of germs. Then appear the very remarkable results which follow. In a month or six weeks the culture dies. That is to say, if one impregnates with it fresh *bouillon*, the latter is completely sterile. Up till that time life exists in the vase exposed to air and heat. If we examine the virulence of the culture at the end of two days, four days, six days, eight days, etc., it will be found that long before the death of the culture the micro-organism has lost all virulence, although still cultivable. Before this period it is found that the culture presents a series of attenuated virulences. Everything is similar to what happens in respect to the micro-organism in chicken cholera. Besides, each of these conditions of attenuated virulence may be reproduced by culture; in fact, since the *charbon* does not recur a second time (*ne récidive pas*), each of our attenuated anthracoid micro-organisms constitutes for the superior micro-organism a vaccine—that is to say, a virus capable of producing a milder disease.

Here, then, we have a method of preparing the vaccine of splenic fever. You will see presently the practical importance of this result: but what interests us more particularly is to observe that we have here a proof that we are in possession of a general method of preparing virus vaccine based upon the action of the oxygen and the air—that is to say, of a cosmic force existing everywhere on the surface of the globe. I regret to be unable from want of time to show you that all these attenuated forms of virus may very easily, by a physiological artifice, be made to recover their original maximum virulence. The method I have just explained of obtaining the vaccine of splenic fever was no sooner made known, than it was very extensively employed to prevent the splenic affection. In France, we lose every year by splenic fever animals of the value of 20,000,000 francs. I was asked to give a public demonstration of the results already mentioned. This experiment I may relate in a few words. Fifty sheep were placed at my disposition, of which twenty-five were vaccinated. A fortnight afterwards, the fifty sheep were inoculated with the most virulent anthracoid micro-organism. The twenty-five inoculated sheep resisted the infection; the twenty-five non-inoculated sheep died of splenic fever within fifty hours. Since that time, my energies have been taxed to meet the demands of farmers for supplies of this matter. In the space of fifteen days, we have inoculated in the

department surrounding Paris more than twenty thousand sheep and a large number of cattle and horses.

If I were not pressed for time, I should bring to your notice two other kinds of virus attenuated by similar means. These experiments will be communicated by and by to the public.

I cannot conclude, gentlemen, without expressing the great pleasure I feel at the thought that it is as a member of an International Medical Congress assembled in England that I make known the most recent results of vaccination upon a disease more terrible, perhaps, for domestic animals than small-pox is for man. I have given to vaccination an extension which science, I hope, will accept as a homage paid to the merit, and to the immense services, rendered by one of the greatest men of England, Jenner. What a pleasure for me to do honor to this immortal name in this noble and hospitable city of London!

Recent Literature.

A Manual on Diseases of the Eye and Ear, for the Use of Students and Practitioners, by W. F. MITTENDORF, M. D., etc. New York: G. P. Putnam's Sons. 1881. Pp. 445.

If it be true that he is a benefactor of mankind who has made two blades of grass grow where one grew before, the same cannot be said as to the multiplication of books. It is not a greater number of books that is needed, but better ones. A new book is only of value if it present new facts or new ideas to the reader, or set forth old ones in more attractive or comprehensible style. Judged by this standard the book before us can hardly be regarded as altogether a success.

The author's aim was, he says, to make this book, intended for the elementary study of the eye and ear, as practical and brief as the great importance of the subject would permit; to be as thorough as possible in the description, treatment, and differential diagnosis of those diseases which we are most apt to meet with in general practice. The plan thus outlined is excellent, its execution, unfortunately, not quite so satisfactory.

Three hundred and sixty pages are devoted to the eye, seventy to the ear.

In an elementary work it is of special importance that the language should be clear and distinct; here, however, sentences are frequently carelessly framed: "In the other condition it is generally due to a spasmodic action of the orbicularis, in acute inflammatory actions of the eye, with more or less œdema of the lid, or by a slight irritation of the conjunctiva of old persons with very loose skin." We meet with strange words: "pedicellated;" there are occasional contradictions, thus, under syphilitic ulcerations of the lids we read: "The ulcer spreads rapidly, often destroying a large portion of the lid;" and, two lines below, "There is generally nocturnal pain connected with the disease; its progress is generally slow."

Good wood-cuts are often of great assistance to a proper understanding of the text, particularly for readers unfamiliar with the subject treated of. We find but nine. Two illustrate an operation, and answer their purpose well; one serves to help, or confuse (?) the explanation of the course of the nerve-fibres from the brain to the retina; of the others, though of the simplest, several might easily be more accurate. Chromolithographs, copied from Sichel's Atlas, from Wells'

reproductions from Liebreich, and from Politzer, terminate the volume.

The statement that "exophthalmus can be differentiated from prominent eyes by the fact that an exophthalmus eye projects farther than a straight line drawn from the upper to the lower orbital margin," might well be modified with advantage, nor should we agree with the author that this affection may be due to myopia, to staphyloma of the cornea or sclera, or to hydrophthalmus.

The directions to treat a chalazion by making a crucial incision through the conjunctiva and removing a portion of the projecting points of the crucial incision by scissors we regard as bad surgery, and totally disagree with the advice, "never cut through the integument of the lid even if the tumor is pointing here very strongly."

It may be doubted, perhaps, if it be very practical to describe thirty-three varieties of cataract in an elementary work.

A curious misconception of a theory proposed by Von Graefe, but long generally abandoned, is found on page 292: "It has been claimed that obstruction of the venous circulation, due to compression of the ophthalmic vein, might lead to papillitis, but this is hardly possible, because the central vein of the retina empties directly into the cavernous sinus," etc.

Von Graefe's idea was that compression of the cavernous sinus checked the flow of blood from the ophthalmic vein, and so caused distention of the central vein of the retina, and that neuritis.

It is true that the vena centralis often, or generally, empties directly into the cavernous sinus, as our author states. This, however, would rather support the theory than disprove it, and it was in spite of this fact, and mainly because it was shown that the vena centralis anastomoses freely with the ophthalmic vein, and the latter again with the anterior facial vein, that the theory was given up.

The tick of a watch is said to be the most reliable test of the amount of hearing. "This should be heard by a normal ear at thirty-six inches; if, however, it is heard only at six inches the hearing power is only like $\frac{3}{8}$ or $\frac{1}{2}$." Probably the intelligence of the reader is relied upon for the reflection that all watches do not tick equally loud, yet it would have been better not to have laid down the rule so positively.

There are better text-books to be had.

Die Nerven Schwäche (Neurasthenia) ihre Symptome, Natur, Folgezustände, und Behandlung. Praktisch bearbeitet von GEORG M. BEARD, A. M., M. D. Nach der zweiten Auflage ins Deutsche übertragen und mit einem Vorwort versehen von SAN-RATH DR. M. NEISSER in Breslau, Badearzt in Charlottenbrunn. Leipzig: Verlag von F. C. W. Vogel. 1881. Pp. viii., 178.

This is a very good translation of Dr. Beard's book on Neurasthenia, second edition. The translator has slightly abridged the work by occasionally omitting parts of sentences, but nothing important has been sacrificed. The style of the original has rather been simplified and improved. The preface to the German edition is simply a short statement of the importance of the subject treated, and the expression of a hope that the condition of nervous weakness described may be more readily recognized after reading the work.

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MALARIA IN NEW ENGLAND.

THE reappearance of malaria at various places in New England from which it has been absent for many years, and its marked extension of late throughout the lower Connecticut River Valley, are exciting increasing notice and comment. Though the fact seems to be indisputable that this affection is much more frequent and general than formerly, as yet no sufficient explanation of the cause, as far as we are aware, has been offered.

In a recent monthly report of the Connecticut State Board of Health, its secretary states that the malarial wave is gradually extending over the State, and goes on to say that: "The only general features that appear to influence it are the rivers along whose valleys it extends and spreads from right to left with greater frequency in the valleys, and the coast line along which it extends and spreads inland. Dr. Knight, of New Haven, is quoted as saying that it never wholly disappeared from the limestone regions of the lower Housatonic valley. If that be so, then we have the centre from which this recent outbreak may have started. It sometimes advances *per saltum*, that is, skipping certain regions, and on the hill-tops, as well as in the valleys, appears sometimes in one form first, sometimes in another. After a careful personal study of a large area, including the valleys of the Connecticut, Housatonic, and Quinnipiac, wholly or partially, which I hope during the present year to extend over the whole malarial region in this State, I have not yet found a cause for the prime appearance of malarial disease. Such local causes as have been investigated have either originated after the appearance of the disease, or else had been in existence long before. Often local causes have been found which apparently induced a localized epidemic, or the persistency and frequency of the disease, as the clay cut on the course of one of the new railroads near which the cases were vastly more numerous than elsewhere in the neighborhood, and the pestiferous marsh in Durham, in whose immediate vicinity was a localized epidemic of typho-malarial fever, but in both instances the disease was in the neighborhood long before.

"It is pretty generally believed that scarlet fever and typhoid fever depend upon the contagion of a preceding case, and I see no reason to doubt, although a fever very like typhoid is apparently due to filth, and called cesspool fever. In a similar manner malarial diseases depend upon a contagion or germ, whatever it may be, which is not produced by the system of the patient. Just how the germ of the disease, for it may

as well be called that as anything, is produced is unknown. The later manifestations of the disease in New England, with its steady progress to the east and north, irrespective of any of the time-honored theories of its causation, compels a new study and comparison of data. Whether the disease originates in each new location from some local conditions, or is due to some law of diseases we do not yet understand, remains to be proved. It appears to be modified by local conditions such as have been alluded to, and perhaps the type may be thus influenced as well as its frequency and persistency. It must, however, be remembered that because malarial diseases have appeared on a hill-top in Connecticut the age of the dwellers near the Pontine Marshes is not a myth."

The extension of malaria as observed in Connecticut is certainly not usually attendant upon increased population and cultivation. The same tendency has made itself apparent in western Massachusetts, and was, we believe, at one time receiving the attention of the Board of Health of this State.

The subject is certainly worthy of timely and careful investigation, and needs to have more light thrown upon it. If anything can be devised to prevent it, the list of fertile and attractive districts in this country rendered uninhabitable or unhealthy by this insidious poison should not be allowed to grow longer. We should rather hope to put ourselves in a position to reclaim some of those already invaded.

We cannot fail to be reminded by indigenous cases of intermittent fever which have of late presented themselves in Newton, about Fresh Pond, at Cambridge, and in Boston, of interesting quotations from records dating back to the early days of the settlement of this neighborhood, which the curious reader will find in Dr. S. A. Greene's centennial address before the Massachusetts Medical Society.

THE NEW YORK LAW TO PREVENT THE ADULTERATION OF FOOD AND DRUGS.

THE full text of the new law of New York State in relation to the adulteration of food and drugs, which makes it a misdemeanor to manufacture or offer for sale any adulterated article of food or drugs, was published in the JOURNAL of August 14th. It goes into force on this the first day of September, and the State Board of Health have issued a circular to the public in which they announce that eight competent chemists have been appointed for the analysis of the various kinds of goods, and arrangements been made for the collection of samples. The Board requests all who are interested in promoting health by guarding against adulterated and deleterious articles of food and beverages to inquire concerning illegal traffic in such articles, and that whenever any person is cognizant of a case in which there seems to be evidence of injury from their use information should be immediately sent to the office of the Board at Albany, when an investigation of the matter will at once be undertaken. The circular further states that the Board desires the fact to be well understood by the

public that this law originated as a national measure for the protection of the people, as recommended by the National Board of Health and National Board of Trade, and that in the State of New York its administration will be based upon effectual coöperation of the State Board of Health with the people and honest producers and tradesmen, and upon the faithfulness and skill of the Board's carefully selected chemical analysts.

The work of analysis is arranged under eleven heads and groupings, and allotted as follows:—

Animal Food. I. Milk, fresh and condensed. Assigned to Professor Chamiller. II. Butter, dairy and artificial; cheese; lard; olive oil; and fruit essences. Assigned to Professor Caldwell, of Cornell University. III. Canned meats and animal foods; meats, fresh, smoked, salted, canned; extracts and essences of meat and fish; gelatine and isinglass. Assigned to Professor Chester, of Hamilton College.

Vegetable Food. IV. Cereals and the products and accessories of flour and bread foods. Assigned to E. G. Love, Ph. D., New York. V. Canned fruits and vegetables, pickles, preserves, spices, etc. Assigned to Professor Lattimore, of Rochester University. VI. Sugars; syrups; molasses; glucose; confectionery; honey; and soda-water syrups. Assigned to Dr. W. H. Pitt, Buffalo. VII. Tea; coffee; cocoa. Assigned to Professor Lattimore. VIII. Wines; beers; spirits; and cordials. Assigned to F. E. Engelhardt, Ph. D., Syracuse.

Drugs. IX. Crude vegetable and animal drugs. Assigned to Frederick Hoffmann, Ph. D., New York. X. Pharmaceutical chemicals and their preparations. Assigned to Dr. Hoffmann. XI. Organic preparations employed in medicines; cinchona, opium, etc., and their alkaloids; commercial pills, coated and otherwise; ethers and essences. Assigned to Professor Caldwell.

The law is of national rather than merely sectional importance, and its operation will be watched with great interest.

MEDICAL NOTES.

NEW YORK.

—Since the 23d of July there have been seven yellow-fever patients at the Quarantine Hospital, of whom two died, and five were discharged cured. Yellow fever is said to be very prevalent at Havana this summer. During the week ending July 16th fourteen deaths were reported from it; during the week ending July 23d twenty-one deaths, and one hundred and twenty cases were reported; and during the week ending July 30th, thirty-one deaths.

—Dr. Robert R. Mellvain died last week at the age of sixty-eight years from cancer of the stomach, and an autopsy was made by Drs. Frank Hamilton, Willard Parker, and John Messenger. When a young man Dr. Mellvain studied in Paris for a considerable time under Claude Bernard, and after his return to America settled in Ohio, but had lived in New York for a number of years before his death. He

was a very accomplished gentleman, and his memory for dates and statistics was quite extraordinary.

—The quarterly meeting of the State Board of Health was held at the Cataract House, Niagara Falls, on the 10th of August, and the session was mainly devoted to the subject of the suppression of the stench nuisances in the vicinity of New York city, which have so long been an annoyance to the citizens.

—A boy twelve years of age recently died from hydrophobia at the New York Hospital. He was bitten slightly on the hand by a large vagrant dog on the 15th of April last, and the wound was promptly cauterized. His last illness was very brief, lasting only from Sunday to Tuesday, and while he was in the hospital curare was employed without any appreciable effect upon the course of the disease.

Miscellany.

LETTER FROM LONDON. INTERNATIONAL MEDICAL CONGRESS.

LONDON AND SUBURBAN PUBLIC AND PRIVATE HOSPITALITY.—THE LORD MAYOR'S BANQUET.—CONVERSAZIONE AT THE GUILDHALL.—STORED ELECTRICITY.—RECEPTION BY LORD GRANVILLE.—GARDEN PARTY OF THE LONDON SCHOOL OF MEDICINE FOR WOMEN.—GARDEN PARTY OF LADY BURDETT-COUTTS, ETC., ETC.

LONDON, August 6, 1881.

MR EDITOR,—The weather continues perfect, the success, bustle, business, festivity, and labor of the seventh session of the International Congress proceed undiminished. It would be invidious to attempt to record the extent of the hospitality which is so profuse on the present occasion as to defy enumeration. Nevertheless one must notice that the principal officers of the Congress are practically keeping open house in no mean spirit. Breakfasts, luncheons, and dinners have succeeded each other daily in the homes of many of the presidents of sections, as well as in that of the President of the Congress, Sir James Paget, whose hospitality and eloquence have alike upon the present occasion baffled adequate description. Notwithstanding the importance of the business before the various sections, and the earnestness of the workers in them, ample participators have been found to avail themselves of the very many interesting and attractive pleasure trips which have been daily offered to them; excursions to the London Docks, to Messrs. Penus' works, have been specially organized in the most liberal spirit by the principals, whilst this afternoon a special train has conveyed a large number of members to Folkestone to witness the unveiling of Harvey's statue, and to partake of the hospitality of the corporation there. Each day finds numerous invitations for garden parties and river trips to the principal suburban seats of members of the profession, as well as to those of public personages. The Baroness Burdett-Coutts this afternoon is giving a large garden party at her picturesque estate, Holly Town, Highgate, and to-night Lord Granville, the present Foreign Minister, entertains the leading foreign members of the Congress, and these are indeed so numerous that it is often heard to be styled the German Congress in London.

Certain hospitals are enumerated for inspection on each day, so that all cases of interest may be explained by the members of the staffs who are then in attendance to welcome at the respective medical institutions all comers who make their visits in accordance with the daily programme.

The Lord Mayor of London, on Thursday night, entertained some two hundred members of the Congress, including Sir James Paget (President of the Congress), Professor Langenbeck, Sir J. Risdon Bennett, Professor Esmarch, Mr. Prescott Hewett, Professor Charcot, Dr. Pantaleoni, Professor Warlomont, Professor Donders, Professor Virchow, Mr. W. Bowman, Professor Paget, Dr. Billings, Dr. Acland, Dr. Pasteur, Dr. Austin Flint, Sir Henry Thompson, Professor Huxley, and Dr. Carpenter. In proposing the loyal toasts the Lord Mayor said that, although he was favored with the presence of a large number of distinguished visitors from various parts of the world, he ventured to think that there was not one but would join heartily in drinking the health of her Majesty, who had set a bright example in every relation of domestic and public life.

The Lord Mayor next gave the toast of the evening, "Success to the International Medical Congress," stating the pleasure it gave him to extend the hospitality of the Mansion House to men so distinguished. This was an age of congresses. There were congresses upon all subjects; but although he had had other gatherings of the kind, and hoped to welcome more, yet he believed that no meeting had ever taken place there or in London more important than this one. It was impossible to estimate what the interchange of thought and what the result of the expression of opinion of these distinguished men might effect in relation to medical science. The diffusion of knowledge, the alleviation of human suffering, and the happiness of mankind he could not doubt would be the result of this Congress. Seldom had the City witnessed such an assemblage. There were present men distinguished for keen scientific research and high intellectual power—men who had made their names famous, not only in their profession but by their works.

Sir James Paget (President of the Congress), who was received with loud cheers, said: "I have the honor to return thanks this evening, not for myself alone, although I feel very profoundly, and from my heart thank the Lord Mayor for the very kind terms in which he has spoken of myself, but I have to return thanks also for nearly all present. It seems to me well that we who have met to settle questions upon which we differ should have things brought before us on which we can be completely unanimous, and one of those is that we can all agree to return our very best thanks to the Lord Mayor for the hospitality—the brilliant hospitality—with which he has received us to-night. We are among those who in the investigation of science have to look for constant change, and yet none more than ourselves admire the traditions which represent definite popular feeling. And, in this country, no institution can do this more perfectly than that of the Lord Mayor and Corporation of London. I believe that, had we been asked what honors we should like best to receive, we should have replied that it would be first of all that which we have had—the patronage of her Majesty the Queen, then that of the presence of the Prince of Wales at our first meeting, which also we have had, and next that of the approval of the Lord

Mayor and the Corporation of London, who represented the magnificent hospitality attached to the merchant princes of London—they represent by longest tradition the value of popular election—for their election is still absolutely and completely popular—they represent those who in this country are prominent for their loyalty, that is law-loving, and who are allowed by law still to exist, and are allowed also to have the great privilege of self-government, a privilege which is still complete in the Lord Mayor and Corporation. Of the many Lord Mayors I have known, there is not one who more thoroughly, by his long life of personal devotion to his fellow-citizens, deserves this honor than his lordship. We boast that we are very hard workers for science, but not one works harder or more heartily for the benefit of his fellow-men than the Lord Mayor. Every day is occupied in giving and receiving hospitality, and that not for personal or private ends, but for the welfare of the people amongst whom he lives. I must not forget that to-night we have to return thanks to the whole Corporation for the invitations that they have given us to a *conversazione* at the Guildhall to-morrow evening. The hospitality at the Mansion House is boundless and of almost daily occurrence, but at the Guildhall it is of necessity rare. There, however, we shall have the opportunity of seeing something above and beyond hospitality—there we shall see a fine collection of relics of ancient London, some of the very best examples of Roman remains; and there, too, we shall find the rarest records of the history of England, and have the privilege of seeing a library rich in excellent works admirably arranged, and open upon terms of the most absolute liberality. In returning thanks, I have to reply quite as much for the honors which are in prospect as for those which we have just enjoyed."

The Lord Mayor proposed "Our Foreign Guests," to which Professor von Langenbeck, Professor Trellat, Dr. Pantaleoni, and Dr. Austin Flint responded. Professor Donders gave "The Health of the Lord Mayor," who proposed in reply, "The Aldermen and Corporation," coupling with the toast the name of Mr. Alderman Stone. Mr. Alderman and Sheriff Fowler, M. P., responded for the health of the sheriffs, and the Lord Mayor for that of the Lady Mayoress, proposed by Sir J. R. Bennett.

One of the few drawbacks to the vast attraction which this session has furnished, was to be found in the small proportion of its members which could be invited to the Lord Mayor's banquet, but this grievance has been minimized by the magnificent *conversazione*, at the Guildhall, which the Corporation of London provided, at an expense of two thousand pounds sterling, in honor of the Congress, at whose disposal no less than two thousand five hundred tickets were placed. This Guildhall *conversazione* proved an even more stupendous success than that at South Kensington, and last night the guests of the Corporation found that interesting old Guildhall most completely adapted for their accommodation and entertainment. The arrangements, which were on a grandly comprehensive scale, displayed the resources of the library and museum, which were extensively supplemented by private aid, and by loans of plate from the various civic guilds. In the temporary ante-chamber, the guests were received by the chief magistrate and the lady who so gracefully takes part in dispensing the hospitalities of the present mayoralty. All, or nearly all, those distinguished physicians and surgeons who have taken part hitherto in the doings of

the Congress were present; and, as a great many of the foreign members are accompanied to England by their wives or daughters, the Guildhall and the many chambers pertaining thereto were filled by an animated assemblage, one-half of which was feminine. At the height of this cheerful reunion, the many tongues that were heard together sufficiently justified the term "International." French, German, Spanish, Dutch, Italian, Scandinavian, and English were all at once audible; and it was evident that taciturnity had been expelled from a gathering which found everywhere something fresh to talk about. There was, moreover, need of speaking in a louder tone than usual; for the hum around the talkers was like a strong flood of sound, overpowering single currents and eddies. In the Guildhall itself, the Coldstream Guards band played the music of nearly as many countries as were represented in the crowd of visitors. The same thing was done by the Royal Artillery band, while in the Council Chamber a vocal and instrumental concert was given by the students of the Guildhall School of Music.

Among the objects exhibited in the library, besides the ancient charters, books, antiquities, maps, manuscripts, autographs, and curious and early-printed books, were the city jeweled sceptre, tendered to sovereigns on the occasion of royal visits, and the city purse. The former of these historical symbols displays a curious mixture of dates, having been repaired, altered, and remodeled at widely different periods. Most ancient of the portions thus brought together by time are the crystals and an alloy of gold which has not been used in art manufacture since the Conquest. As for the purse, which typifies the city's wealth, it is of gold and silver embroidery, less venerable, but still as old as the first of the Tudor kings. In the Museum were exhibited a collection of Roman, Romano-British, Saxon, and mediæval objects of all descriptions found in the city of London. In the reading-room next the library a selection of the Corporation plate, chronologically arranged, and lent by the Lord Mayor, was accompanied by similar loans from the Armorers' and Braziers', the Barber-Surgeons', the Sadlers', the Skinners', the Clothworkers', the Distillers', the Goldsmiths', the Fishmongers', the Haberdashers', the Merchant Tailors', the Leather Sellers', the Stationers', and seventeen or eighteen other companies. In the Guildhall, interspersed with palms, ferns, and flowers, which everywhere made a pleasantly varied show, sculptures and choice specimens of Doulton ware found places in which they appeared to advantage. The electric lighting was everywhere effective; but the chief because the newest attraction in this general system of illumination was afforded by the storage of electricity, this being the method employed to light the committee-room and the staircase. Crystal drops, containing each a brilliant and at the same time soft and mellow light, resembling in quality the flame of a wax candle, but much more powerful than a single light of this nature would be, had been charged at the West End of London, and taken to the Guildhall, where they hung magically on the circular rim of a chandelier. This light has the peculiar charm so much desired by wearers of diamonds and other precious stones, causing, as it does, those ornaments to flash from all their facets rays of prismatic splendor. Refreshments were served in the Exchequer Court, the South Court, and the Crypt, a plan being furnished with every handbook, enabling the guests to circulate throughout all the

mazes of the building, and to find those places without difficulty. In short, all the arrangements were admirable; and if any anxiety had been felt, in expectation of undue pressure, it was relieved by the smoothness with which the whole entertainment went, from first to last.

One hears on all sides of the satisfaction which the members attending the various sections feel at the character of the work which is daily done therein, but the vast extent of which defies useful commentary until the volume of Transactions shall appear.

The practice of exhibiting, at stated times, groups of living specimens illustrative of rare forms of disease proves most valuable.

The members of the London School of Medicine for Women, who have been debarred participation in the work of the International Medical Congress, have manifested a graceful magnanimity in their resolution not to hold aloof from the hospitalities of this important gathering. Their house in Henrietta Street, Brunswick Square, rejoices in a large, old-fashioned — and therefore highly fashionable — garden; and yesterday this oasis in the desert of the west-central district was beautified with tasteful devices of flags and festoons, as also with a profusion of flowers from all parts of the country. From five till seven o'clock a company, including many distinguished people, enjoyed the pleasures provided for their entertainment; and the beauty of the weather, tempered in its heat by a delicious breeze, completed the success of this elegant reception. Among those who were present may be named the Dowager Countess of Buchan, the Right Hon. Henry Fawcett, M. P., and Mrs. Fawcett, Professor Ray Lankester, Sir Arthur and Lady Hobhouse, Dr. Carpenter, Professor Landolt, Professor Busch, Dr. Elizabeth Blackwell, Mrs. Garrett Anderson, M. D. Miss Ker, M. D. Miss MacLaren, M. D. Mrs. Westlake, Dr. A. C. Hépites, Professor MacAlister, Professor Struthers, Dr. Fanvel, Dr. G. De Mussy, Mr. Luther Holden, Professor Binz, Mrs. Foggo, Dr. Annie Barker, and Mrs. Thorne, the honorary secretary of the institution. A band played a miscellaneous selection of music, Handel's triumphal march, "See, the conquering hero comes," being introduced as Miss Prideaux, Mrs. Scharlieb, and Miss Tomlinson, who, on Thursday, passed first M. B., in the London University examination, entered together. The foreign guests, some of whom visited the adjacent Royal Free Hospital, with which the school is in association, were unanimous in their expression of the pleasure which this garden party afforded them.

Dr. Billings' address, which was looked forward to with the highest anticipations, was listened to yesterday afternoon by a vast and distinguished audience, who were at once interested, instructed, and delighted. At its close the president of the Congress thanked Dr. Billings in a brief but eloquent and beautiful speech, which was of additional interest as recording some incidents in the early professional struggle of the justly exalted and greatly beloved speaker. To-morrow, Sunday, a large party will be the guests of Sir Trevor Lawrence at his picturesque country seat. Special services will be held in the cathedrals here, and arrangements have been made for those who wish to visit Kew Gardens, which offer natural beauties scarcely second to those afforded by old Druid Hill Park, Baltimore, but very inadequately appreciated by the vast majority of Londoners proper.

This Congress will close on Tuesday, that is to say, on the very day of the formal opening of the annual meeting of the British Medical Association, which will this year be held in the beautiful Isle of Wight, where, from the unusual attraction afforded by the recent discovery of a buried Roman villa in good preservation, there will be a second reunion of very many who are this week too busy in London to fully avail themselves of the opportunity for personal intercourse which hosts and guests covet alike.

LETTER FROM PORTLAND.

MEDICAL MATTERS IN MAINE. — MEDICAL LEGISLATION. — AN ANATOMICAL BILL. — THE STATE LUNATIC ASYLUM. — A CHARTER FOR AN ECLECTIC MEDICAL COLLEGE. — THE TWENTY-NINTH ANNUAL MEETING OF THE MAINE MEDICAL ASSOCIATION. — THE MEDICAL SCHOOL OF MAINE.

MR. EDITOR, — In reviewing the course of medical events in Maine during the past twelvemonth, we find several items of more than ordinary interest. Foremost among them is the action of the legislature with reference to an anatomical bill. As the readers of the JOURNAL are doubtless aware, it has been practically impossible to obtain dissecting material in this State in any lawful way. Every subject has been secured by some clandestine process, and every year new difficulties have arisen in the path of the student or practitioner who desired to acquire or revive his knowledge of human structure. For many years the Maine Medical Association has occasionally made systematic efforts to induce our lawmakers to pass a bill which should do even scant justice to the profession, but in vain. There has never been any considerable difficulty in convincing a majority of the legislators of the necessity of dissection and the propriety of such a law as was prayed for, but the trouble lay in persuading them to run the risk of incurring the displeasure of their constituents, as they were very certain to do if they voted for any such enactment. It has often been said, and apparently with truth, that no advocate of an anatomical bill was ever again allowed to represent his town at the capitol; indeed, the odium which has attended the defense of such a measure has sometimes amounted to complete social and political ostracism, and has fairly driven men from the State. Nothing daunted, however, this Association returned to the struggle this year, under the leadership of its president, Dr. Greene, of this city, and by pursuing a sagacious and methodical plan of attack, succeeded in securing the passage of a bill, which, although imperfect and weighted with difficult conditions, is a gain over its predecessor. The device employed was to have every senator and representative approached before the meeting of the legislature, and, if possible, pledged to support the measure, so that, it was hoped, when the bill was presented, it would go through the several steps to its final passage without discussion. But, as almost always happens, some irrepressibles wanted to display their eloquence and the jealousy with which they guarded the interests and feelings of the dear people, and a hot discussion was at once precipitated upon the commons of the commonwealth. Objections were raised and amendments offered, and for a time it looked as if everything was lost; but the bill, greatly mod-

fied and weakened, was squeezed through, and, after long and anxious delay, received the signature of the governor. This "act for the promotion of medical science" is in substance as follows: —

Section first provides a punishment of not more than five years' imprisonment or fine not exceeding three thousand dollars for the having in possession, for anatomical purposes, any part of the body of a person dying in Maine, unless obtained under this act or a certain previous statute which never has furnished and never will furnish a subject.

According to section second, any inhabitant of Maine who wants to be dissected when he is dead may be accommodated, if no relative or family connection objects; that is to say, if his second-cousin's wife, whom he would not knowingly have gratified in his lifetime, chooses out of spite to protest against the dissection, the law utterly disregards the last testament of a departed citizen as far as it relates to the disposal of his body, the one thing before all others which he while living considered, in common with everybody else, was most peculiarly his own.

The third section provides that unclaimed bodies shall be subject to the use of the Medical School of Maine, which may deliver its surplus cadavera to any regular physician for anatomical purposes in this State.

In the fourth section are prescribed rules for notifying the school of the existence of bodies and for their delivery to the proper persons, and requires a hundred dollars bond that each carcass shall be decently buried after it has fulfilled its scientific mission. Thirty dollars fine is to be paid for the violation of the provisions of this section.

In order to satisfy the squeamishness of certain legislators, an act additional was passed immediately afterwards, providing that every dead body shall be embalmed as soon as it is received at the school, and there kept intact for thirty days; and also that an identifying description be kept in a special book. Any of the corpse's family may claim and remove it at any time within the month.

It will be seen that the new law does not make it exactly an easy proceeding to secure a subject for dissection. Whether or not any can be obtained is a serious question which is as yet unsolved. No attempt to test its workings is to be made until the warm months are gone, and we must wait until autumn for developments. One would think that the original act was sufficiently stringent; it is feared that the additional statute is so exacting as to be a complete paralyzer.

Another piece of legislative work in which the medical profession, as well as the community generally, took a good deal of interest, was the investigation of the Maine Insane Hospital. For some time rumors had been circulated to the effect that serious abuses were allowed in the institution, and the trustees requested an official investigation. A committee of the legislature held sessions on twenty different occasions, inviting testimony from all concerned; a few direct and specific charges of mismanagement were made and patiently investigated, and the committee presented three reports. That of the majority is an eager and fulsome exculpation of the officers, and represents the hospital to "be fully up to the highest standard of efficiency in all its departments." One of the minority reports agrees in most points with that of the majority, but recommends that all additions to the hospital shall be on the cottage plan, and that a female physician be employed. The

second minority report, presented by a homœopathic physician, represents that abuses have occurred, and makes various suggestions, some of them very sensible, looking to the improvement of the management. Naturally there are diverse opinions in the profession about the matters involved in the controversy; but probably the large majority of physicians who have taken the pains to look into them would agree substantially that it is unfortunate that party politics should influence the appointment and tenure of the trustees, as at present; that these officers ought to be selected solely with reference to their peculiar fitness for the position; that four hundred and fifty insane people are too many to be treated with the best results in one institution; that, if this number is to be congregated in one place, more than three physicians are required to minister to their medical wants; and that there is room for very decided improvement in the present superintendency. This last point, as is well known, has been discussed for years in the board of trustees and in the governor's council, with a very general agreement of opinion. Nobody considers the superintendent a bad, dishonest, inactive, or cruel man; his personal character has never been assailed; but he has reached an age when a certain rigidity of mental structure renders most men incapable of adopting new methods, and, in addition, has a physical infirmity which must seriously diminish his capacity for usefulness in this position. There is need of new blood in the place, and unless a change is made before long it will take more than the ungutted of a flattering legislative report to soothe the dissatisfaction which is constantly growing among those who have occasion to be especially interested in the institution. It is not believed that the hospital is in particularly bad condition; but it would be a matter of humanity and of State pride to have it in a conspicuously good one. There is no reason why the most approved methods of treatment should not be pursued here as well as elsewhere; it is quite as possible for Maine to make valuable contributions to the scientific study of insanity as for most other States; but we look in vain to Augusta for light on the subject.

This year's legislature was applied to for a charter for an eclectic medical college to be located in Lewiston. As originally framed, the bill was so worded that, if it had become a law, we should probably have had a diploma-mill in this State whose operations might have rivaled those of the notorious Philadelphia establishments. But fortunately there were a few medical men in the legislature who presented the case so luminously to their fellows that essential alterations were made in the proposed charter, and the amount of damage of which the concern will be capable is greatly diminished. As now constituted, the law requires of every would-be eclectic M. D. the successful passage of as severe a public examination in the fundamental branches of medicine as the candidates in the Medical School of Maine are subjected to before they are allowed to graduate.

As it is improbable that members of the regular profession will attend the examinations, the faculty and friends of the institution will have everything all their own way, and the amount of protection which society will experience is likely to be rather small. But it has more appearance of decency, at all events, to have proper regulations, even if they are never obeyed; and, in case of especially flagrant abuse, there is something definite to work from.

The Maine Medical Association held its twenty-ninth annual session in this city in June. The president's address was a very timely denunciation of private preceptorship, and it is devoutly to be hoped that every member of the profession will take its lesson to heart. There would then quickly be a selecting-out of the poorly qualified students, and those who were able to stand the tests would be obliged to abandon their desultory ways and betake themselves to earnest, systematic work. But he who looks for a sudden and radical change is doomed to a bitter disappointment. The discussion is not new, even in this Association. Nine years ago Professor C. F. Brackett devoted the annual oration to the subject of methods in medical education, and took precisely the same ground; but, although the argument was thoroughly convincing and unanswerable, and was presented in a delightfully trenchant style, there has been no noticeable decrease in the number of private preceptors, no marked increase in the attendance at the school for instruction. The habit of taking students is so firmly fixed, and it is so convenient and gratifying to many men's complacency to have pupils about their offices, that not a few appeals will have to be made before the vicious system is replaced by one which is rational. It is so easy to applaud an eloquent speech which denounces our shortcomings, and also to find an excuse for disregarding its teachings when we have occasion to practice them! Oh, for some first-class man who, in this cause, would be willing to make himself disagreeable to his medical brethren individually, and plead with them concerning their iniquities, even as doth an elder at a camp-meeting; what a revival in medical education there would be, and what an uplifting from the gall of bitterness and the sin of private preceptorship!

On the first day of the Association's meeting, a motion was made to exclude from the reports with which the daily papers were furnished all mention of cases and medical papers, on the ground that it was inconsistent for the society to do for any member what it would regard as unseemly if done by the member for himself; but the movement received almost no support, and did not prevail. When next charges are preferred against some member for violating the code by inserting accounts of his skill in the non-medical press, the censors will have a delicate task to steer between the rocks of the ethics and the gulf of the Association's liberality without wrecking their craft.

A rule was adopted by which all nominations for honorary membership must take the same course as applications for active membership. Hitherto it has been the practice to propose from the floor without warning, so that a nomination was practically equivalent to an election; for to rise and publicly oppose a man's admission is an ungracious task which no one covets and few have the moral hardihood to perform. The result has been an altogether too lavish distribution of the society's favors; but, in future, they will be bestowed with more discrimination, and will, consequently, be of greater value.

The reports of cases and papers were of ordinary interest, and excited considerable discussion. Dr. A. K. P. Meserve, of Buxton, York County, was chosen president, and the other officers were in the main re-elected. An entire evening was spent in a social way, an excellent banquet being provided at the expense of the society, and many ladies accompanying the mem-

bers. This entertainment was favorably commented on, but as no arrangement was made for its repetition next year the ill-natured are afforded a chance to suppose that there was a bee in even that honey.

In one respect the meeting was the most enjoyable for years. The discussion of individual grievances, which has often wasted the time and disgusted those who prefer to have the censors settle quarrels outside the public meetings, was conspicuous by its absence; and it is quite certain that any attempt to revive the former troublesome method would have been promptly crushed by the united opposition of a large number of the most influential men in the society.

The delegates to the Medical School of Maine reported it to be in an extraordinarily flourishing condition, the number of students exceeding that in any preceding year, and their quality being a noticeable improvement on that of former classes. In every respect the School maintains its fair reputation. The report on the Portland School for Medical Instruction was also highly commendatory.

PORTLAND, August 10, 1881.

HAPPY DOCTORS.

OFFICIAL PROGRAMME OF THE INTERNATIONAL MEDICAL CONGRESS.

First day. Grand banquet. Interesting experiments with various wines. Confidential exchange of experience after the third bottle.

Second day. Grand *déjeuner*. Surgical operations on cold fowls and raised pies. General investigation of "mixing." Valuable results obtained by taking a combination of champagne, sherry, port, claret, pale ale, and chartreuse vert.

Third day. Garden party. Examination of the action of the muscles in the game of lawn tennis. Close study of strawberries and cream and champagne cup. Supper experiment at the Albion. Extempore lecture upon the benefits to be derived by taking whisky and water internally before retiring to bed.

Fourth day. Select dinner party of savants interested in food. Careful consideration of the effect upon the system of turtle soup, curried whitebait, canvas-back ducks, and an entirely new and original with-you-please pick-me-up made of sardines, olives, truffles, cayenne pepper, tomatoes, capers, herring roes, fowls' livers, and tarragon vinegar. Human capacity for absorbing champagne in extra large doses practically tested. After the experiments a long consultation with the police.

Fifth day. Psychological picnic. Exercise of the nerve power of the lower limbs to the sounds of a military band. Interesting operation of a quadrille, a polka, and a waltz. Day finished with a scientific supper. Preparations of different kinds of meat. Practical lectures upon the anatomy of the fowl, the duck, and turkey. Experiments in wine temperature. Claret seventy and champagne four degrees below zero. Perambulating difficulties and optical delusions. Exercise of the vocal chords. Subject: "We won't go home till morning."

Sixth and last day. All the foreign doctors ill in bed, sending for all the English doctors. General prescription: Large doses of soda water! — *From Punch.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 19, 1881, TO AUGUST 26, 1881.

McKEE, J. C., major and surgeon. By direction of the Secretary of War the leave of absence on surgeon's certificate of disability granted in S. O. No. 177, August 19, 1880, is extended three months. Par. 3, S. O. 189, A. G. O., August 18, 1881.

WEBSTER, WARREN, major and surgeon. Granted leave of absence for twenty (20) days. S. O. 149, Dept. of the East, August 24, 1881.

McCLELLAN, ELY, major and surgeon. Relieved from duty in the Department of the Columbia, and to proceed to Louisville, Ky., and report by letter, upon his arrival there, to the Surgeon General. S. O. 193, A. G. O., August 23, 1881.

WOODHULL, A. A., major and surgeon. Relieved from duty in the Department of California, and to proceed to New York city, and report by letter, upon his arrival there, to the Surgeon General. S. O. 193, A. G. O., August 23, 1881.

BROWN, HARVEY E., major and surgeon. Relieved from duty in the Department of Texas, and to proceed to New York city, and report by letter, upon his arrival there, to the Surgeon General. S. O. 192, A. G. O., August 22, 1881.

HUBBARD, VAN BUREN, major and surgeon. The leave of absence granted him in S. O. 169, A. G. O., August 26, 1881, is extended eight months with permission to go beyond sea. S. O. 193, A. G. O., August 23, 1881.

DICKSON, J. M., captain and asst. surgeon. Relieved from duty in the Department of the Columbia, and to proceed to New York city, and report by letter, upon arrival there, to the Surgeon General. S. O. 193, A. G. O., August 23, 1881.

COWDREY, S. G., captain and asst. surgeon. Relieved from duty in the Department of the Platte, and to proceed to New York city, and report by letter, upon arrival there, to the Surgeon General. S. O. 193, A. G. O., August 23, 1881.

SHANNON, W. C., captain and asst. surgeon. Relieved from duty at Fort D. A. Russell, Wyo., and assigned to duty as post surgeon at Fort Thornburgh (junction of White and Green rivers), Utah. S. O. 81, Department of the Platte, August 22, 1881.

GARDNER, E. F., asst. surgeon. Upon being relieved by asst. surgeon Bushnell, is relieved from duty in Department of Dakota, and will comply with Par. 3, S. O. 171, A. G. O. S. O. 150, Department of Dakota, August 17, 1881.

ROBINSON, SAM'L Q., 1st lieutenant and asst. surgeon. Relieved from duty in the Department of Dakota, and to proceed to Boston, Mass., and report by letter, upon arrival there, to the Surgeon General. S. O. 193, A. G. O., August 23, 1881.

POWELL, J. L., 1st lieutenant and asst. surgeon. Granted leave of absence for one month, to take effect as soon as the medical director of the department shall have completed certain inspection duty at Fort Stockton, Texas. S. O. 99, Department of Texas, August 13, 1881.

BUSHNELL, G. E., asst. surgeon. Relieved from temporary duty at Fort A. Lincoln, D. T., to take effect on his arrival at that post, and to proceed to Fort Ellis, M. T., and report to the commanding officer for duty at that post, to relieve asst. surgeon E. F. Gardner. S. O. 150, Department of Dakota, August 17, 1881.

The tenth semi-annual meeting of the New Hampshire Medical Society will be held at "The Wentworth," Newcastle, N. H., on Tuesday, September 6, 1881.

BOOKS AND PAMPHLETS RECEIVED. — A Paper on the Relations of the Minute Blood-Vessels to the Fat Cells in the Fascia of the Cat's Neck, illustrated by Photographs and Drawings, read before the Richmond Microscopical Society. By Wm. R. Weisinger, M. D., of Manchester, Va. Richmond, Va. Johns & Goosley. 1881.

Post-Partum Atrophy of the Uterus. By Walter Coles, M. D. St. Louis. (Reprint.)

A Treatise on Comparative Embryology. By Francis M. Balfour, LL. D., F. R. S. In two Vols. Vol. II. London. MacMillan & Co. 1881.

A System of Surgery, Theoretical and Practical, in Treatises by various Authors. Edited by T. Holmes, M. A. Cantab. Surgeon and Lecturer on Surgery at St. George's Hospital. First American from Second English Edition. Thoroughly Revised and much Enlarged by John N. Packard, M. D. Assisted by a large corps of the most eminent American Surgeons. In three Volumes, with many Illustrations. Vol. I. Philadelphia. Henry C. Lea's Son & Co. 1881. (A. Williams & Co.)

INTERNATIONAL MEDICAL CONGRESS,
LONDON, 1881.

AN ADDRESS ON OUR MEDICAL LITERATURE.

BY JOHN S. BILLINGS, M. D.,
Surgeon United States Army.

WHEN I was surprised by the honor of an invitation to address this Congress, my first thought was that it must be declined, for the simple but sufficient reason that I had nothing to say that would be worth occupying the time of such an assemblage as it was evident this would be. But while thinking over the matter, and looking absent-mindedly at a shelf of catalogues and a pile of new books and journals awaiting examination, it occurred to me that, perhaps, some facts connected with our medical literature, past and present, from the point of view of the reader, librarian, and bibliographer, rather than from that of the writer or practitioner, might be of sufficient interest to you to warrant an attempt to present them, and—the wish being probably father to the thought—I decided to make the trial.

When I say “our medical literature,” it is not with reference to that of any particular country or nation, but to that which is the common property of the educated physicians of the world as represented here to-day—the literature which forms the intranational and international bond of the medical profession of all civilized countries, and by virtue of which we, who have come hither from the far west and the farther east, do not now meet, for the first time, as strangers, but as friends, having common interests, and, though of many nations, a common language, and whose thoughts are perhaps better known to each other than to some of our nearest neighbors.

It is usual to estimate that about one thirtieth part of the whole mass of the world's literature belongs to medicine and its allied sciences. This corresponds very well to the results obtained from an examination of bibliographies and catalogues of the principal medical libraries. It appears from this that our medical literature now forms a little over 120,000 volumes properly so called, and about twice that number of pamphlets, and that this accumulation is now increasing at the rate of about 1500 volumes and 2500 pamphlets yearly.

There are at the present time scattered over the earth about 180,000 medical men, who, by a liberal construction of the phrase, may be said to be educated; that is, who have some kind of a diploma, and for whose edification this current medical literature is produced. Of this number about 11,600 are producers of, or contributors to, this literature, being divided as follows: United States, 2800; France and her Colonies, 2600; the German Empire and Austro-Hungary, 2300; Great Britain and her Colonies, 2000; Italy, 600; Spain, 300; all others, 1000. These figures should be considered in connection with the number of physicians in each country; but this I can only give approximately as follows: United States 65,000; Great Britain and her Colonies, 35,000; Germany and Austro-Hungary, 32,000; France and her Colonies, 26,000; Italy, 10,000; Spain, 5000; all others, 17,000.

It will be seen from these figures that the number of physicians who are writers is proportionately greatest in France and least in the United States. As regards France, this is largely due to the requirement of

a printed thesis for graduation, which of itself adds between six and seven hundred annually to the number of writers.

The special characteristics of the literature of the present day are largely due to journals and transactions, and this is particularly true in medicine. Our periodicals contain the most recent observations, the most original matter, and are the truest representations of the living thought of the day, and of the tastes and wants of the great mass of the medical profession, a large part of whom, in fact, read very little else. They form about one half of the current medical literature, and in the year 1879 amounted to 655 volumes, of which the United States produced 156; Germany, 129; France, 122; Great Britain, 54; Italy, 65; and Spain, 24. This is exclusive of journals of pharmacy, dentistry, etc., and of journals devoted to medical sects and isms.

[Tables were here appended, showing by nations the number of works and journal articles upon the practice of medicine, surgery, obstetrics, hygiene, etc., for the years 1879 and 1880. A marked increase has occurred in the literature of hygiene during the last two years, and this especially in England, France, Germany, and the United States. The literature of diseases of the nervous system, of ophthalmology, otology, dermatology, and gynecology is also increasing more rapidly than that of the more general branches.]

These figures represent merely the opinions of an individual—first as to whether each treatise or pamphlet included in these statistics was worth noting, and second, as to how it should be classed. Had everything been indexed the figures, for journal articles at least, might have been nearly doubled; while, if the selection had been made by a more severe critic, they might have been reduced one half.

Be that as it may, I think we can take them as indicating certain differences in the direction of work of the medical authors of the great civilized nations of the earth; but they must be considered as approximations only; and the statistical axiom must be remembered, that the results obtained from a large number of facts are applicable to an aggregate of similar facts but not to single cases. There will be a certain number of medical books and papers printed next year, just as there will be a certain number of children born; and as we can within certain limits predict the number of these births and the proportion of the sexes, or even of monsters, so we can within certain limits predict the amount and character of the literature that is yet to come, the ideas that are yet unborn. The differences are due to race, political organization, and density of population. As Dr. Chadwick has pointed out, in speaking of the statistics of obstetric literature, one of the chief causes of the multiplication of medical societies is geographical. “In England it is possible for those who are specially interested in gynecology and obstetrics to attend the meetings of the Obstetrical Society of London, whereas in America the distances are so great that this is impossible.” Speaking broadly, we may say that at present Germany leads in scientific medicine both in quantity and in quality of product, and that the rising generation of physicians are learning German physiology. But the seed has gone abroad, and scientific work is receiving more and more appreciation everywhere.

Seven years ago, Professor Huxley declared that, if a student in his own branch showed power and origi-

nality, he dared not advise him to adopt a scientific career, for he could not give him the assurance that any amount of proficiency in the biological sciences would be convertible into the most modest bread and cheese. To-day I think he might be bolder, for such a fear would hardly be justifiable — at all events in America. — where such a man as is referred to could almost certainly find a place, bearing in mind the professor's remark that it is no impediment to an original investigator to have to devote a moderate portion of his time to giving instruction either in the laboratory or in the lecture-room.

I have said that, as regards scientific medicine, we are at present going to school to Germany. This, however, is not the case with regard to therapeutics, either external or internal, in regard to which I presume that the physicians of each nation are satisfied as to their own preëminence. At all events it is true that, for the treatment of the common diseases, a physician can obtain his most valuable instruction in his own country, among those whom he is to treat. Just as each individual is in some respects peculiar and unique, so that even the arrangement of the minute ridges and furrows at the end of his forefinger differs from that of all other forefingers, and is sufficient to identify him; and as the members of certain families require special care to guard against hæmorrhage, or insanity, or phthisis, so it is with nations and races. The experienced military surgeon knows this well; and in the United States, which is now the great mixing ground, illustrations of race-peculiarities are familiar to every practitioner.

The separation of biological study from practical medicine, which has of late years become quite marked in the literature of the subject, has its advantages and disadvantages. Thus far the former have far outweighed the latter, and both the science and the art of medicine have been promoted thereby. But are not the physiologists, or, as I believe they prefer to be called, the biologists, separating themselves too completely from medicine for the best interests of their own science, in that they are neglecting human pathology? In our hospital wards and among our patients nature is continually performing experiments which the most dexterous operator cannot copy in the laboratory, — she is, as Dr. Michael Foster says, "a relentless and untrammelled vivisector, and there is no secret of the living frame which she has not, or will not, at some time or place, lay bare in misery and pain."

Now while it is true that Dr. Foster, in his address before the British Medical Association last year (which address is the clearest exposition of the aims of the physiology of the present day that I have seen), insists upon the fact that all distinctions between physiology and pathology are fictitious, and declares that attempts to divide them are like attempts to divide meteorology into a science of good and a science of bad weather, his conclusion that the pathologist should be trained in methods of physiological investigation seems to me to be only a part of the truth. The tacit assumption is that all, or at least the most important, phenomena of human disease may be reproduced in the physiological laboratory. If this were only true, what a tremendous stride would have been taken towards making medicine a science. Unfortunately it is not so. Many of the most interesting of these phenomena — the most interesting because as yet the most unexplainable — can only be observed in the sick man himself. Nor have

the physiologists as yet made much use of that field which ought to be specially inviting to them — namely, comparative pathology; although the literature of the present time already indicates that a change has begun in this respect.

While it is true that to the graduate of thirty years ago much of the physiological literature of the present day is in an unknown tongue, it is also true that the physiologist of the present, who confines himself to laboratory work, will find himself distanced by the man who keeps his clinical and pathological studies and his experimental work well abreast.

The increase in both the amount and value of the literature of the several specialties in medicine is readily seen by a comparison of recent catalogues and bibliographies with those of twenty or thirty years ago, and this increase still continues at a greater rate than prevails in the more general branches. There are great differences of opinion as to the relative value of this increase, and as to its future effect upon the profession; but there can be no doubt as to the fact. There must be specialties and specialists in medicine, and the results will be both good and evil; but the evils fall largely upon those specialists who have an insufficient general education, — who attempt to construct the pyramid, their knowledge, with the small end as a foundation. It has been said by Dr. Hodgen that "in medicine a specialist should be a skilled physician and something more, but that he is often something else — and something less." There is truth in this; truth which the young man will do well to consider with care before he begins to specialize his studies; but, on the other hand, it is also true that the great majority of men must limit their field of work very much and very clearly if they hope to achieve success. The tool must have an edge if it is to cut. It is by the labor of specialists that many of the new channels for thought and research have been opened; and if the flood has sometimes seemed to spread too far, and to lose itself in shallow and sandy places, it has nevertheless tended to fertilize them in the end.

My experience would show that these statements do not apply to medical books. The folios and quartos of three and four hundred years ago seem to have had great capacity for resistance to ordinary destructive forces. Perhaps much of this is due to the fact that they are not usually injured by too much handling or perusal. True, they are gradually becoming rarer; but, at the same time, by means of properly organized libraries, they are becoming more accessible to all who wish to really use them, and not merely to collect and hide them away. They drift about like the sea-weed, but the survivors are gradually finding secure and permanent resting places in the score of great collections of such literature which the world now possesses. At present, the currents of trade are carrying them in relatively large numbers to the United States, where medical collectors and specialists are among the best customers of the antiquarian booksellers of Europe. I could name a dozen American physicians who have given to European agents almost unlimited orders for books relating to their several specialties, and upon their shelves may be found books of the 15th and 16th centuries, which may be properly marked as "rarissimi."

Not that the rarest books are by any means the oldest. The collector who seeks to ornament his shelves with the *Rose* of John of Gaddesden, or the *Lily* of Bernard de Gordon, the first folios of Avicenna or of

Celsus, or almost any of the eight hundred medical incunabula described by Hain, will probably succeed in his quest quite as soon as the one who has set his heart on the first editions of Harvey or Jenner, the American tracts on inoculation for small-pox, or complete files of many of the journals and Transactions of the present century.

Whatever may be the chosen line of the book-collector, he is the special helper of the public library, and this whether he intend it or not. In most cases his treasures pass through the auction-room, and sooner or later the librarian, who can afford to wait, will secure them from further travel. Thanks to the labors of such collectors, I think it is safe to say, — what certainly would not have been true twenty years ago, — that if the entire medical literature of the world, with the exception of that which is collected in the United States, were to be now destroyed, nearly all of it that is valuable could be reproduced without difficulty.

What is to be the result of this steadily increasing production of books? What will the libraries and catalogues and bibliographies of a thousand, or even of a hundred, years hence be like, if we are thus to go on in the ratio of geometric progression which has governed the press for the last few decades? The mathematical formula which would express this, based on the data of the past century, gives an absurd and impossible conclusion; for it shows that, if we go on as we have been going, there is coming a time when our libraries will become large cities, and when it will require the services of every one in the world, not engaged in writing, to catalogue and care for the annual product. The truth is, however, that the ratio has changed, and that the rate of increase is becoming smaller. In western Europe, which is now the great centre of literary production, it does not seem probable that the number of writers or readers will materially increase in the future; and it is in America, Russia, and southern Asia, that the greatest difference will be found between the present amount of annual literary product and that of a century hence.

The analogies between the mental and physical development of an individual, and of a nation or society, have been often set forth and commented on; but there is one point where the analogy fails as regards the products of mental activity, — and that is, that as yet we have devised no progress for getting rid of the exuvia. Growth and development in the physical world imply the changes of death as well as of life — that with the increase of the living tissues there shall also be the excretion and destruction of dead, outgrown, and useless matters which have had their day and served their purpose. But *litera scripta manet*. There is a vast amount of this effete and worthless material in the literature of medicine, and it is increasing rapidly. Our literature is in fact something like the inheritance of the golden dustman, but with this important difference, namely, that when the children raked a few shells or bits of bone from the dustman's heap, and, after stringing them together and playing with them a little while, threw them back, they did not thereby add to the bulk of the pile; whereas our preparers of compilations and compendiums, big and little, acknowledged or not, are continually increasing the collection, and for the most part with material which has been characterized as "superlatively middling, the quintessential extract of mediocrity." A large medical library is in itself discouraging to many inquirers, and I have become quite

familiar with the peculiar expression of mingled surprise, awe, and despair, which is apt to steal over the face of one not accustomed to such work, when he first finds himself fairly in the presence of a mass of material which he wishes to examine for the purpose of completing his ideal bibliography of — let us say epilepsy, or excision, or the functions of the liver.

Let such inquirers, as well as those who regret that they have no access to large libraries, and must therefore to rely on the common text-books and current periodicals for bibliography, console themselves with the reflection that much the larger part of all of our literature which has any practical value belongs to the present century, and, indeed, will be found in the publications of the last twenty years.

There are a few medical books written prior to 1800 which every well educated man should — I will not say read, but — dip into, such as some of the works of Hippocrates and Galen, of Harvey and Hunter, of Morgagni and Sydenham; but this is to be done to learn their methods and style rather than their facts or theories, and by the great majority of physicians it can be done with more profit in modern translations than in the originals. The really valuable part of the observations of these old masters has long ago become a part of the common stock, and the results are to be found in every text-book.

If, perchance, among the dusty folios there are stray golden grains yet ungleamed, remember that just in front are whole fields waiting the reaper. There is not, and has not been, any lack of men who have the taste and time to search the records of the past; and the man who has opportunities to make experiments or observations for himself wastes his time, to a certain extent, if he try to do bibliographical work so long as he can get it done for him. He wishes to know whether this problem has been attacked before, and with what result — whether there are accounts of any other cases like the one he has in hand. In ninety-nine instances out of a hundred, if the answer to these questions be not given in the current text-books or monographs, it is not worth prolonged search by the original investigator. Yet he should know how to make this search, if only to enable him to direct others; and it is for this reason that a little acquaintance with bibliographical methods of work ought to be obtained by the student.

You will perhaps pardon me for taking as an illustration the Index Catalogue of the Surgeon-General's Office in Washington, as being one with which I am familiar, and which I can venture to comment on without risk of its being thought that I wish to depreciate its value. Taking any given subject in medicine, it is possible for a fairly educated physician to obtain from this catalogue a large proportion of all the references which have any special value, and by so doing to save a vast amount of time and labor. On the other hand, he will find, when he comes to examine the books and articles referred to, that at least one half of them are of no value so long as the other half are accessible, seeing that they are dilutions and dilatations, rehashes and summaries of the really original papers. If the seeker be in the library itself, this does not cause a great waste of time, as he can rapidly examine and lay aside those that do not serve his purpose. But if he be using this catalogue in another library, say here in London, the case is different. It is highly improbable that he will find in any other collection all the books referred to, and then comes the annoyance of

the doubt as to whether he may not be missing some very valuable paper. How is he to know whether or not Smith in his pamphlet on the functions of the pneumogastric has anticipated his own theory of its relations to enlarged tonsils? And in all such cases "*omne ignotum est pro magifico*." In a bibliography of the subject, prepared from the same material as the catalogue, he would either find no mention of Smith's paper, or, better still, a note that his paper is merely an abstract or compilation. The fact that he does not find Smith's book in the London library, nor any allusion to it in the best works on the subject, ought to induce him to ignore it altogether.

In proportion to the energy of the young writer, and his determination to not only note everything that has been written about his subject, but to carry out the golden rule of verifying all his references, he is apt to be led off from his direct research into the many attractive by-paths of quaint and curious speculation which he will find branching off on every side; and this danger must be guarded against, or he will find that he is wasting his time and energy in turning over chaff which has long ago been pretty thoroughly threshed and winnowed.

Do I seem to depreciate the value of the thoughts which our masters have left us, and which have furnished the foundations on which we build? — or to undervalue the importance of the great medical libraries in which are stored these thoughts? — or to speak slightly of the utility of the catalogues and indexes and bibliographies, without which such libraries are trackless and howling wildernesses? If so, I have said what I did not mean to say. The subject has been considered from the point of view of what used to be called the division of labor, but which now I suppose should be called evolution and differentiation; and this has been done because life is short and the art is long — with fair prospects of becoming longer. It is surely unnecessary for me to enter upon any panegyric of books or libraries. As Dr. Holmes says: "It is not necessary to maintain the direct practical utility of all kinds of learning. Our shelves contain many books which only a certain class of medical scholars will be likely to consult. There is a dead medical literature, and there is a live one. The dead is not all ancient, the live is not all modern. There is none, modern or ancient, which, if it has no living value for the student, will not teach him something by its necropsy. But it is with the live literature of his profession that the medical practitioner is first of all concerned."

In medicine, as in social science, we must depend for many facts upon the observation of conditions which occur very rarely, and which cannot be repeated at pleasure. I have already alluded to the importance of nature's vivisections to the physiologist; and a record of a case written a century ago may be just the link that is needed to correlate the results of his experiments of yesterday with existing theories. The case which at first seems unique and inexplicable both receives and furnishes light when compared with ancient records.

A science of medicine, like other sciences, must depend upon the classification of facts, upon the comparison of cases alike in many respects, but differing somewhat either in their phenomena or in the environment. The great obstacle to the development of a science of medicine is the difficulty in ascertaining what cases are sufficiently similar to be comparable; which difficulty, in its turn, largely due to insufficient and erroneous

records of the phenomena observed. This defect in the records is largely due, first, to ignorance on the part of observers; second, to the want of proper means for precisely recording the phenomena; and, third, to the confused and faulty condition of our nomenclature and nosological classifications.

Let us consider each of these points briefly. Very, very few are the men who can, by and for themselves, see and describe the things that are before them. Just as it took thousands of years to produce a man who could see, what now any one can see when shown him, that the star Alpha in Capricorn is really two separate stars, so we had to wait long before the man came who could see the difference between measles and scarlatina, and still longer for the one who could distinguish between typhus and typhoid. Said Plato, "He shall be as a god to me, who can rightly divide and define." Men who have this faculty — the "Blick" of the Germans — we cannot produce directly by any system of education; they come, we know not when or why, "forming a small band, a mere understanding of whose thoughts and works is a test of our highest powers. A single English dramatist and a single English mathematician have probably equaled in scope and excellence of original work in their several fields all the like labors of their countrymen put together."¹

But cannot we do something to increase the number of observers by telling them what to observe? It is probable that much may be accomplished in this direction provided that care be taken to limit the field. Manuals of "what to observe at the bedside and in the post-mortem room" are very well in their way, but can never be made to reach the great majority of the profession, nor would they be of much use if they did. If a few, a very few, distinct specific questions are brought to the attention of a general practitioner, he will often be on the alert for their answer. And it should be remembered that chance may present to the most obscure practitioner an opportunity for observation which the greatest master may never meet.

The great difficulty is to get such questions prepared. They must relate to matters that are just in the nebulous region between the known and unknown — to points not yet clear, but of which we know enough to make it probable that by observing in a definite direction they can be made clear; and to prepare them requires not only knowledge but a certain reaching out beyond knowledge. It usually happens that the man who has this faculty strives to answer his questions himself, and no doubt he can usually do it better than another. But much can be done towards defining and marking out what we do not know, and this has been a powerful aid to the progress of physiology in recent years.

I have had occasion to refer to this in speaking of Dr. Michael Foster's work on physiology, in each section of which an attempt is made to separate that which may be considered as proved from that which is merely probable; and thus almost every page becomes suggestive of work to be done.

Another example of what I mean will be found in a paper on the collection of data at necropsies by Professor H. P. Bowditch of Boston.² Taking the results of an investigation into the absolute and relative size of organs at different periods of life, and in connection

¹ Hes, "Mathematics in Evolution." Popular Science Monthly, 1876, vol. ix, p. 207.

² Trans. Mass. Med. Legal Soc., 1, 1880, p. 139.

with different morbid tendencies, recently published by Professor Beneke, of Warburg, Dr. Bowditch urges the securing as large a number as possible of such data, and selects certain of Professor Beneke's results for special inquiry; for instance, that the "cancerous diathesis is associated with a large and powerful heart, capacious arteries, but a relatively small pulmonary artery, small lungs, well developed bones and muscles, and tolerably abundant adipose tissue." It can hardly be doubted that those who read the papers of Professors Bowditch and Beneke would be induced to examine things which before would have had for them no interest, and therefore to make and record observations in pathological anatomy which otherwise would have been lost.

The second difficulty referred to, namely, the want of means for making accurate records, is one that is yearly growing less. It behooves us to be modest in our predictions as to what may be accomplished in the future towards the solution of our Sphinx's riddle. We see as through a glass darkly, and, except through the glass, in nowise; but at least we have made such progress that what we do see we can to a great extent so record that our successors yet unborn can also see; and it is owing to this fact that a part of the medical literature of the last quarter of the nineteenth century will be more valuable than all that has preceded it.

The word-pictures of disease traced by Hippocrates and Sydenham, or even those of Graves and Tronseau, interesting and valuable as they are, are not comparable with the records upon which the skilled clinical teacher of the present day relies. Yet how imperfect in many cases are even the best of these records as compared with what might be given with the resources which we have at our command. The temperature-chart has done away with the errors which necessarily follow attempts to compare the memory of sensations perceived last week with the sensations of to-day; and the balance and the burette enable us to estimate with some approach to precision the tissue-changes of our patients by the records of change in the excretions which they furnish; but we must still trust to our memory, or to the imperfect descriptions of what others remember, when we attempt to compare the results obtained on successive days by auscultation or percussion, although the phonograph and microphone strongly hint to us the possibility of either accurately reproducing the sounds of yesterday, or of translating them into visible signs, perhaps something like the dot and dash record of the telegraph code, which could then be given to the press, and so compared with each other by readers at the antipodes.

We are beginning to count the blood-corpuscles, and to use photomicrography, but we do not yet apply the latter process to the former so as to enable every reader to count for himself.

The connections of medicine with the physical sciences are yearly becoming closer, and the methods by which the sciences have been brought to their present condition are those by which progress has been, and is to be, made in therapeutics, as well as in diagnosis, or in physiological research. These methods turn mainly upon increasing the delicacy and accuracy of measurements; of expressing manifestations of force in terms of another force, or of dimension in space or time. The balance and the galvanometer, the microscope and the pendulum, the camera, the sphygmograph, and the thermometer, are some of the means by which investi-

gators, at the bedside and in the laboratory, are seeking to obtain records which shall be independent of their own sensations or personal equations; which shall be taken and used as expressing, not opinions, but facts; and with every addition to, or improvement in, these means of measurement and record, the field of observation widens, and new and more reliable materials are furnished for the application of logical and mathematical methods.

Upon the third difficulty which has been referred to, namely, our confused and defective terminology, I need not dwell. "Science," said Condillac, "is a language well made;" and though this is far from being the whole truth, it is an important part of it. In examining medical reports and statistics, it is necessary to bear constantly in mind that, to understand many terms, you must know what the individual writer means by them. When, for example, we find in such statistics a certain number of death attributed to gastro-enteritis, or croup, or scrofula, we have to take into account the country, the period, and the individual author, in order to get even a fair presumption as to what is meant.

The three difficulties which have been referred to, although the most important, are by no means the only causes of the confusion and imperfection of our records.

Prominent among the minor troubles of the investigator are defective or misleading titles; and, in behalf of the readers and bibliographers of the future, I would appeal to authors, and more especially to editors, to pay more attention than many of them do to the matter of titles and indexes. The men to whom your papers are most important, and who will make the best use of them, provided they know of their existence, are for the most part hard workers, busy men, who have a right to demand that their library table shall be provided with properly prepared materials, and not with shapeless lumps.

The editors of transactions of societies, whether these are sent to journals or published in separate form, often commit numerous sins of omission in the matter of titles. The rule should be: that every article which is worth printing is worth a distinct title, which should be as concise as a telegram, and be printed in a special type. If the author do not furnish such a title, it is the editor's business to make it; and he should not be satisfied with such headings as *Clinical Cases*, *Difficult Labor*, *A Remarkable Tumor*, *Case of Wound*, with *Remarks*. The four rules for the preparation of an article for a journal will then be: (1.) Have something to say. (2.) Say it. (3.) Stop as soon as you have said it. (4.) Give the paper a proper title.

Some societies and editors do not seem to appreciate fully their responsibility for the articles which they accept for publication—a responsibility which cannot be altogether avoided by any formal declaration disclaiming it. This is due to the fact that, while the merits of a paper can usually be determined by examination, this is by no means always the case. In every country there are writers and speakers whose statements are received with very great distrust by those best acquainted with them. Supposing these statements to be true, the papers would be of much interest and importance; but the editor should remember that a certain number of readers, and especially those in foreign countries, have no clue to the character of the author, beyond the fact that they find his works in

good company. In medical literature, as in other departments, we find books and papers from men who are either constitutionally incapable of telling the simple literal truth as to their observations and experiments, although they may not write with fixed intention to deceive, or from men who seek to advertise themselves by deliberate falsehoods as to the results of their practice. Such men are usually appreciated at their true value in their immediate neighborhood, and find it necessary to send their communications to distant journals and societies in order to secure publication.

I presume that you are all familiar with the peculiar feeling of distrust which is raised by too complete an explanation. The report of a case in which every symptom observed, and the effect of every remedy given, is fully accounted for, and in which no residual unexplained phenomena appear, is usually suspicious, for it implies either superficial observation, or suppression or distortion of some of the facts. A diagrammatic representation is usually much plainer than a good photograph, but also of much less value as a basis for further work.

No fact is more familiar to this audience than the vast extent of the field of the science of to-day — so vast that few may hope to master more than a small part of it, and yet so closely connected that even the small part cannot be fully grasped without some acquaintance with a much wider field.

But little over a hundred years ago Haller in Göttingen was professor of anatomy, botany, physiology, surgery, and obstetrics, and lecturer on medical jurisprudence. At the same time he was writing one review a week, and summing up existing medical science in his *Bibliotheca*. To-day, any one of these branches requires all the time of the most energetic and learned of our contemporaries; but, on the other hand, the well-educated medical graduate of to-day could give Haller valuable instruction in each of the branches of which he was professor. It is also true, as I have pointed out, that our actual progress is by no means in proportion to the work done, nor as great as these merely quantitative statements would seem to make it.

Science has been termed "the topography of ignorance." From a few elevated points we triangulate vast spaces, enclosing infinite unknown details. We cast the lead and draw up a little sand from abysses we shall never reach with our dredges. If it is true that we understand ourselves but imperfectly in health, it is more signally manifest in disease, where natural actions, imperfectly understood, disturbed in an obscure way by half-seen causes, are creeping and winding along in the dark toward their destined issue, sometimes using our remedies as safe stepping-stones, occasionally, it may be, stumbling over them as obstacles.¹

In days of old, when the profession of medicine, or of a single medical specialty, was an inheritance in certain families, a large part of their knowledge, and the efficiency of their remedies, was thought to depend upon these being kept a profound mystery. Among the precepts of magic there was no more significant one than that which declared that the communication of the formula destroyed its power, and that hence attempts to reveal the secret must always fail. We have changed all that. Every physician hastens to publish his discoveries and special knowledge, and a good many

do the same by that which is not special, or which is not knowledge. For the individual, in a degree, for the nation or the race in a much greater degree, the literature produced is the most enduring memorial. The whole result of civilization has been cynically defined as being, roughly, "three hundred million Chinese, two hundred million natives of India, two hundred million Europeans and North Americans, and a miscellaneous hundred million or two of Central Asians, Malays, South Sea Islanders, etc., and over and above all the rest the library of the British Museum. This is the net result of an indefinitely long struggle between the forces of men and the weights of various kinds in the attempt to move which these forces display themselves."²

And thus, in our great medical libraries, each of the folios or quaint little black-letter pamphlets which mark the first two centuries of printing, or of the cheap and dirty volumes of modern days, with their scrofulous paper and abominable typography, represents to a great extent the life of one of our profession and the fruit of his labors, and it is by the fruit that we know him.

After stating that modern physicists have concluded that the sun is going out, that the earth is falling into the sun, and therefore that it and all things in it will be either fried or frozen, Professor Clifford concludes that "Our interest lies so much with the past as may serve to guide our actions in the present, and with so much of the future as we may hope will be affected by our actions now. Beyond that we do not know and ought not to care. Does this seem to say, Let us eat and drink, for to-morrow we die? Not so, but rather, Let us take hands and help, for this day we are alive together." To this I join a verse from the Talmud which will remind you of the first aphorism of Hippocrates, and is none the worse for that. "The day is short, and work is great, the reward is also great, and the master presses. It is not incumbent on thee to complete the work, but thou must not therefore cease from it."

Original Articles.

THE SYSTEMATIC WEIGHING OF INFANTS.³

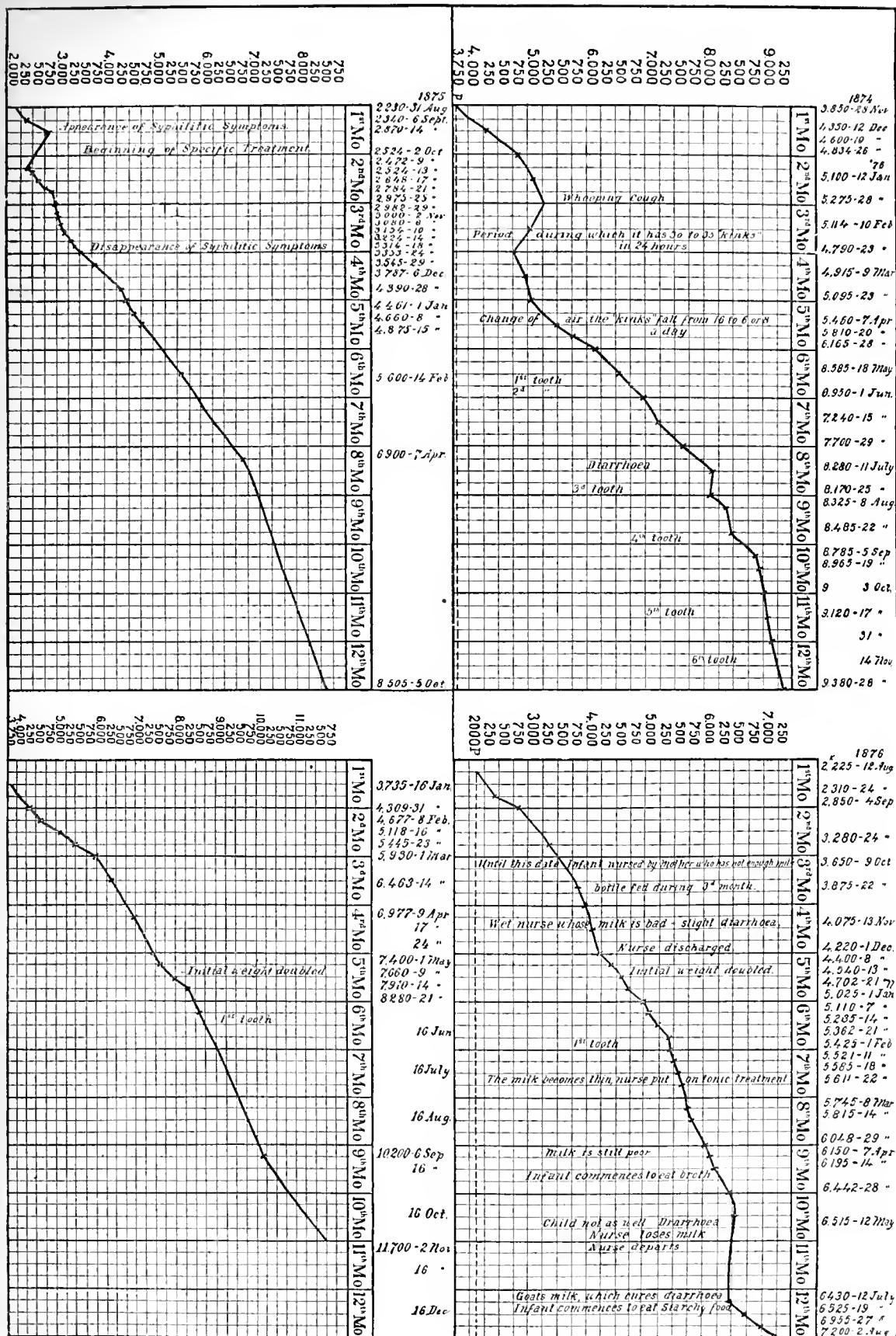
BY H. C. HAVEN, M. D.

THE desirability of reducing practice to the conditions of an exact science is a postulate of modern medicine; any method of observation conducing to this end is worthy of attention. I therefore make no apology for bringing to your notice a method, homely it is true and possibly familiar to you all, but which it seems to me is of great value in the management of infants, either in health or disease. The systematic weighing of infants substitutes scientific data for personal opinion. Professor Guillot first advised its employment in 1852. It did not come into general use, however, till some time later. In 1866 MM. Blache and Olier, in a memorial presented to the French Academy of Medicine on Infant Mortality and the Means of Preventing It, strongly urged the necessity of regular and frequent weighing. Since that time it has been gradually adopted in France and Germany,

¹ Liberty, Equality, and Fraternity, by James Fitz James Stephen, New York, 1873, p. 178.

² Read before the Boston Society for Medical Observation, April 18, 1881.

³ *Barber's Tree of Knowledge*, etc., by O. W. Holmes, Boston, 1872, pp. 7, 8.



Professor Parrot having done much to popularize it. As far as I have been able to inform myself, although used in this country by a few interested especially in pediatrics, it is seldom employed by the general practitioner, or in many of the institutions devoted to the care of children.

A balance responding to two or three grammes, — almost any in ordinary household use will do this. — a set of weights, preferably metric, are the necessary instruments. The child should be weighed as soon after birth as practicable, being dried and wrapped in a piece of warm flannel. The weight of this should be previously ascertained, or if always used may be disregarded, being a constant factor, and not affecting the results except in the slight original addition. During the first eight or ten days the weighing should be daily. The existence, persistence, and termination of the so-called physiological loss is thus determined. The original weight should be regained from the fifth to the eighth day. After this weekly weighings for the first five months, and later fortnightly, will suffice. The best time is in the morning, when the child's toilet is usually made; this gives slight additional trouble.

The daily gain should be about twenty-five grammes for the first five months, at which time the weight at birth should be doubled; after this its gain gradually decreases to about ten grammes at the end of the fifteenth month, when the initial figures should be quadrupled. These numbers are the mean of a very large number of French observations, and have the demerit of being too exact. In general, however, the average daily gain in the first few months should not be below twenty grammes; if so, the child is badly nourished, sick, or going to be. There are exceptions to this rule, the gain being sometimes less, sometimes greater. It is always, however, in direct proportion to the original weight. If this is very small the gain may be correspondingly small. The technical difficulties of carrying out this method are slight, certainly in any institution they would be, and any mother or nurse of ordinary intelligence can be trusted to secure accurate results.

Its advantages are that it affords absolute knowledge on several points. Is the food, whether milk of mother, nurse, or animal, or some one of the numerous preparations, affording sufficient and proper nutriment to the babe? Is it getting a fair start in life? This question is often the most important and at the same time the most difficult to solve. The scales give us information far more reliable than the intelligence of the mother, the education of the training-school graduate, the experience of the monthly nurse, or even the experience, education, and intelligence presumably combined in the physician himself. Again, in the treatment of disease; are the desired results being attained? This we can tell with certainty; exactly what food, usually the most important of all treatment, is best suited to the child. We can tell in the wasting diseases of children, where often the struggle for life is severe, if we are gaining or losing ground. There are many other advantages I will not go into here. The effect on the mothers of the better class is not, I think, to be despised. It inculcates the habit of systematic observation of their children and correct deductions therefrom. It enforces the all-important connection between the diet and the health of the child; a truism, an axiom to the physician, unfortunately not to many even of the most intelligent mothers. In dispensary

practice, who that has suffered from the maddening prolixity or the sullen ignorance of the average mother of that class, would not be rejoiced to get, as he can by this method, in a moment's time, some satisfactory and reliable evidence as to the condition of the child, the success of his treatment, and how far his dietetic instructions have been followed. I quote from M. Boudet: —

"Is it not fortunate that we can apply to the oftentimes so difficult appreciation of the symptoms of sickness, convalescence, and health one of the exact methods which are the privilege of the physical sciences. As exact is the balance, so significant is it in revealing the health of the infant and the influence of the quality and quantity of its nourishment, the state of health of the nurse; the exact and frequent determination of its weight faithfully translates the onward and backward march of its development. I am astonished that this system has not come into more general use. How much superior are the indications of the balance in comparison with even the most experienced eye, in recognizing emaciation or the reverse. I do not speak of the difficulties of the system; it is not a serious objection.

I subjoin some weight charts, which will show better than words how accurately the balance indicates the condition of the child.

A METHOD OF DISCOVERING BY ACUPUNCTURE AND ELECTRICITY THE EXACT LOCATION OF BULLETS OR OTHER PIECES OF METAL IN THE BODY.

BY JOHN VANSANT, M. D.,

Surgeon United States Marine Hospital Service.

In gun-shot wounds, when there is no opening of exit, and in other cases where pieces of metal may have been lodged within the body, the difficulty and uncertainty of discovering the exact location of the bullet or metallic mass is often great, as is well known. Projectiles are so easily deflected from a straight path, and made to take such devious courses by apparently trifling obstructions in the body, that it is frequently unsafe or impossible to follow them along their track to their resting place. But if this can be done prudently, in such cases of deflection, by flexible probes of ordinary construction conveying information by the sense of touch, or by those fitted at the inserted end with some device to bring away small particles of the metal by friction thereon, or by those containing wires, insulated except at their points, and intended to give an electric signal upon contact with a bullet, there will still be doubt as to the precise location of the object touched, even though its metallic nature may be ascertained, because of the uncertain direction of the probe, due to its flexibility and bendings. The patient's sensations will then be the chief guide, and these will usually indicate, independently of any probing, the place *near which* a metallic mass may have lodged, whilst palpation, pain on pressure, and local discoloration of the skin will each furnish, at times, confirmatory evidence.

To remove all doubt in the matter it will only be necessary to introduce a slender steel wire or needle, by the shortest route, directly through the tissues from the outside down to the place where the piece of

metal is supposed to lie. If the point of the needle come in contact with some obstruction, presumed to be the metal, then allow this needle to remain, and insert in the same way a second similar needle near to the first one, but not touching it, and cause the ends of the two needles to press firmly against the obstruction; then connect the exterior ends of the needles by wires, in a circuit, with a small tolerably sensitive galvanometer, and *one* very small galvanic cell. If the obstruction be metallic this will be shown immediately by a deflection of the index of the galvanometer, but if not metallic then no such deflection will occur, for the weak current from one cell will not pass sufficiently through even the thinnest stratum of animal tissue to sensibly affect the galvanometer. Neither will such a feeble current heat the inserted needles in case their points should rest in contact with a bullet or other piece of metal.

The needles or wires employed for this kind of acupuncture should be as slender and delicate as they can be and have the necessary rigidity to enter the softer tissues. They should not be highly tempered, but should be capable of bending without breaking, and they require no insulation.

If the bullet be missed at the first insertion other trials may be made until satisfactory results be obtained, for it is well known that fine needles can be introduced with impunity into any of the tissues and almost all of the organs of the body. Only a few days ago I made positive a diagnosis of "aortic aneurism below the diaphragm" by means of a hypodermic syringe having a long slender needle, using the instrument as an aspirator. Not the slightest ill effect followed. These needles are often inserted into the liver, testes, and other organs without any bad results. The needles, however, should be as slender as consistent with necessary strength.

A galvanic cell composed of a rod of malleable iron and another of amalgamated zinc, each about one eighth inch diameter by about three inches long, passed through the cork of a small vial or test tube, and immersed in diluted sulphuric acid, will furnish a current of ample strength.

This combination of acupuncture needles with a galvanometer and weak battery can be used very effectively, also, to supplement the "electric balance," like that recently employed in the endeavors to determine the location of the bullet in the body of the wounded President of the United States.

The latter instrument discloses the presence of a metallic mass in the tissues, and its approximate distance from the surface, provided the size and shape of the mass and the mode in which its surfaces present themselves be known. But these are the very data usually unknown. The acupuncture needles with galvanometer and feeble current reveal the exact location of the mass, and the needles can be used as a guide for making an incision to extract it, when such operative procedure may be requisite.

UNITED STATES MARINE HOSPITAL, {
PORT OF BOSTON, MASS., August 10, 1881. }

—The seventh annual meeting of the Indiana, Illinois, and Kentucky Tri-State Medical Society will be held in the city of St. Louis, Mo., Tuesday, Wednesday, and Thursday, October 25, 26, and 27, 1881.

RECENT PROGRESS IN THE TREATMENT OF DISEASES OF THE THROAT.¹

BY F. L. KNIGHT, M. D.

PARALYSIS OF THE POSTERIOR CRICO-ARYTENOID MUSCLES OF THE LARYNX.

DR. FELIX SEMON has an exceedingly interesting article² on the proclivity of the abductor fibres of the recurrent laryngeal nerve to become affected sooner than the adductor fibres, or even exclusively, in case of undoubted central or peripheral injury or disease of the roots or trunks of the pneumogastric, spinal accessory, or recurrent nerves.

This curious and important fact is by no means entirely new or unknown. The allusions to it, however, have usually been incidental, and intended rather to explain, by some hypothesis or other, what is considered a pathological curiosity, than to come to certain definite and general conclusions. Its importance is, Dr. Semon hopes to show, so great, especially with regard to the diagnosis of diseases of the brain and chest, in which the laryngeal affection plays the rôle of an important, sometimes pathognomonic, symptom, that it is justifiable and desirable that this question should be once more and separately brought before those who have the opportunity of either corroborating or correcting his statements and conclusions. The question at issue stands thus: It is well known that with the exception of the crico-thyroid muscles (the tensors of the glottis), which are supplied by the superior laryngeal nerve, all the other laryngeal muscles, adductors as well as abductors, receive their motor innervation from the recurrent laryngeal nerve. But this fact, simple and natural as it seems to be to all of us who are accustomed to look at it as to a self-understood matter, nevertheless invites a consideration concerning a very interesting, very important, and wholly unsolved question, namely, as to the manner in which this small nerve accomplishes its most complicated and intricate functions.

Quite apart from the delicacy of the mechanism of the vocal apparatus, over which the recurrent nerve, in conjunction with the superior laryngeal nerve, has to preside, the natural question must at once present itself to our mind: In what way are the diametrically opposed functions of opening and closing the glottis accomplished, over which, as far as we know at present, the recurrent nerve alone presides? Are we to believe that the nerve is, in fact, a homogeneous one, but that different stimuli, or stimuli coming from different centres, can set up in its root different forces, conducted through the same nerve fibres, and resulting at one time in a general involuntary contraction of the abductor muscles, and at another in the almost always voluntary contraction of their antagonists? Or, are we to suppose that, though the nerve is apparently homogeneous, it consists in reality of bundles of strictly differentiated fibres, bound together simply by a common nerve-sheath, and actually differentiated throughout their peripheral course, in fact having ganglionic centres of their own? Semon thinks pathological facts strongly support the latter hypothesis. It will be seen that even this hypothesis is by no means sufficient to explain all the pathological phenomena introduced in the paper.

A study of the anatomy of the inferior laryngeal

¹ Concluded from page 197.

² Archives of Laryngology, vol. ii., No. 3.

nerve shows that the individual muscular branches are only given off close to the larynx. Considering this anatomical fact, and another equally plain one, namely, that the diameter of the trunk of the nerve is a very small one (one mm. when close to the larynx, according to Luschka), it is very tempting to draw at once the conclusions alluded to above, namely: (1.) That any lesion or disease affecting the nerve from its centre to the spot where it gives off the first branch for the posterior crico-arytenoid muscle, must of necessity affect all the laryngeal muscles (with the exception, of course, of the crico-thyroid muscles, and perhaps of the epiglottidean muscles). (2.) That, on the other hand, any impairment of mobility, if not due to mechanical or myopathic influences, of a single one or some of the laryngeal muscles seems to point out clearly that the cause of this impairment must be a local one, due to injury or disease of the respective nerve twigs. These conclusions cannot be rejected *a priori* as unreasonable. The anatomical facts seem to support them strongly, and although it was known at a very early period in laryngological studies that the abductor and adductor muscles could become separately affected, yet the possibility has been emphatically denied that such a partial paralysis could be due to either central causes or affections of the main nerve trunks.

This view is fallacious in consequence of the omission of a very simple but important consideration, namely, that we must distinguish between a complete and an incomplete as well as between an acute and a gradually progressive lesion of the nerve. If we have an acute complete lesion, such as is produced by transverse cutting of the pneumogastric or recurrent nerves, experiments on animals, as well as occasional observations on human beings, have shown beyond doubt that the consequences are such as would be expected theoretically, namely, total loss of the functions of all the laryngeal muscles (with the exception of the crico-thyroid). Matters, however, become entirely different, if we have to deal with either an incomplete acute or an incomplete gradually progressive lesion. The former of these two conditions is certainly an extremely rare one in practice, though it can be easily produced by experiment, the latter, on the other hand, is the form which is not only practically the most important, but almost the only one which occurs in reality. If we believed that all the recurrent nerves were identical and not differentiated, but that different stimuli, coming from either the same or from different centres, could be transmitted through them, it seems to Semon that in every case in which there is an incomplete impairment affecting the roots or trunks of the spinal accessory, pneumogastric, or recurrent nerves, one could reasonably expect one and the same sequence only, namely, diminution of all the functions of all the laryngeal muscles supplied with motor fibres by the recurrent laryngeal nerve, and this diminution in proportion to the number and strength of the fibres disabled by the disease-producing cause. In other words, every paralysis of the recurrent nerve, unless acute and complete from its commencement, ought to begin with loss of the adductive as well of the abductive power, and this equal impairment should progress *pari passu* with the disablement of the still conducting fibres, until at last, all of them having become devoid of conducting elements by some external cause or internal retrogressive metamorphosis, the stage of complete paralysis of the nerve with immobility of the corresponding vocal cord in the cadaveric position it attained. Dr.

Semon has never seen a case in which the symptoms developed in this way. If in reality all the fibres of the recurrent nerve were identical, the loss of some of them by any pathological process must, as I have tried to explain, under all circumstances be followed by the same consequences. The intensity of these consequences might vary according to the number of disabled fibres, and perhaps according to the rapidity of the pathological process; but in all cases the differences could only be quantitative, and never qualitative. In other words, if this hypothesis were correct, it would not admit of a single exception to the rule. A single exception, a single good observation, proving that in a case of gradually progressive paralysis of the roots or the trunks of the accessory, pneumogastric, and recurrent nerves, one set of laryngeal muscles was either before their antagonist, or even exclusively paralyzed, annihilates the entire hypothesis of the homogeneousness of the filament of the recurrent nerve, for if they were really homogeneous, the laryngeal muscles could never be separately affected by a lesion involving the trunk of the nerve itself. Now we have not one, nor a few, but many cases on record, in which clinical observation and the post-mortem examination have actually shown that, although the disease-producing cause acted upon the whole nerve-trunk, yet one set of laryngeal muscles only became affected, or one much more than the other. Such cases have occurred to every observer of much experience. Dr. Semon does not think there is any possibility of reconciling this positively ascertained fact with the theory of the homogeneousness of the recurrent nerve, and therefore believed that this theory must be completely given up.

The second hypothesis appears the more probable, and one *a priori* harmonizing much more with the complexity and delicacy of the vocal functions of the laryngeal muscles, namely, that the filaments of the recurrent nerve are strictly differentiated throughout the course of the pneumogastric nerve, and even possess ganglionic centres of their own. The adoption of this hypothesis at once gives a clue to the explanation of the frequent clinical observations, that in cases of intrinsic nerve disease as well as of external mischief to the nerve, and in cases of central as well as of peripheral lesion, one set of the muscles is earlier affected than the other or even exclusively. If, for instance, a disseminated sclerotic affection of the brain should happen to affect those ganglionic centres only which form the nuclei of the abductor filaments of the recurrent nerve; if a tumor of the neck should happen to press on those nerve fibres only which supply the crico-arytenoides lateralis, the thyro-arytenoides, and the arytenoides proprius muscles (this latter example has been chosen merely for the sake of illustration; as far as known to the author no such case has been reported) it would not need further explanation to prove that in the first instance we would see, laryngoscopically, the vocal cords not in the cadaveric but in the phonatory position, because the posterior crico-arytenoid muscles only were paralyzed, and that, on the other hand, in the second instance we would see the glottis widely open, and meet with complete aphonia in consequence of the inability of the solely paralyzed adductor muscles to bring the vocal cords together for the purpose of phonation. In each of these two cases this state of things could remain stationary (namely, if the pathological process occasioning the paralysis came to a standstill) or could lead to com-

plete paralysis with its consequences (namely, if the antagonistic centres or fibres, which were left free at the beginning, became also affected later on).

It would seem, then, that the earlier symptoms in cases of incomplete, slowly progressing paralysis entirely depended upon the question which fibres have been accidentally first attacked, and the natural conclusion would be that we sometimes should expect early lesion of the abductors, at others of the adductors.

The author then introduces twenty-two cases showing that isolated paralysis of the posterior erico-arytenoid muscles was the result of disease or injury to the centres and nerve-trunks, or that at any rate the paralysis of these muscles was earlier, and respectively more developed than that of their antagonists. This number cannot be compensated by an equal or approximately equal number of observations proving the occurrence of a primary affection of the adductor fibres under similar circumstances, and indeed the author has not been able to find, in the whole range of laryngeal literature known to him, a single case in which primary organic disease of the brain or of the nerve-trunks was proved by clinical observation or the result of the post-mortem examination to have been the cause of isolated paralyses of the adductors!

The cause of the proclivity of the abductor fibres to be affected sooner than the adductor, or exclusively, is difficult at present to explain satisfactorily. Semon holds that the theory of the uniformly central origin of this paralysis is untenable in the face of the authenticated cases of paralysis and degeneration of these muscles (the abductors) in consequence of disease of, or pressure upon, the nerve-trunks.

Several hypotheses might be made and have been made to explain this peculiar proclivity, namely:—

(1.) That the anatomical distribution of the fibres of the recurrent nerve may be a concentric one, and that the abductor fibres may be situated in the periphery of the nerve, that is, most exposed to all external injuries.

(2.) That there may be a specific vulnerability of the abductor filaments, or what would amount practically to the same thing, that even in cases of partial disablement of the adductor filaments, the remaining healthy adductor fibres might conduct all the nerve force emanating from the adductor centres to the adductor muscles.

(3.) That possibly the adductors receive an increment of nerve force from the superior laryngeal nerve.

All of these hypotheses are open to certain objections, and none of them seem to the author to offer a really satisfactory and plausible explanation, the time for which, he thinks, has not yet arrived. Semons thinks, before all, by numerous further contributions, the fact should receive further corroborative evidence that *there is a proclivity of the abductor fibres of the recurrent nerve to succumb to pathological influences affecting the roots and trunk of the motor nerves of the larynx.*

Quite apart from the great intrinsic anatomical and physiological interest of the question, its affirmative reply would entitle us to lay down the following practical rule: Immobility of one or of both the vocal cords in the phonatory position — if not occasioned by mechanical impairments or myopathic affection — invites to a consideration of all the possibilities which may produce paralysis of the entire recurrent nerve;

immobility in the position of deep inspiration — if not occasioned by mechanical impairments or myopathic affection — is much more likely to be due to either a functional or a local neurosis, that is, an affection produced by local disease of the adductor twigs of the recurrent nerve.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DRS. DOE AND MASON.

REPORTED BY DR. WITHERINGTON, HOUSE SURGEON.

SIX CASES OF TYPHUS FEVER.

ON April 13th a family of six persons was admitted to the hospital. They were found in a house on Meander Street, of bad hygienic condition. They were all lying about in a dull, stupid condition, unable to do anything for themselves, and all, with the exception of the infant, appeared to be suffering from the same symptoms. The family was composed of the following persons: (1) Mrs. L., aged fifty-four; her daughters, (2) Susie, aged twenty-nine, and (3) Louise, aged twenty-five; her grandchildren, (4) Mary, aged eleven, (5) Louis, aged six, also Willie, aged sixteen months (not sick); (6) Lewis, another member of the family, entered later.

The history, so far as it could be obtained, was as follows: The family had always been healthy. The husband and father had returned home, after an absence of four years, about March 23d. Most of this time he had been at sea, but had recently landed at New York. While there he was taken sick, and returned to his family to be taken care of. The nature of his illness is not known, but on reaching home he complained of headache and dizziness, and on attempting to walk would fall. He was unable to go about much, but was not confined to his bed. After ten days he began to improve, and at the time his family were taken sick considered himself well.

Soon after the father's return Louise began to complain of headache, languor, etc., but kept about her work. On April 3d she took to her bed after a severe chill, complaining of dizziness, intense headache, and ringing in the ears. There was no pain in any other part of the body. About two days later, April 5th, Louis, the little boy, was taken sick with very similar symptoms, which obliged him to go to bed. No prodromata reported. April 7th, Susie, who had been at her work until the night before in her usual good health, was seized with headache and dizziness without other subjective symptoms, but was so prostrated that she had to take to bed. Later in the same day she was followed by Mary, who had kept up till that time, though she had had a headache for three days previously. The mother was the last of the family to yield, though she began to feel badly the evening of the 6th. By lying in bed a portion of the time she succeeded in partially caring for the others until the morning of the 13th, when she found herself unable to rise.

Willie, the infant, who entered simply for care, was a large, healthy boy, and presented no symptoms of any disease. But, as will be seen, with this exception all the members of the household were affected.

Five days later another member of the family, but not of the household, entered the hospital. He, Lewis, aged twenty-five, is a brother of the two young women,

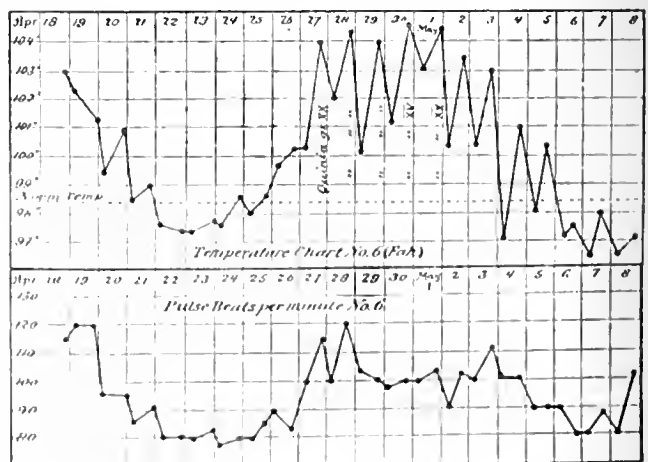
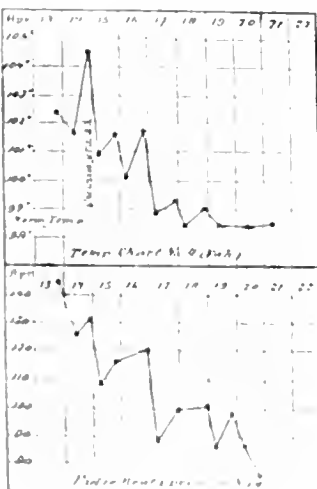
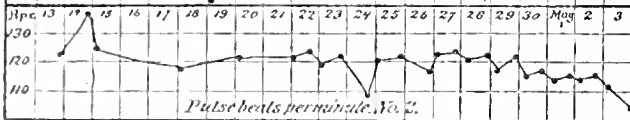
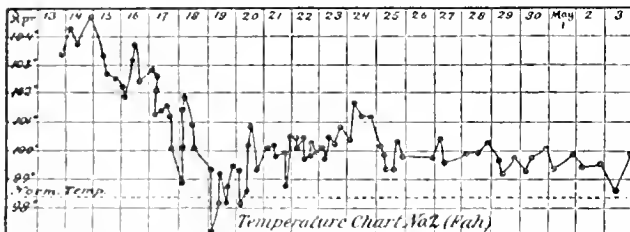
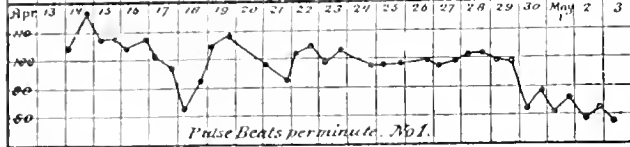
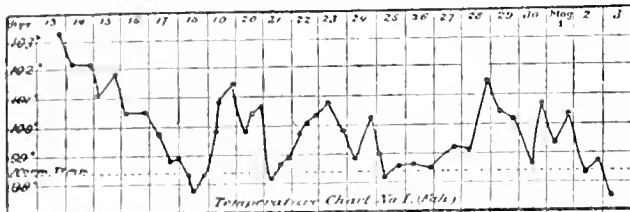
is married, and lives in Jamaica Plain. On the night of his father's return the son spent the evening with him, and remembers that he smoked his father's pipe.

Ten days later he repeated his visit. Two days after this, April 5th, he was attacked with headache and vertigo, accompanied with a chilly feeling and vomiting. He entered on the twelfth day of his sickness, and allowing for the difference in the stage of the disease his condition was exactly similar to that of the others.

All these patients had a dull, stupid appearance. All complained chiefly of headache with dizziness and staggering if they attempted to walk. None of them had any abdominal pain or distention, though in one case there is record of gurgling with tenderness in the right iliac fossa. There was no diarrhoea. In four cases the bowels were constipated, in two regular. In all the cases the tongue was coated, and the face flushed. The temperatures on entrance varied from 102° F. to 104.2° F. The clinical charts, published herewith are numbered according to the arrangement of the names where they are first given.

In the course of the fever active delirium was present in three of the cases. It was usually of a pleasant character. In one case the prattling and singing were nearly constant for several days, and were accompanied by almost incessant movements of the hands. Retention of urine was observed in most of the cases.

An eruption appeared in three of the cases, the



three young adults, who were the sickest of the family. This eruption was pretty well scattered over the trunk, and all the extremities, but was most abundant on the abdomen and chest. It was for the most part macular, but some of the spots were slightly raised. The color was a dull, dark red, and did not wholly disappear on pressure. No petechiae were observed. In one case rose spots are reported intermixed among the other spots.

The period at which the eruption appeared is known definitely in only one case, in which it was on the fifth day. Its disappearance, which was gradual, was completed at about the establishment of convalescence in all the cases. In addition to the three well-marked cases of eruption, the mother, whose skin was considerably freckled and stained, had a few reddish spots here and there, which, though not of themselves at all characteristic, yet taken in connection with the other cases were worthy of note. The skin of the children remained perfectly clear throughout.

Complications. Lewis (6) was taken with facial erysipelas after his fever had subsided and he had sat up one day. The attack was moderately severe, and ran a course of about nine days.

Mrs. L. (1) had a painful swelling of the submaxillary gland on the left side, followed, in a few days, by a similar swelling on the right side. These underwent resolution, and disappeared in about a week.

Contagion. No other case of the disease developed in the hospital. A patient, however, who occupied a bed adjoining one of the cases for a few days before the latter was removed to the isolating ward, and who soon after left the hospital, was taken sick a day or two after her discharge with what the attending physician pronounced typhus fever. No other cases occurred in Boston.

The course of the disease, reckoning it in each case from the day the patient took to his bed till that on which he first sat up, varied from eleven days in the case of Mary to about four weeks in the case of Susie. The average of all the cases was twenty-one days. This does not include the duration of the erysipelas, which developed after the patient had sat up, but does include that of the adenitis, which came on before the patient had left her bed.

Remarks. As typhus fever is a rare disease in this vicinity, and its prevalence in neighboring cities and in foreign countries from which many thousand immigrants are now arriving, concerns the public health, these cases are reported as being of local interest. Although the nature of the affection was suspected at the outset, the absence of the characteristic eruption in half of the cases, and the comparatively mild form of the disease, prevented an immediate positive diagnosis. The usual symptoms of typhoid fever, however, were wanting, and the temperature curves are instructive.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. M. RICHARDSON, M. D., SECRETARY.

APRIL 18, 1881. DR. H. C. HAVEN read a paper on the

SYSTEMATIC WEIGHING OF INFANTS.

which will be found on page 222 of this number of the JOURNAL.

In reply to Dr. Webber, Dr. Haven said with regard to the prognosis, that these charts afford a better means than any other. It cannot strictly be said that a rapid diminution in weight makes the prognosis grave. There are no strict rules to be applied.

DR. DRAPER spoke of the value of such observations as the reader had illustrated in determining more accurately the weight of children at birth. Each observation gives us new and valuable information. The normal weight of the new-born child is important in a medico-legal way also. About thirty-five hundred grammes is about normal all over the world.

DR. BUCKINGHAM asked if there was any difference in the weight of children of primiparae and pluriparae. It is said by a German writer that the milk with the first child is less abundant than at later births.

DR. HAVEN replied that not only is the initial weight of the first-born child under the average, but their daily increase is also less. Observations taken in France show that the children of primiparae increase less rapidly in weight than those of pluriparae, the milk of the mother being not only less nourishing, but also less abundant.

DR. MINOT thought it important to note other things at the same time with variations in weight, such as age and health of parents. Another interesting point would be a comparison of the weights of children fed upon different foods. The comparative value of the different forms of infants' food could in this way be ascertained better than in any other. It is important to know what is the best artificial food. Dr. Minot had seen, this winter, in a child a curious condition of things. It was thirteen months old, and unable to use its legs. The reflex function of legs was lost. The child looked intelligent, and could speak a little. It was found that it had been fed upon condensed milk. It was put first upon cow's milk and then upon Mellin's Food. Improvement was immediate. It was soon able to move its legs, and before long could do so very well indeed, till it was able to stand and walk by pushing a chair before it. No medicine was used. The case looked very much like infantile paralysis. There was no observation of the daily weighing, though it would have been very interesting.

DR. PORTER reported the following case:—

INTESTINAL OBSTRUCTION; REGULAR DEJECTIONS FOR FOURTEEN DAYS BEFORE DEATH; AUTOPSY; TYPHLITIS; ULCER OF CECUM OPENING INTO PERITONEAL CAVITY; PERITONITIS.

M. C., the patient, a man of twenty-eight, had been in good health until Thursday, March 17th, then, in consequence of exposure to cold he developed acute cystitis. Friday, 18th, as his bowels had not been opened the previous day, he took, without the advice of his physician, a number of Schenk's mandrake pills, about half a dozen. In consequence of these he had several violent and painful dejections during the night, and the next morning he was seized with intense pain, its worst seat being on the right side, at about the junction of the iliac and hypochondriac regions. Sunday, 20th, the pain had increased in severity, and extended over the whole abdomen; he was unable to retain any nourishment; there had been no dejection since those induced by the pills. Monday, 21st, he was admitted to the hospital. There was then tenderness over the whole abdomen, but most marked on the right side,

and just above the pubes; extreme restlessness; great thirst; inability to retain nourishment. As it was not until he had been in the house a week that a possible origin for the trouble was learned from his family, a diagnosis was not clearly made on entrance. He was ordered hot fomentations, nutrient enemata, and opium pro re nata.

March 22d. From the patient's statement that there had been constipation for some days it was thought that intussusception might be the cause, and copious enemata were given, without effect, however.

March 23d. There was so much suffering from the nutrient enemata, principally because of hemorrhoids from the violent straining of the previous week, they were omitted, and one drachm doses of milk and soda water given hourly. This was the first thing tolerated by the stomach for four days. To keep him quiet he required three grains of opium hourly. Tympanites was now quite marked.

March 24th, the sixth day from his attack. During the night the quantity of milk and soda was increased to half an ounce hourly; when this caused any nausea the next dose was omitted. An enema as copious as he could endure was tried again, but produced no movement.

March 25th and 26th. No change except that he was growing weaker.

March 27th, ninth day. Tympanites very much increased; passed no flatus; took one ounce milk and soda hourly.

March 28th, tenth day. To-day it was first known that the patient had subjected himself to the violent purgative mentioned at the beginning of the case. His condition was steadily growing worse; pain was excessive, and in addition to one half grain morphia suppositories he required frequent hypodermics of one fourth grain; nausea frequently prevented him from taking his milk.

March 30, twelfth day. Tympanites greatly impeded respiration; no nourishment was being taken, and the patient was very low indeed. To give relief to the over-distended intestines three punctures were made in the linea alba with the aspirator needle, giving vent to a large amount of gas. A puncture was then made over a prominent place in the transverse colon, at its left extremity, and over the descending colon just above the sigmoid flexure. As before gas escaped through the needles for a few minutes, then came a discharge of liquid intestinal contents. For more than an hour these two tubes discharged this fluid. At the end of that time the abdomen had relaxed to nearly its normal tension; the patient was greatly relieved from pain, and the respirations were easy. At the close of the operation intestinal movements could be heard, and during the night flatus was freely passed, the first time for twelve days.

March 31st, thirteenth day. The patient was very comfortable. There was no return of tympanitis and no pain; milk and soda were freely taken, and solid food requested; there was one defecation early in the morning, not large in amount, consisting of the same kind of fluid as was evacuated through the needles.

April 1st, fourteenth day. Within thirty-six hours patient has had fifteen movements, some of them containing a few small scybalæ; there has been improvement in every symptom, and since that date the bowels have been regular, and in no way has there been any intestinal disturbance.

April 3d, sixteenth day. Took solid food; sat up in

bed; stool daily of perfectly normal character; slight swelling noticed over parotid gland.

April 4th, seventeenth day. Swelling had increased, and was quite painful. From this date until the 8th there was no change in his condition except that the parotid abscess increased, and by the surrounding œdema obstructed the œsophagus so that swallowing was impossible.

April 8th, twenty-first day. Fluctuation just anterior to the ear. The abscess was opened, a large amount of pus escaping.

April 9th, twenty-second day. Pus in considerable quantities was noticed in sputum, which, up to this time, had been only mucous; the quantity of pus expectorated increased daily; the discharge from the parotid abscess ceased entirely.

April 12th, twenty-fifth day. Until this date the patient seemed gaining ground every day. He took large quantities of nourishment and stimulants, but quite suddenly on this day there was a change for the worse. He seemed weak, his appetite failed, and cough increased.

April 15th, twenty-eighth day. From this time until he died there was a constant failure in strength, but absolutely no local symptoms; his bowels acted every day with well-formed dejections; there was no abdominal pain or tenderness; on the day of his death he suffered from dyspnoea, but not previously.

Autopsy by Dr. Fitz.

On opening the anterior abdominal wall a subcutaneous abscess containing about a drachm of thick pus was found corresponding with the site of an abdominal puncture.

Heart. Right side distended with freshly clotted blood. Valves and cavities normal. Muscular substance opaque. Pericardial surface normal.

Lungs. Posterior portion both lobes of the left lung distended, heavy, dense, corresponding pleural surface opaque, injected with occasional hæmorrhagic spots, and delicate patches of recent false membrane. On section through the lung the surface was granular in the affected portions, dark-red, and friable. The right lung was adherent to the thoracic wall by recent adhesions, and was extensively infiltrated by granular material, the cut surface mottled with spots of yellow, from which puriform material exuded on pressure. Soft, yellow, curdy substance was frequently present in the smaller bronchi.

Spleen, twice normal size, soft on section, reddish-gray, follicles indistinct.

Kidneys enlarged; capsule easily detached; on section cotyledons gray and opaque; opacity of convoluted tubes.

Bladder normal.

Liver enlarged at least one third; reddish-gray color; a superficial abscess, large as a walnut, in the upper part of the right lobe, the diaphragm forming its upper wall, and sloughing over it. On section reddish-gray, opaque parenchyma with distinct lobular divisions.

The pelvic cavity was shut off from general peritoneal cavity by recent adhesions between its walls and coils of intestines, and contained a quart of dirty gray, opaque, and offensive pus. A circumscribed abscess as large as the first was found about the cecum. Its cavity contained pus and faecal matter and its walls were shreddy. Three openings in the vermiform appendix communicated with this cavity: one at the end of appendix with sloughing margin; two, each one

fourth of an inch in diameter, with slaty-blue border, about one half an inch below the opening into the caecum. The mucous membrane at the head of the caecum, over a patch nearly as large as the palm of the hand, was deeply and irregularly ulcerated, and an opening between the pericecal abscess and the interior of the caecum was found, one inch in diameter. The destruction of tissue around it was more extensive at the outside of the intestine, and there was no loss of mucous membrane beyond the margin of the opening. The mucous membrane of the stomach was thickened and opaque, mammillated. That of the intestines was also thickened and opaque, the follicle enlarged, and two of Peyer's patches contained several small ulcers.

Diagnosis.—Typhlo-enteritis with perforate perityphlitis, encysted peritonitis, double fibrinous pneumonia, acute abscess of liver, acute splenic tumor, cloudy swelling of heart, liver, and kidneys.

Dr. Minot read the following cases, the accompanying specimens being shown by Dr. Whitney.

PHLEBITIS ORIGINATING IN INFLAMMATION OF THE APPENDIX CECI.

The patient was a vocalist by profession, thirty-three years old. He had twice suffered from intermittent fever, many years ago, in Louisville, but his health had been good since then. In March, 1880, he had an attack of abdominal pain, with vomiting, lasting a day; and afterwards a similar attack, but more severe, and accompanied with chills. The present attack began, without obvious cause, March 21, 1881, with pain in the abdomen followed by vomiting and a chill. For several days afterwards he had two or three chills daily, at irregular intervals, followed by fever and free perspiration. He entered the Massachusetts General Hospital, under the care of Dr. Minot, March 10th. No enlargement of the liver or spleen could be felt. There was tenderness in the epigastrium; the urine contained a trace of albumen with hyaline and granular casts. Temperature, 102° ; pulse 95. For several days he was treated with large doses of quinine, but without any benefit, the chills recurring with severity, and the temperature rising at times to 107° . April 5th, there was much tenderness in the right iliac region. The discharges became involuntary, the patient failed rapidly, became comatose, and died on the evening of April 13th. There was no œdema anywhere, and no evidence of thoracic disease.

The following are the chief points of interest in the account of the autopsy by Dr. Fitz. On the upper surface of the lower lobe of the right lung, in the transverse fissure, was a superficial abscess, of the size of a pea; the pleura covering this part of the lung was ecchymosed and roughened, with a delicate layer of recent false membrane. Spleen slightly increased in size, normal in color and consistency. The kidneys presented a slight opacity in the region of the convoluted tubes, otherwise not remarkable. The small intestines were injected, several coils in the right lumbar region were attached to the meso-colon by recent adhesions, and on detaching these a circumscribed purulent peritonitis was observed, the cavity containing half an ounce of pus. The mesentery attached to the caecum was extensively infiltrated with pus. Surrounding the vermiform appendix, and connected with its interior by a small opening, was a trabeculated cavity of the size of a plum, with shreddy walls, which communicated with the caecum by an opening large enough

to admit the tip of the little finger. The mucous membrane of the appendix was yellow and opaque, apparently necrosed. The radicles of the portal vein in the mesentery, especially those arising from the region of the caecum, were dilated, and distended with pus. In spots these collections of pus approached the peritoneal surface so closely as to produce a soft, yellow nodule, the peritoneum in their vicinity being injected, ecchymosed, and roughened. In following certain of the branches of the portal vein towards the periphery fresh thrombi were found beyond the purulent ones. The purulent masses extended up to the trunk of the portal vein, and followed its ramifications into the liver. In the portal vein outside the liver the pus was contained within a shell of adherent thrombus, often separated from the smooth wall by a free space. Liver not enlarged; on section, a general injection of its tissue was apparent, with numerous circumscribed collections of pus either within or surrounding the divided branches of the portal vein. These varied in size from that of a pin's head to that of the primary branches of the vein, were often grouped in clusters, and represented either abscesses or sections of softened thrombi. The mucous membrane of the large intestine was swollen and injected, with occasional small nodules, which on section were found to be collections of puriform material in the branches of the mesenteric vein.

MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

The members of the American Dermatological Association met for their fifth annual meeting at the Ocean House, Newport, on Tuesday, August 30th. The officers for the past year were: president, Dr. J. Nevins Hyde, of Chicago; vice-presidents, Drs. E. Wigglesworth, of Boston, and C. Heitzman, of New York; secretary, Dr. Arthur Van Harlingen, of Philadelphia; treasurer, Dr. I. E. Atkinson, of Baltimore.

After a business meeting with closed doors, the regular morning session commenced with the annual address by the president on

PERIODICAL DERMATOLOGICAL LITERATURE,

of which a very interesting and full account was given, followed by an index of papers in journals devoted to dermatology.

Dr. James C. White, of Boston, presented a paper on the

LIMITATIONS OF INTERNAL THERAPY IN SKIN DISEASES.

He showed that the number of drugs that we are justified in regarding as possessed of true *specific* action on cutaneous disease is very small, being limited to mercury, iodine, and arsenic. He most thoroughly went through all the classes of skin diseases as adopted in the Association's system of classification, and showed that with the exceptions above mentioned we had no positive proof of any benefit to the skin disease as such from the administration of any known drug or substance, although often we may indirectly benefit the disease by correcting evident disturbance of the general health when such exists. He favored the thorough and scientific investigation of this subject by a committee of the Association.

Dr. C. Heitzman, of New York, gave an address on some points in the minute anatomy of the skin, more

especially with regard to the development and anatomy of the hair and hair follicle, with regard to which some entirely new and original facts were laid before the society. The nature of the communication, it being the result of long-extended microscopical investigation, precluded discussion, properly speaking, but the numerous questions asked by several of the members showed how interesting and clear these points of minute cutaneous anatomy had been made to them.

The evening session of the 30th was opened by Dr. Van Harlingen with a report of a case of Lymphangioma Cutis Multiplex, which was followed by a paper by Dr. Dühring, of Philadelphia, on the Small Pustular Scrofuloderm, based on three carefully observed cases. After an interesting discussion on these communications the meeting was adjourned to the following morning.

At the business meeting of the 31st the following officers were elected for the ensuing year: president, Dr. J. Nevins Hyde; vice-presidents, Drs. Fix, of New York, and Hardaway, of St. Louis; secretary, Dr. Van Harlingen, of Philadelphia; treasurer, Dr. Atkinson, of Baltimore.

The regular morning session was opened by the chairman of the committee on statistics, Dr. J. C. White, who reported the statistical tables of cases of skin disease occurring in dispensary and private practice, received from the various sections into which the country is divided for this purpose. These statistics are becoming more valuable each year. For the present year the cases tabulated number over eleven thousand. Dr. White's report included the statistics of leprosy for the present year, with a valuable history by Dr. Graham, of Toronto, of the lazarette at Tracadie, New Brunswick.

Dr. Atkinson then read a case of

TUBERCULAR LEPROSY

occurring in Baltimore, which at first, on the most thorough investigation, seemed to be of necessity sporadic in nature. He discovered later, however, that one of the only other two cases of the disease that had ever existed in Baltimore, so far as he could find out, had lived for a time in the house next his patient, and that they had seen each other. Dr. Atkinson also read a paper for Dr. Bernann, who had examined specimens of diseased tissue from this case, and showed sections which were exceedingly interesting, as Dr. Bernann had succeeded in showing objects which seem to be the same as what is claimed to be the *Bacillus Leprosus*.

Dr. Hyde reported a case of Acute Tubercular Leprosy running through its acute stage in five to six months. He closed the morning session by reading an elaborate article by Dr. H. D. Schmidt, of New Orleans, on the Pathological Anatomy of Leprosy, in which the microscopic appearances were most thoroughly reported.

The greater part of the evening session was taken up by a most earnest discussion of the papers read during the morning, and the meeting was adjourned after the reading of a paper by Dr. Wiggleworth on the subject of

LOCAL ULCEERATIONS OF CONSTITUTIONAL ORIGIN.

which he suggested, namely the local treatment of such lesions by calomel and iodoterm, combined, of course, with appropriate constitutional treatment.

At the morning session of September 1st Dr. Heitz-

mann gave an account of his clinical experience in the use of the solution of oxy-sulphuret of calcium (Vleming's solution), which was extremely interesting, and followed by a general discussion. Dr. Heitzmann's paper on

ELECTROLYSIS FOR EPILATION

was also read at this meeting. It was a report of very successful destruction of hair by this method, a very large number of hairs having been treated, of which relatively few returned. In three weeks it was evident which hairs had not been destroyed, and a second operative procedure was held. At the end of three months only six hairs were visible. Drs. White and Dühring spoke of the success this procedure had had in their hands.

Many fine specimens were shown at this meeting.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

S. W. LANGMAID, SECRETARY.

SURGICAL SECTION.

APRIL 15, 1881. DR. R. M. HODGES in the chair.

DR. E. H. BRADFORD spoke of the operation of

RESECTION OF THE TARSUS IN CLUB-FOOT.

and illustrated the method.

DR. HODGES showed several casts illustrating the good results obtained in spite of the small bones being removed to a very considerable extent. He said there were three points to be remembered regarding this class of operations:—

(1.) The slight constitutional disturbance in operations on the feet.

(2.) The large amount of bone which could be removed, and the very serviceable foot which could be left.

(3.) It seemed unnecessary in operating on the foot to pay any attention to articular surfaces.

DR. J. C. WARREN spoke of a case somewhat similar, operated on by Dr. Porter, with a very satisfactory result. It seemed to the speaker that this operation would be of great value in cases where, from one cause or another, mechanical treatment could not be carried out. Dr. Warren insisted on the point mentioned by Dr. Bradford, of carrying bandage above and below the two proximal joints to secure immobility of any one joint.

In reply to a question by Dr. W. S. Bigelow, as to whether the tarsus was regarded as a whole, DR. BRADFORD replied that the ankle-joint only was respected. The German surgeons did not do even this. This operation had been done by Dr. Reed, of New York, for equinus and those forms of club-foot due to ankylosis of the small bones.

DR. CAROT asked if it made any difference in the result whether the tendons on the anterior aspect of the foot were cut or not.

DR. BRADFORD said it had not seemed to. Treatment had lasted about three and one half weeks.

DR. J. C. WARREN showed some modifications of his apparatus for exerting pressure on long-standing irreducible hernia, consisting principally in the adaptation of a hard or soft rubber collar to the tumor so as to form a pedicle, allowing the requisite amount of pressure to be used without permitting the hernia

to escape laterally. He reported two cases, one of five and one of two years' standing, reduced by the aid of this apparatus. Reduction was effected in the former case in six weeks, in the latter in ten days.

ANTISEPTIC MANAGEMENT OF WOUNDS.

DR. W. S. BIGELOW called attention to a recent pamphlet, by Francis M. Caird, M. B., entitled, *Hints on the Antiseptic Management of Wounds*,¹ which gives concise directions for the application of Lister's method to operation and dressings. The book is scientific, practical, and thorough, and could be studied with especial advantage by the assistants and others on whom the thoroughness of the preparations for operations, which constitutes half the battle, depends. Every antiseptic operation ought to be carried out with as careful attention to the small details as if it were an experiment in spontaneous generation. Neglect of a single point, though seemingly trivial, imperils the result, and renders the other precautions useless. It is mainly on the assistants that the success of the antiseptic measures depends. It is impossible for a surgeon whose attention is fatigued by a long or difficult operation to have his eyes everywhere, and watch at the same time spray and sponges, towels and instruments. Yet a single wipe with an imperfectly disinfected sponge, for example, is as sure a maneuver as could be devised to invalidate the effect of every other precaution. This is one of the most common sources of trouble. Sponges are imperfectly disinfected beforehand, and left exposed during an operation in a way which courts failure. Wetting with carbolic solution just beforehand is wholly insufficient. A sponge containing dry germs is an exceedingly difficult thing to disinfect.

Some recent experiments of my own have made it apparent that the essential element in the devitalization of dry germ spores is *time*. An adult microbium is a very delicate and sensitive organism. A slight change in the temperature or the reaction of the nutritive fluid, or of the supply of nutrition, will determine the prompt destruction of many species. But between the growing organism and the dry spore there is a difference in sensitiveness analogous to that between a flower and a dry seed. A frost or a high temperature is promptly fatal to the former, while the latter will bear a good deal of baking or freezing without losing its power of germination, while its resistant outer envelope will withstand the action of many chemical reagents whose effect, if introduced in the sap of the plant, would be at once destructive. So with the microbia. It is from the dry germs of the organisms that danger is to be feared, and against them that precautions should be directed. Now, suppose a sponge, ordinarily clean, to be washed with common water, and put aside till wanted. Pasteur has shown that any water but spring water, collected before contact with the air, is filled with organisms and germs. With these the sponge is filled by the very washing which is meant to clean it. As it dries the germs remain as they are, and of the organisms, some die, and some which are ready to go to seed disappear and leave their germs behind. It would be hard to find a more difficult object to disinfect than a sponge in this state, and yet a more or less imperfect wetting with a five to one hundred solution before use is sometimes expected to accomplish the result. In reality the sponges should

be soaked for days in carbolic solution, and only taken out just before they are wanted. They should be stacked in a clean basin, and kept covered with a towel wet with carbolic, and never actually used for more than a minute before being replaced.

Similar precautions should be taken with instruments. The real safety in these is that they are habitually kept clean, and the germs do not adhere readily to the dry, polished surfaces. But the teeth of some forms of forceps are very hard to clean, and these as well as any other rough surfaces should receive special attention. The moment instruments are wet, however, any germ which touches them sticks, and this should be guarded against by keeping them completely covered by five to one hundred solution whenever laid down. Laying them on a wet cloth is utterly useless.

Sutures should be kept stuck in the under surface of the cork of a wide-mouthed bottle containing carbolized oil, and never in the assistant's coat.

Such details are often omitted or neglected from carelessness or routine, but they are among the essentials, without which an operation cannot be said to be thoroughly antiseptic. It may be said that many cases end successfully without them; so they do without any antiseptics whatever. But as the percentage of failure is smaller with antiseptics than without, so it is smaller with thorough antiseptic precautions than with half-way measures.

DR. A. T. CABOT asked about the use of a solution of carbolic in ether for preparing dressings.

DR. BIGELOW said that the difficulty is rapid evaporation. If the dressings were renewed often enough it might work. He had never tried it on wounds, but often used it in laboratory work for stopping flasks, etc., for which it is wholly unreliable.

DR. BRADFORD asked about disinfection by heat of cotton dressings.

DR. BIGELOW said it had been often recommended by Pasteur. The trouble with Guérin's cotton-wool dressings is that he shuts all the germs inside. If the cotton be heated till it just begins to char, shown by its turning a faint cream color, then all the germs it contains are also slightly charred, and, of course, dead beyond the possibility of resuscitation. Cotton-batting in rolls, in large, wide-mouthed jars, and with a few thicknesses of paper tied over the neck by a string, may be conveniently charred in this way in an oven, and will keep for some time if the cover is not disturbed. If the cotton be charred too much it becomes brittle and useless.

DR. MARCY spoke of his way of preparing dressings, and promised to show some at a future meeting.

Recent Literature.

A Manual of Ophthalmoscopy for the Use of Students. By DR. DAGUENET. Translated by C. S. Jeaffreson, F. R. C. S. E., etc. Philadelphia: Presley Blakiston. 1880.

The author's "object has been to condense, in as small a number of pages as possible, all that it is necessary to know to study with benefit diseases of the eye."

The arrangement of the subject-matter is, in general, good, but, except as to condensation, the author has fallen much short of the goal he attempted to reach.

¹ London: Baillière, Tindale & Co. 1880.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 8, 1881.

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THE CASE OF PRESIDENT GARFIELD.

SINCE immediately after the occurrence of the shooting of the President we have, as a weekly publication, and wisely, we think, refrained until now from comment upon the medical aspects of the case.

The hourly phases of this momentous illness have been made public, with all their details, as those of no other case of medicine or surgery ever were before. That the methods of their presentation have not always been satisfactory, even to those who "read between the lines," is made apparent by the fact that to the daily dispatch of "Blaine to Lowell," rather than to the "official bulletin," every eye has turned for reliable information of the President's condition. A lenient judgment must, however, be invoked for physicians who have borne the task of an attendance, the trying nature of which can be easily understood; and we ought, perhaps, to congratulate ourselves that no change has taken place in the *personnel* of the President's medical staff, in view of the possibilities which such a step might have involved.

It is an easy matter to speculate upon what would have happened if the assassination of President Garfield had occurred in New York, or Philadelphia, or Boston. It is in vain to wish that Dr. Agnew's surgical experience could have guided the treatment from the very outset; but it is none the less a fact that the President's case was one which called for the best skill of surgeons familiar with the daily practice of surgery, and proficient in all subjects pertaining to modern surgical pathology and therapeutics. It may be a question whether the encouraging hope that all was going on well was not a better sentiment to foster than one which would have revealed to an absorbed and expectant public, for example, the full and fateful meaning of the parotid inflammation, which every practiced surgeon realized as soon as its existence was made known. It may have been more politic to state that the "giving out" of the stomach was due to a dyspepsia which a soldier's and statesman's campaigns had occasioned, rather than that its true cause was the increasing exhaustion of blood-poisoning; but the one great "might have been" most to be wished is that, in so prominent and conspicuous a case, there should have been nothing said or done to impair the public's faith in the science of medicine as practiced by the profession, at the present time, in a country where its position has, in these latter days, acquired so great a prestige in the estimation of the whole world.

The suggestion has been made that the President's welfare would have been promoted by his earlier removal from Washington. In looking back we can now see that this could have been done, possibly with advantage, during some periods of the case; but the expectation of improvement, or the occurrence of imperfectly appreciated "relapses," must nevertheless have justified its repeated postponement. So far as we are aware, however, there has been no reason to suspect the malign influence of "malaria," either in that form which might be due to the location of the White House, or that modern variety to which the term is popularly applied, and which means the emanations from drains and soil-pipes, as having had any *direct* detrimental effect upon the President's condition.

The extent and perfection to which antiseptic measures have, or have not, been adopted calls for this much of comment, namely, — that perfectly antiseptic dressings and methods must have been very difficult to maintain in the treatment of such a wound as the President's; and, if the details in this respect have not satisfied the ultra disciples of Listerism, the attending physicians are entitled to what vindication they can find in the verdict of the recent International Congress, "that antiseptic treatment only answers one of the requirements of wound treatment; and that he only is a scientific surgeon who enlarges his views and practice to embrace them all."

FIRST ANNUAL REPORT OF THE NEW YORK STATE BOARD OF HEALTH.

ALTHOUGH submitted to the Governor of the State some months since, the above report has only recently been published in permanent form. It embraces the period from the organization of the Board on the 29th of May, 1880, to the first of the following December, and the amount of work accomplished by it during this first six months of its existence, as set forth therein, certainly goes to show that there was abundant need for the establishment of such an organization in the State. After some notice of the organization of the Board and the rules under which it is managed, the report takes up the subject of the public health laws, and points out the necessity for sanitary regulations for every town and village on the ground that there are sources of peril from various diseases and from causes of evil that require something more than individual efforts to secure even personal and domestic health, and much more to protect the public health. In view of the importance of this subject the Board has had prepared a compendium of the laws relating to public health and a brief outline of model sanitary ordinances, regulations, and orders adapted to the use of local boards of health in the State. Then follows a statement of the efforts of the Board to secure a complete registration of deaths, births, and marriages throughout the State, and a more efficient discharge of their duties by local boards of health.

The subject of preventable and prevalent diseases is next taken up, and the necessity of a suitable system for the observation and registry of disease pointed

out. The fact that twenty-five per cent. of all the mortality in the State is caused by only five of the diseases which destroy life, and that fully one third of the total sickness and mortality in the State is known to be preventable, is regarded as an ample reason for making a systematic study and registration of such diseases; and this duty, it is stated, has been satisfactorily commenced by the Board. Small-pox is the first infectious disease spoken of, and a brief notice is given of its occurrence in Troy and some of the surrounding villages and towns. The record of an outbreak of the disease among a factory population in West Troy very completely illustrates how recklessly the contagion is apt to be spread among the common people, and how promptly great employers of such people may take action which shall stamp out such an epidemic. Eighty persons were present at a masquerade party, and after several hours, when the company sat down to supper unmasked, it was discovered that one young woman had varioloid eruption on her face; but, instead of at once dispersing, the company continued their revelry until morning. The result of this wanton and culpable exposure was that twenty-two of the eighty individuals were attacked with varioloid or variola. As these cases all occurred in families of employees of a certain firm of manufacturers of woollen goods, the firm at once closed their mills and ordered all persons employed by them, in whatever capacity, to be vaccinated; enforcing the order by insisting that no individual should continue in their employment without presenting a certificate from a physician showing that they had been vaccinated, even though they might have had small-pox itself. The same emphatic orders also extended to the most thorough purification and disinfection of all dwellings in the place, and the consequence was that the outbreak was suddenly and completely terminated. Twenty-two cases resulted from exposure in the dance-hall, and eleven persons contracted the disease from exposure to these cases; while only one case occurred outside of the families thus exposed. Five of the whole number of cases were very severe, but none of them proved fatal.

In six widely separated regions of the State the Board was called to advise in regard to the prevalence and suppression of diphtheria. Among these were Geneva and its vicinity, where, among a population of seven thousand inhabitants, eighty deaths occurred from it in a period of fifteen months; the scattered forest townships of Arietta and Northville, in Hamilton and Fulton counties, respectively; and Otsego County, where, from a mild case in a farmhouse, situated upon a high hill, there occurred a series of malignant and fatal cases. The connection of a single tenement with a line of direct repropagation, traced nearly a hundred miles, and a significant instance reported from Middlefield, Otsego County, as traced back to a tenement in the village of Amsterdam, aptly illustrated the propriety of the measures for separation of the sick, and thorough disinfection, recommended by the Board in all cases of diphtheria.

Outbreaks of dysentery occurred in some of the villages of Long Island during the summer and autumn, and the subsequent investigations undertaken under the supervision of the Board left no doubt that the trouble originated in the contamination of the wells from privies, cess-pools, and other sources of defilement.

The reports and various complaints concerning malaria and the local sources of miasmatic disease outnumbered all others received at the office of the Board; and the most obvious fact derived from them was that drainage and sewerage for health do not yet appear to be the first object which local authorities have in view in their public works and the rules and regulations they enforce concerning them, whether in cities, villages, or the rural districts. The action advised or taken for relief and prevention in the instances referred to in the report unfortunately proved that the existing laws relating to general drainage of wet lands, etc., in the State were practically inoperative, and, further, that wherever they have been put into operation they have been the occasion for errors and abuses which the legislature did not foresee. Therefore, although the law creating the State Board of Health provides, in one of its sections, a mode of summary procedure to secure the protection of health and life in urgent cases, where nuisances are menacing the people, there seems to be great need of an improvement in the general laws relating to drainage and sewerage.

In regard to the purity of water supplies for domestic use, it is shown that the want of adequate laws for preventing the pollution of streams, wells, and other sources of supply is equaled only by the general neglect on the part of citizens of the duty to avoid the use of sanitarily impure and defiled water. The subject of providing pure supplies and of maintaining necessary local regulations to prevent the sources of defilement, it is stated, is now under discussion in various parts of the State, and is receiving the special attention of the Board and of the local authorities with whom it is in correspondence, and the Board has now issued to the latter a proposed form of sanitary regulations in regard to the matter. In the various reports and statements appended to the general report of the Board it is believed that there is abundant evidence that the local sanitary officers in different parts of the State are already coöperating with the State Board in a cordial and useful way. In conclusion it is stated that the work of the Board, as at present organized, has reached a point which will insure constant investigation and care of local causes of miasmatic diseases, of the interests of health and life as they are affected by water supplies, of safeguards against poisons and adulterations, of the danger from fluids used in common lighting, and of the sanitary wants of public institutions and places of assemblage, while, by the general registration of vital statistics, the dissemination and practical application of sanitary knowledge, and the maintenance of its central office in a state of complete readiness and efficiency, the Board must endeavor to extend its coöperation, and

offer the most useful information and counsel whenever local sanitary officers or the people of any community seek such aid in preserving life and health.

(To be concluded.)

MEDICAL NOTES.

NEW YORK.

—The sea-side nursery of St. John's Guild, recently opened at Cedar Grove, near New Dorp, Staten Island, is designed to be a model institution of its kind. It is a wooden structure, of yellow pine, having a frontage on the water (from which it is distant about thirty feet) of six hundred feet, and when entirely completed will consist of a central building and two wings. One of the wings is finished, but the other will not be erected till next summer. Special attention has been paid to the ventilation and drainage, and the closets are in a small, separate wing connected with the main building. All around the house there are verandas, some of which will at all times be in the shade. The Guild owns ten acres in the rear of the nursery, and the most of the land is covered by a fine cedar grove, which, it is believed, will add no little to the salubrity of the location. This institution is designed not to take the place of the floating hospital, but to supplement the work hitherto carried on by its agency. It frequently happens that children when seriously ill, after spending a day on the water on one of the excursions (although greatly benefited for the time being) are reduced to their previous condition after a single night spent in the unwholesome atmosphere of the tenement-house. Hence to secure permanent benefit in these worst cases taken upon the excursions a certain number of the children will be received into the nursery for as long a period as the circumstances in each case may require. The cost of endowing a bed in the institution is one hundred dollars, and the maintenance of quite a number has already thus been permanently secured.

—During the week ending August 14th the public baths were used by 286,821 persons, of whom 97,493 were females.

—A lodging-house in Thompson Street has been ordered to be vacated by the Board of Health, on account of its bad sanitary record. This is one of the buildings in which typhus fever appeared early in the spring, and from April 8th to July 21st there were removed from it twenty-two unmistakable cases of typhus, besides several in which the diagnosis was doubtful. The fever germs seem to have persistently adhered to the premises in spite of almost daily fumigations and frequent white washings and other efforts at purification. The emigration commissioners, having recently made an inspection of a number of the emigrant boarding-houses, have suspended the licenses of three of them on account of their unhealthy and filthy condition.

—A large new hospital (St. Mary's) to be under the direction of the sisters of charity of the diocese, is now being erected in Brooklyn. It is to cost six

hundred thousand dollars, and will accommodate one thousand patients, the care of which will be in the hands of a house staff of ten physicians and surgeons, with one hundred nurses. There will also be an outdoor department. The late Matthew Vassar in his will bequeathed eighty-five thousand dollars for the founding of a hospital to be known as "The Vassar Brothers Hospital" at Poughkeepsie, and in addition made this institution residuary legatee, an arrangement which will probably secure its endowment to the extent of two hundred and fifty thousand or three hundred thousand dollars.

Miscellany.

CRIME AND INSANITY.

MR. EDITOR, — In your issue of July 28, 1881, you reprint an article from the *Lancet*, entitled, Method in Madness, which refers to "the murderer of Mr. Gold" and "the man who attempted to assassinate the President of the United States," and you seem to indorse the same editorially. The closing sentences of the article read as follows: "The perpetrators of these heinous offences against common right and public safety may be more or less responsible for their acts, and, so far as they are concerned, more or less sane or insane. The measure of the morbid element in their individual cases will be the health or disease of the particular part or element of the brain from which the offense sprang. The ultimate judgment formed must be determined upon the basis of scientific tests to be applied to the action of the brain alleged to be the subject of partial or incipient disease. There is nothing in the facts, as they stand, to supply the materials for a judgment. Precise scientific inquiry can alone solve the enigma each case presents."

If this is written (and indorsed) simply from a metaphysical point of view, I have nothing to say, but if it is intended as a preliminary argument, I desire to take issue fairly and squarely with the writer and indorser.

What is the underlying principle of our modern penal code? Is it retaliatory, vengeful? Is an eye exacted for an eye, or a tooth for a tooth? By no means. When we hang a man it is with the intention of warning all other men not to commit so terrible a crime. When we put a man in prison it is with the hope that his discipline may prove reformatory.

But of late years a strange sentimentality has sprung up on this matter. A murderer has become a subject of especial interest. The life that he has extinguished is not considered, it is passed, gone, but *this* life, which is in such deadly peril is to be soothed (with rich viands), sweetened (with beautiful flowers), and prayed with till, by some hook or crook,—an *alibi* or the insanity dodge,—it may be rescued from the vale of death, and brought out into the sunshine of acquittal and—oblivion; and it is marvelous how simply and sweetly good, conscientious, pious people will lend themselves to a more or less open fraud to "save this brand from the burning."

The writer in the *Lancet* seems to think that "the materials for a judgment," in the case of these two criminals "must be determined up on the basis of sci-

entific tests to be applied to the action of the brain alleged to be the subject of partial or incipient disease." In this case no jury could ever be found—not even of psychologists—to decide upon the insanity nor even the sanity of any man. It has often been said that no "genius" was sane, because his mind was not well balanced, that it over-developed one quality at the expense of others; and, *à propos* of Guiteau, an eminent physician of New York is stated to have said that "no man who did not take his three square meals a day could be considered sane."

But most people, in and out of the profession, — psychologists and sentimental philanthropists excepted, — expect the laws to protect them from criminal assaults, and they will be as strongly inclined to believe that the common law is good enough for men who exhibit such very homeopathic conditions of insanity as the miscreants under consideration, and not care to "measure the morbid element in their individual cases" so fine as to defraud the ends of *real justice*. A. R. B.

BERKELEY, CALIFORNIA.

LONDON LETTER.

LONDON, August 23, 1881.

THE AMERICAN EDITION OF HOLMES' SURGERY; TORSION OF ARTERIES AT GUY'S HOSPITAL; MOORFIELD'S OPHTHALMIC HOSPITAL; CATARACT OPERATIONS, ETC.

MR. EDITOR, — Two or three things may interest you.

Did I tell you how indignant my friend Mr. Holmes is at the prospective issue of an American edition of his *System of Surgery*? He says that the first intimation he had of it was the advertisement in the *American Journal of Medical Sciences*. He is very emphatic in his denunciation of the project. He says there can be no excuse on the ground of the necessity of a modernized edition because he is busy editing a revised issue himself. He says that not only was he never notified by Mr. Lea, the publisher, or any one else, of any such intention, but that one of the gentlemen who is writing up one of the most important subjects had the ———? to write him asking his opinion upon certain points connected therewith, never alluding to the contemplated use of his answer. "I am sure," he said, "no one could be found in London who would do such a thing."

It is very unfortunate that there is not some proper adjustment of the international copyright interests.

Those of your readers who have not seen the Guy's Hospital Museum recently are not aware of the perfection in quality and detail of the *life-like* wax preparations. Every form of skin disease, acute and chronic, in every stage and variety, every kind of morbid growth, both before and in section after removal, either ante or post mortem, are shown, and so accurately that it requires very careful inspection to determine the fact that they are artificial. It is a most fascinating field for study, and an excellent place for an experienced practitioner to train himself in diagnosis by inspection.

At Guy's all the surgeons use torsion to the exclusion of the ligature, except sometimes in very small vessels wherein it is difficult to isolate the vessel from muscular fibres. They give a very large statistical

showing in its favor. I have seen every kind of amputation there except of the hip-joint, and never a ligature applied to a large vessel. They use no transverse forceps, but seizing the cut end of the vessel with strong forceps twist it until it is felt to "give way," that is, the two inner coats break. I have often seen six and sometimes ten complete turns given to the femoral artery. Mr. Bryant said, "Doctor, theoretically the twisted end ought to slough off, but *practically it never does*." We have to talk to our students about secondary hæmorrhage, but we do not show it to them." Mr. Lucas told me that for a long time they have ceased to dread or look for secondary hæmorrhage.

I saw Mr. Bryant perform excision of the head of the femur in a peculiar case. It was a case of traumatism in a child of four years, where there had been pain, tenderness, inguinal swelling, with *abduction* and *eversion* of the limb, and a sinus on the anterior aspect of the thigh at the middle. Child emaciated and feeble, but under ether the motions, which were free, developed *no crepitus*, nor was there any shortening, but, just as he predicted, the head was found carious rolling in a mass of granulations sprouting from a carious acetabulum, a perforation in which communicated with a pelvic abscess.

I have been at Moorfield's for a few days constantly, and there found my compatriot, Dr. Fox, of Philadelphia, a pupil of Professor Gross, as house surgeon. He has, like all the rest, been exceedingly kind. The greatest advances in ophthalmology just now are connected with refraction, especially in retinoscopy and keratascopy. Now we can determine the various affections of myopia, hypermetropia, astigmatism, etc., with the ophthalmoscope, and also ascertain the degree of corrective power. The advantage in case of children is obvious. Dr. Morton, of the hospital, has just published a valuable little monograph on the subject.

They generally make, in London, the modified linear extraction for cataract, making a small iridectomy upward, dividing the capsule by crucial incision, and after making the flap — they do not curve the last of it forward — remove the fixation forceps, and *do all the rest without supporting the globe*. You can imagine how much the operation is delayed and the operator embarrassed where the patient is compelled to keep the eye in position. In the same operation I have seen the operator have to make six or eight attempts both for seizing the iris and extracting the lens, because the poor patient could not keep the organ still, and hear him or her told, "You will lose your eye if you don't hold it still, and it will be your own fault." I have too often seen the lens driven backward, and vitreous humor escape, and a long and tedious search before extraction from lack of fixation. After a careful observation of results in a large number of cases, I have seen nothing, in uncomplicated cases, that equals a small corneal flap, base of incision close to the sclerotic, *curving it forward in the last third of its extent* about twenty-five degrees, and *incising the capsule along and just in front of the upper border of the lens* — the pupil being well dilated. If, as almost never happens when the incision is thus curved, the iris inclines to protrude at all, snip it off, otherwise leave the normal pupil. *Experientia docet*.

Sincerely yours,

WM. WARREN GREENE.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 20, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	682	350	40.62	23.02	6.30	6.60	1.03
Philadelphia.....	846,984	400	192	28.25	16.00	1.75	2.00	5.00
Brooklyn.....	566,689	288	175	39.93	26.39	6.25	—	.35
Chicago.....	362,535	212	113	53.61	31.67	4.72	30.56	5.28
Boston.....	350,522	172	80	44.34	37.74	3.31	3.77	1.42
St. Louis.....	332,190	196	101	37.79	19.77	1.16	1.16	2.91
Baltimore.....	255,708	114	57	44.90	23.47	7.65	1.53	5.61
Cincinnati.....	216,140	123	40	30.70	14.41	2.63	3.51	10.53
New Orleans.....	177,638	87	47	22.76	8.94	3.25	1.63	—
District of Columbia.....	156,381	100	53	41.38	25.29	3.45	2.30	3.45
Pittsburgh.....	155,137	106	63	47.00	19.00	5.00	6.00	10.00
Buffalo.....	115,578	73	51	49.06	34.91	3.77	1.89	2.83
Milwaukee.....	104,857	61	30	23.29	17.81	4.11	2.74	—
Providence.....	62,882	18	—	39.34	26.23	6.56	4.92	—
New Haven.....	49,999	45	26	22.22	11.11	5.56	5.56	5.56
Charleston.....	43,461	16	8	17.78	15.56	2.22	6.67	—
Nashville.....	59,485	35	21	37.50	31.25	—	6.25	6.25
Lowell.....	58,295	26	15	40.00	37.14	—	—	—
Worcester.....	52,740	32	24	26.92	23.08	3.85	7.69	—
Cambridge.....	49,006	30	18	59.38	59.38	—	—	—
Fall River.....	39,178	25	12	30.00	10.00	3.33	—	3.33
Lawrence.....	38,284	11	5	—	—	—	—	—
Lynn.....	33,340	14	12	40.00	24.00	12.00	—	—
Springfield.....	27,598	17	12	45.45	45.45	—	9.09	—
New Bedford.....	24,985	10	4	64.29	64.29	—	—	—
Somerville.....	21,851	19	10	52.94	47.06	—	11.76	5.88
Holyoke.....	21,785	10	8	50.00	40.00	10.00	10.00	—
Chelsea.....	21,213	11	7	42.11	31.58	5.26	—	5.26
Taunton.....	19,329	16	10	10.00	10.00	—	—	—
Gloucester.....	18,475	—	—	81.82	54.55	9.09	18.18	—
Haverhill.....	16,995	—	—	50.00	43.75	—	—	6.25
Newton.....	13,537	2	1	—	—	—	—	—
Newburyport.....	12,405	7	3	—	—	—	—	—
Fitchburg.....	187,156	96	39	100.00	100.00	—	—	—
Twenty-four Massachusetts towns..				28.57	28.57	—	—	—
				29.17	22.92	1.04	—	2.08

Deaths reported 3414; 1828 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1347; diarrhoeal diseases 839, consumption 374, diphtheria and croup 146, lung diseases 111, typhoid fever 102, malarial fevers 61, scarlet fever 55, small-pox 42, whooping-cough 41, cerebro-spinal meningitis 27, measles 16, erysipelas eight, puerperal fever six, typhus fever four. From *malarial fevers*, St. Louis 15, New York 14, New Orleans 10, District of Columbia eight, Brooklyn six, Baltimore three, Chicago and Buffalo two, Philadelphia one. From *scarlet fever*, New York 24, Brooklyn and Pittsburgh five, Philadelphia four, St. Louis and Baltimore three, Chicago, Boston and Buffalo two, New Orleans, Milwaukee, Lowell, Fall River, and Spencer one. From *small-pox*, Chicago 20, Philadelphia 10, New York six, Pittsburgh five, Brooklyn one. From *whooping-cough*, New York nine, Baltimore six, Chicago and St. Louis five, Brooklyn four, Providence three, Cincinnati and Buffalo two, Philadelphia, Boston, Fall River, Quincy, and Beverly, one. From *cerebro-spinal meningitis*, Chicago 10, New York six, Philadelphia four, Fall River two, Cincinnati, New Orleans, Buffalo, Lynn, and Taunton one. From *measles*, New York six, Pittsburgh three, Baltimore two, Philadelphia, Brooklyn, Chicago, Buffalo, and Providence one. From *erysipelas*, Brooklyn and Chicago two, New York, Boston, Baltimore, and Taunton one. From *puerperal fever*, Philadelphia, Brooklyn, Chicago, St. Louis, Baltimore, and New Orleans one. From *typhus fever*, New York four.

Five cases of small-pox were reported in Brooklyn, 57 in Chicago, and 44 in Pittsburgh; diphtheria 16, scarlet fever three, in Boston; diphtheria seven, scarlet fever five, in Milwaukee.

In 10 cities and towns in Massachusetts, with a population of 1,010,124 (population of the State 1,783,086), the total death-rate for the week was 28.67 against 27.58 and 29.16 for the previous two weeks.

For the weeks ending July 23d and July 30th in 149 German cities and towns, with estimated populations of 7,556,846

and 7,699,657, the death-rates were 35 and 31.2. Deaths reported in the respective weeks 5182 and 4717; under five 3280 and 3072; diarrhoeal diseases 647, 563; pulmonary consumption 463, 435; acute diseases of the respiratory organs 263, 199; scarlet fever 100, 86; diphtheria and croup 89, 105; typhoid fever 56, 55; whooping-cough 42, 42; measles and *rötheln* 46, 34; puerperal fever 15, 13; typhus fever one, seven; small-pox four, one. The death-rates in the respective weeks ranged from 16.7 in Metz to 54 in Breslau; and from 14.6 in Bremen to 45.9 in Posen; Königsberg 25.5, 31; Breslau, 44.6; Munich 31.9, 40; Dresden 32.4, 35.2; Berlin 54, 44.5; Leipzig 30.9, 31.6; Hamburg 33.4, 27.1; Hanover —, 24.1; Bremen 26; Cologne 32.7, 32; Frankfort 22.7, 18.6; Strasburg 36.8, 33.8.

For the weeks ending July 30th and August 6th in the 20 English cities, with an estimated population of 7,608,775, the death-rates were 25.2 and 22.9 respectively. Deaths reported 3673 and 3342; diarrhoea 776, 533; acute diseases of the respiratory organs (London) 156, 165; scarlet fever 106, 95; measles 104, 99; whooping-cough 79, 63; small-pox (London 39, 38) 43, 41; fever 26, 38; diphtheria 23, 16. The death-rates ranged from 12.4 in Wolverhampton to 36.9 in Leicester, and 9.7 in Plymouth to 30.1 in Leicester in the respective weeks; Bristol 17.4, 17.9; Sheffield 17.7, 20.1; Manchester 22.5, 22; Birmingham 23.9, 19.1; London 27.2, 23.4; Liverpool 29, 27.3; Leeds 29.2, 22.5. In Edinburgh 14.1, 16.2; Glasgow 19.4, 23.6; Dublin 17.5, 19.4.

In the 21 chief towns of Switzerland, for the weeks ending July 30th and August 6th, population 479,934, there were respectively 49 and 77 deaths from diarrhoeal diseases; acute diseases of the respiratory organs 12, 15; diphtheria and croup eight, six; whooping-cough six, —; typhoid fever five, four; measles —, two; puerperal fever —, one. The death-rates for the respective weeks were: Geneva 12.9, 24.3; Zurich 29.1, 23; Basle 26.8, 23; Berne 25.8, 34.1.

The meteorological record for the week in Boston was as follows: —

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
August, 1881.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration.	Amount in inches.
Sun., 14	29.745	69	82	63	70	47	90	69	W	NW	NW	7	10	9	F	F	R	1.50	.01
Mon., 15	30.005	64	73	61	63	63	84	70	NE	E	NW	9	4	7	C	C	C	—	.03
Tues., 16	30.170	61	65	57	67	63	77	69	N	E	NE	14	8	8	O	F	F	—	—
Wed., 17	30.145	58	61	53	74	75	88	79	NE	NE	NE	17	13	18	C	O	R	1.15	.02
Thurs., 18	30.044	59	65	55	100	85	94	93	NE	NE	NE	17	11	8	R	O	O	2.55	.46
Fri., 19	29.881	61	65	58	100	89	98	96	N	C	E	10	0	4	R	G	G	11.20	.31
Sat., 20	29.776	64	73	58	100	80	93	91	N	E	NE	4	6	12	G	F	O	—	—
Week.	29.967	62	82	53														17.20	.81

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 27, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Princi-pal "Zy-motic" Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	679	346	41.68	22.39	9.43	6.63	2.06
Philadelphia.....	846,984	349	163	24.07	9.74	2.87	1.44	4.01
Brooklyn.....	566,689	279	157	36.92	22.22	5.02	6.45	1.08
Chicago.....	503,304	335	203	48.96	23.88	4.78	2.69	6.27
Boston.....	362,535	177	103	40.11	33.33	3.39	3.39	1.13
St. Louis.....	350,522	173	89	27.75	14.45	.58	1.73	1.16
Baltimore.....	332,190	201	108	35.32	20.90	5.47	2.99	3.48
Cincinnati.....	255,708	119	60	34.45	15.13	4.20	6.72	10.08
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	102	51	39.22	26.47	1.96	3.92	6.86
Pittsburgh.....	156,381	104	52	60.58	14.42	4.81	2.88	13.46
Buffalo.....	155,137	123	75	49.59	37.40	2.44	6.50	6.50
Milwaukee.....	115,578	76	59	38.16	25.79	9.21	2.58	2.58
Providence.....	104,850	34	12	44.12	20.59	14.70	—	2.94
New Haven.....	62,882	30	10	20.00	6.67	—	—	3.33
Charleston.....	49,999	—	—	—	—	—	—	—
Nashville.....	43,461	18	9	22.22	16.67	—	5.56	—
Lowell.....	59,485	24	12	33.33	29.17	—	—	—
Worcester.....	58,295	20	16	55.00	45.00	—	10.00	—
Cambridge.....	52,740	35	15	48.57	45.71	2.86	5.71	—
Fall River.....	49,006	19	10	26.32	10.53	10.53	5.26	—
Lawrence.....	39,178	17	9	29.41	23.53	—	—	—
Lynn.....	38,284	18	7	38.89	27.78	5.56	—	—
Springfield.....	33,340	9	2	22.22	22.22	—	—	—
Salem.....	27,598	20	12	65.00	55.00	5.00	5.00	5.00
New Bedford.....	26,875	9	2	55.56	44.44	—	—	—
Somerville.....	24,985	7	5	28.57	14.29	14.29	—	—
Holyoke.....	21,851	10	5	40.00	30.00	—	10.00	10.00
Chelsea.....	21,785	12	3	8.33	—	—	—	—
Taunton.....	21,213	10	7	80.00	70.00	—	—	10.00
Gloucester.....	19,329	9	5	88.89	66.67	11.11	—	11.11
Haverhill.....	18,475	6	2	33.33	33.33	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	6	1	33.33	33.33	—	—	—
Fitchburg.....	12,405	2	0	—	—	—	—	—
Twenty-three Massachusetts towns.	178,427	63	30	49.21	33.33	4.76	4.76	6.35

Deaths reported 3095 (no returns from New Orleans or Charleston): 1640 under five years of age: principal "z-motic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 1214, diarrhœal diseases 694, consumption 338, diphtheria and croup 159, lung diseases 128, typhoid fever 110, small-pox 61, scarlet fever 56, malarial fevers 54, whooping-cough 46, cerebro-spinal meningitis 14, measles 10, puerperal fever six, erysipelas three, typhus fever one. From small-pox, Chicago 28, Pittsburgh 17, Philadelphia 10, New York six. From scarlet fever, New York

20, Brooklyn and Pittsburgh nine, Philadelphia seven, Chicago, Baltimore, and Buffalo two, Providence, New Haven, Worcester, Fall River, and Westborough one. From malarial fevers, New York and St. Louis 15, Baltimore eight, District of Columbia seven, Brooklyn and Chicago three, Cincinnati, New Haven, and Nashville one. From whooping-cough, Brooklyn 11, Philadelphia eight, Chicago seven, New York five, Boston and Cincinnati four, St. Louis and Buffalo two, Baltimore, Pittsburgh, and Providence one. From cerebro-spinal meningitis, Chicago and St. Louis two, New York, Philadelphia, Cincin-

ti, Lowell, Worcester, Lawrence, Lynn, Chelsea, Attleborough, and Westborough one. From *measles*, New York four, Chicago three, Brooklyn two, Pittsburgh one. From *puerperal fever*, Chicago two, New York, District of Columbia, New Haven, and New Bedford one. From *corysipelus*, Brooklyn, St. Louis, and Pittsburgh one. From *typhus fever*, New York one.

Seven cases of small-pox were reported in Brooklyn, 25 in Chicago, 38 in Pittsburgh; diphtheria 11, scarlet fever four, in Boston; diphtheria 15, scarlet fever three, in Milwaukee. Dysentery is prevalent in Buffalo.

In 11 cities and towns of Massachusetts, with a population of 1,079,343 (population of the State 1,783,986), the total death-rate for the week was 22.85 against 28.67 and 27.58 for the previous two weeks.

For the week ending August 6th in 149 German cities and towns, with estimated populations of 7,794,129, the death-rate was 30.8. Deaths reported 4612; under five 3822; diarrhoeal diseases 530, pulmonary consumption 487, acute diseases of the respiratory organs 210, scarlet fever 88, diphtheria and croup 88, typhoid fever 66, whooping-cough 40, measles and röteln 20, typhus fever (Königsberg, Stettin, Berlin two) 4, small-pox (Königsberg, Aachen, Stettin) three. The death-rates ranged

from 9.8 in Metz to 48.1 in Chemnitz; Königsberg 31.6; Breslau 45.4; Munich 34.6; Dresden 34.5; Berlin 37.8; Leipzig 30.9; Hamburg 28.6; Hannover 22; Bremen 22.4; Cologno 31.8; Frankfurt 23.4.

For the week ending August 13th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 21.7. Deaths reported 3167; diarrhoea 483, acute diseases of the respiratory organs (London) 148, scarlet fever 110, measles 87, whooping-cough 61, fever 42, small-pox (London) 29, diphtheria 19. The death-rates ranged from 14.7 in Bradford to 36.9 in Leicester; Manchester 18.7; Sheffield 19.5; Bristol 20.2; Birmingham 21; London 21.5; Liverpool 24.3; Leeds 26.2. In Edinburgh 17.1; Glasgow 20.9; Dublin 22.2.

In the 21 chief towns of Switzerland, for the week ending August 13th, population 479,934, there were 79 deaths from diarrhoeal diseases; acute diseases of the respiratory organs and typhoid fever each 10, diphtheria and croup seven, whooping-cough five, puerperal fever three, measles two. The death-rates were: Geneva 21.8; Zurich 27.8; Basle 27.6; Berne 31.6; St. Imier 87.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
August, 1881.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration.	Amount in inches.
Sun., 21	29.703	67	77	60	95	76	95	89	NW	SE	W	7	7	8	G	F	F	—	—
Mon., 22	29.834	71	84	62	75	43	74	64	W	W	W	12	7	8	F	F	C	—	—
Tues., 23	30.035	68	79	59	75	48	73	65	W	W	NW	10	9	6	C	O	C	—	—
Wed., 24	30.274	61	66	58	69	81	75	75	N	E	SE	8	8	4	F	O	O	—	—
Thurs., 25	30.280	64	80	55	77	64	87	76	W	E	SW	2	3	12	F	F	C	—	—
Fri., 26	30.225	69	84	59	79	66	90	78	W	Calm.	W	3	0	9	C	H	C	—	—
Sat., 27	30.180	71	91	63	97	52	84	78	W	SE	W	5	3	10	G	H	C	—	—
Week.	30.077	67	91	55				75										3.30	.15

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 27, 1881, TO SEPTEMBER 2, 1881.

BYRNE, CHARLES C., major and surgeon. Relieved from duty at Angel Island, Cal., and assigned to duty as post surgeon at Benicia Arsenal and attending surgeon at Benicia Barracks, Cal. S. O. 142, Military Division of the Pacific and Department of California, August 23, 1881.

COLES, ELLIOT, captain and assistant surgeon. Granted leave of absence for one month, to take effect when relieved by a medical officer, with permission to apply for three months' extension. S. O. 97, Department of Arizona, August 23, 1881.

KING, WILLIAM H., captain and assistant surgeon. To ac-

company Battery I, Third Battery, to Yorktown, Va., and remain with it until further orders. S. O. 153, Department of the East, August 31, 1881.

ADAIR, GEORGE W., captain and assistant surgeon. Granted leave of absence for two months. S. O. 196, A. G. O., August 26, 1881.

STRONG, N., first lieutenant and assistant surgeon. To proceed to Park City, Utah, report for temporary duty to commanding officer of the troops en route to Fort Thornburgh, Utah, and remain on such duty until arrival of Captain W. C. Shannon, Assistant Surgeon United States Army. S. O. 84, Department of the Platte, August 29, 1881.

ARTHUR, W. H., first lieutenant and assistant surgeon. Granted leave of absence for one month, to take effect from the date of return of Surgeon Forwood to Fort Omaha. S. O. 82, Department of the Platte, August 24, 1881.

Original Articles.

RESECTION OF THE TARSUS IN SEVERE CASES OF CONGENITAL CLUB-FOOT.

BY E. H. BRADFORD, M. D.

DR. LITTLE, of London, was the first to suggest removal of a portion of the tarsus (the cuboid bone) as a means of shortening the treatment in "inveterate varus."¹ This was done, in 1854, by Mr. Solly, of St. Thomas Hospital at the recommendation of Dr. Little. The result was less successful than was anticipated, owing, apparently, to the difficulty encountered in maintaining the corrected position of the foot by means of the appliances used. The patient recovered from the operation.²

Mr. Lund³ removed the astragalus in a similar case with success. The details have, however, not been given with sufficient accuracy to justify a clear opinion as to the perfection of the cure.

Dr. Mason, of New York, was obliged to amputate in a case where he had unsuccessfully excised the astragalus⁴ and a portion of the external malleolus.

Verbelzi successfully dissected out the astragalus in a case of congenital club-foot in a child five and one half years old.⁵ The exact details I have been unable to find.

Mr. Lund showed before the London Clinical Society a case where he had successfully removed the astragali in double congenital talipes. The boy was able to walk about readily. The astragalus was excised (after an incision through the soft parts) by means of a gouge and a short curved hook, with a cutting edge on its concavity.

Mr. Thos. Smith and Prof. John Wood have also performed the operation successfully.⁶

Mr. Davy has operated in three cases by removing simply the cuboid bone, and in three cases by excising a wedge-shaped piece from the tarsal arch. Death from septicæmia occurred in one case. In the others recovery took place, and from the report the cases progressed favorably.⁷

Davies Colley operated by resection of the tarsal bones on a child twelve years old; ten days after the operation on the second foot, and twelve weeks after the first operation, the patient was able to walk about without any apparatus. Two months later, when re-examined (no apparatus having been worn in the interval), the foot was found in good position, the boy treading on the whole of the sole. The patient could walk, hop, and jump. Six months later he was able to walk eight miles.⁸

König,⁹ Rupperecht,¹⁰ Meusel,¹¹ report, respectively, three, five, and five operations of resection of the tarsus for severe club-foot. All are mentioned as successful with the exception of one under the care of König, where death occurred ten days after the opera-

tion. At the autopsy it was found that the patient had been suffering from ulcerative endocarditis, with valvular disease of the heart, and with pathological changes in the lungs.

Ried has removed in congenital club-foot in children the astragalus and a portion of the os calcis in one case, in a second a wedge-shaped portion of the tarsus, and in a third the astragalus alone. The results are reported to be entirely satisfactory. In two cases of acquired equinus in an adult with ankylosis of the tarsus, a wedge-shaped section was made by means of a key-hole saw (first boring through the bones) through the tibia and fibula and the astragalus. In four weeks the wound was healed, in three the patient was able to walk with crutches, and the ultimate result was said to be entirely satisfactory.¹²

West¹³ excised the astragalus, the scaphoid, and the cuboid bones in a patient, twenty-three years old, suffering from talipes equino-varus, gaining a good result in ten weeks.

Bryant¹⁴ and Schede successfully removed a wedge-shaped section from the tarsus, and the latter showed their patients before the VII. Congress of German Surgeons.¹⁵

Hueter,¹⁶ in an adult, resected the head of the astragalus and the scaphoid, and the result was a useful foot.

Dr. C. B. Porter¹⁷ operated upon a boy by excising a wedge-shaped portion of the tarsus, obtaining an excellent result.

In the two following cases the patients came under my care suffering from severe relapsed congenital equino-varus. In the first case the deformity was single, in the second double.

CASE I. Cora W., eleven years of age, an inmate of an orphan asylum, was sent to the Children's Hospital for treatment, with severe equino-varus; the patient walking upon the outer edge and dorsum of the foot.

Tenotomy and mechanical treatment were tried for a month with but slight benefit. On August 27th a wedge-shaped section of bone was removed from the tarsus. The operation was done under antiseptic precautions. The section was made with a metacarpal saw, and the fragments removed with dressing forceps. After the operation the wound was covered with an antiseptic gauze dressing, a cotton bandage was wound over the foot and leg, and then a plaster of Paris bandage applied. After this had hardened a fenestrum was cut; the gauze over the wound cut open, laid back on the plaster bandage and carbolized putty packed in at the edge of the fenestrum; an ordinary antiseptic gauze dressing was applied over the whole; no constitutional disturbance followed the operation; the temperature rose once to 101° F., but with this exception remained normal; the wound healed under the blood clot as occurs under a thorough antiseptic dressing; in five weeks the patient was able to walk about without a cane; she remained in the hospital for some time under observation and was discharged with the foot in nearly a normal position. Nine months later the patient was again examined. She had worn no appliance in the interval, the foot had shown no tendency to relapse, the child wore an ordinary boot, could stand on the toes of the

¹ Practical Observations on the Treatment of Club-Foot. Third edition, page 305.

² Adams. Club-Foot. Second edition, Philadelphia, page 251.

³ British Medical Journal, October 19, 1872.

⁴ New York Medical Record, July 14, 1877.

⁵ Centralblatt f. Chirurgie, No. 24, 1877.

⁶ Lancet, March 16, 1878, page 389.

⁷ Lancet, March 16, 1878, page 388. British Medical Journal, December 15, 1877.

⁸ Medio-Chirurgical Transactions, second series, vol. xliii., 1877.

⁹ Centralblatt f. Chirurgie, 1880, No. 13.

¹⁰ Ibid., March 13, 1880.

¹¹ Centralblatt f. Chirurgie, No. 11, 1880.

¹² Deutsches Zeitschrift f. Chirurgie, 1880, xlii., 114.

¹³ British Medical Journal, 1878, vol. ii., p. 657.

¹⁴ Medical Times and Gazette, 1878.

¹⁵ Verhandlungen der Deutsches Gesellschaft f. Chirurgie, VII. Congress, 1878, Theil. I., s. 76 und 77.

¹⁶ Klinik der Gelenkkrankheiten, 1877, II. Theil, s. 145.

¹⁷ Unpublished case.

previously affected foot, but could not flex the foot beyond a right angle with the leg. The patient walked nearly on the whole of the sole of the foot, placing the heel well down at each step, as is shown by the accompanying tracing, taken by wetting the foot and allowing the patient to stand until the moistened impression was taken on the paper.

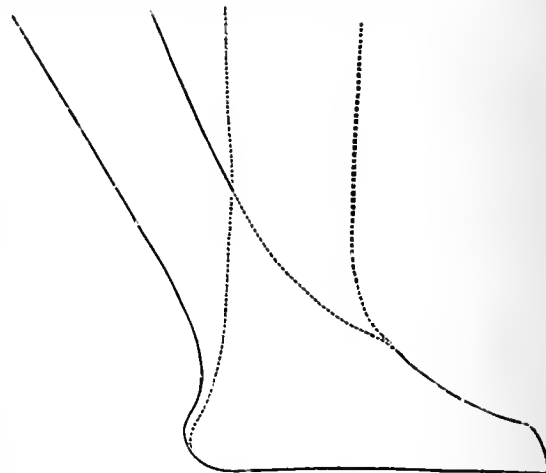


CASE II. R. F., boy thirteen years old, double congenital club foot, of aggravated type. The patient was only able to wear shoes made especially and walked on the dorsum and outer side of the foot.

The first foot was operated on November 9, 1881. By December 12th the boy was able to bear weight upon the limb; by January 19th the wound was entirely healed. January 9th the second operation was performed; on February 4th he was allowed to walk about both feet. The patient remained in the hospital until April 2d, under observation. At this time he walked a mile and used no apparatus or cane, wearing ordinary shoes. No sinus remained after either operation. The temperature rose after the first operation to 102° F. on the second day, but fell to normal the next day and remained so. After the second operation on the third day the temperature rose to 101° F., but fell after removing the drainage tube, which was stopped; no subsequent rise in temperature took place. Tenotomy was done in the second but not the first case and was of help in allowing the soft parts to stretch. Both feet were fixed after the operation in plaster-of-Paris bandages. The method recommended by Reeves of holding the foot during the application of the bandage was tried in the second but not in the first foot. This consists of pulling the tarsus in by means of a strip of bandage passed around the ankle and held by an assistant; the toes are held and forced by the hand of an assistant in an opposite direction, and this position is maintained until the plaster has become hard. After the second operation also the plaster-of-Paris bandage was applied

not only to the knee but above it. This was found to prevent the plaster shell from rolling around the leg and allowing the front of the foot to evert.

The correction of the position in the second foot was much more perfect than in the first, owing to the improvements in detail. In both, however, the boy was able to stand on the flat of the sole. There remained after recovery about thirty degrees of motion at the



ankle; the feet could be brought to a right angle but not flexed beyond that. The boy could stand on the flat of either foot or raise himself on his toes, but while standing on the heels could not raise the toes from the ground. The amount of bone removed in the three cases varied, a larger section was excised in the last than in either of the other cases. In all, the cuboid and one cuneiform were removed entirely and in addition a section made of the astragalus, os calcis, cuneiform scaphoid, and head of the fifth metatarsal.



Nos. 2 and 4 show the foot before, Nos. 1 and 3 after operation.

The section was most readily made with a chisel, and a vice for securing the heel, made by Dr. Fletcher Abbott (consisting of a joiner's clamp with a cup-shaped hollow cut out to fit the heel, and secured to the table

by a second clamp) was of great help in steadying the limb during the use of the chisel.

All the operations were performed and the wounds dressed strictly antiseptically.

That the operation be accepted generally by surgeons as a recognized method of treatment, it is essential that the deformity be thoroughly corrected and that no ill effects follow the surgical interference.

Antiseptic precautions offer the best safeguard, and it must be admitted that a study of the reported cases justifies the impression that the danger is not so great as has been supposed.

The results hitherto obtained have been such that a serviceable and nearly perfect foot is given in the place of a deformed one, in a relatively short time enabling the patient to walk on the flat of the sole without noticeable deformity, but there has not been the restoration of a foot absolutely normal in shape and in motion as have been gained by the method of tenotomy and gradual mechanical correction even in severe cases. This has only been done, however, by the expenditure of great care on the part of the surgeon and attendant, and after a very protracted treatment, facts which practically debar, to a great extent, from the benefit of treatment the pauper class: a class which furnishes the larger part of the contingent of severe relapsed club-foot.

OBSTETRIC AND GYNÆCOLOGICAL LITERATURE, 1876-1881.¹

ADDRESS ON OBSTETRICS AND DISEASES OF WOMEN.

JAMES R. CHADWICK, M. D., BOSTON, MASS.

INSTEAD of following the routine custom of presenting in this address the advances that have been made in the department of obstetrics and gynecology during the past year, I propose to ask your attention to a statistical consideration of the whole volume of literature upon this branch of medicine during the past five years. I shall present a quantitative analysis of this literature with reference to nationalities, and shall finally sketch the rise and fall of the interest evinced in certain special topics as shown by the number of separate publications and journal articles published in each successive year. These enumerations I am enabled to make by utilizing the annual Indices of the Gynecological and Obstetric Literature of all Countries, published under my supervision in the Transactions of the American Gynecological Society. The Index for the year 1876 only covers the last six months of the year, and is therefore of but limited utility. The Index for the year 1879 is in print, but is not yet published; that for 1880, though on cards and now in course of preparation for the printer, has nevertheless proved available for my purpose. The space of time covered by my review is, unfortunately, limited to five, or more strictly speaking, to four and a half, years, so that my sketches of the different topics can in no instance embrace more than a brief epoch in the life-history of any method of treatment, operation, or theory. Such a numerical analysis of current literature, if it could be made to cover a longer term of years, would, I am convinced, show some strange mutations in the popularity of certain topics, and would dampen the ardor of many authors who have sought to attain immortality by pro-

pounding new theories, devising new operations, and above all, by inventing new instruments. Of course the number of articles published upon a given new topic is not, in every instance, an accurate test of its merit. Many new ideas are of such nature as to appeal to a limited audience. A new therapeutic remedy or a new operation, on the other hand, is pretty sure to meet a warm reception. Its life history may then be outlined somewhat as follows: an article is written recounting the success obtained by its author in the treatment of a certain condition by a new operative method. Immediately it is tried by many practitioners, who hasten to publish their results, particularly if favorable, when they may expect to derive renown or practice from being early identified with the innovation. Articles multiply rapidly, the operation has been forced upon the attention of the whole profession; soon its charm of novelty wears off, and the number of papers would rapidly diminish were it not that the negative or unfavorable results obtained begin to be published; the true merits of the operation are gradually reached, and finally it is either adopted as part of the traditional store of operative procedures, or is renounced and forgotten. A familiar recent instance of this course of events is observable with regard to incision of the cervix uteri for dysmenorrhœa, advocated many years ago by Sir James Y. Simpson. This operation at once appealed to the mechanical instincts of the profession, was taken up with avidity, was advocated in all the medical journals of the world, was variously modified by different operators, each of whom sought by numerous papers to have his special method adopted; opponents soon raised their voices; the operation was shown conclusively not to be followed by the promised relief in many cases, and, moreover, to be fraught with some danger. To-day this operation is rapidly passing into oblivion. It is still performed in cases of extreme stenosis, but is recognized as inadequate to afford relief in the vast majority of cases for which it was formerly recommended. My table shows a progressive decrease in the number of papers on this subject during the past five years. A similar fate may safely be predicted for several operations now held in high esteem, such as the operation for laceration of the cervix uteri, Freund's method for the complete extirpation of the cancerous uterus, Porro's Cesarean section followed by excision of the uterus, etc.

OBSTETRIC AND GYNÆCOLOGICAL PERIODICALS.

Before passing to an analysis of the whole volume of literature, let me direct your attention for a few moments to the special periodicals, including journals and society transactions, devoted to this branch of medical science:—

NUMBER OF PERIODICALS DEVOTED TO OBSTETRICS AND GYNÆCOLOGY, 1876-1880.

	1876			1877			1878			1879			1880		
	Journals.	Transactions.	Total.	Journals.	Transactions.	Total.	Journals.	Transactions.	Total.	Journals.	Transactions.	Total.	Journals.	Transactions.	Total.
America	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Gr. Brit. & Ire.	4	1	5	4	1	5	4	1	5	4	1	5	4	1	5
France	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Germany	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Belgium	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Italy	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Spain	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
Denmark	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2
	9	4	13	11	5	16	12	5	17	15	6	21	17	5	22

¹ Read before the American Medical Association at its thirty-second meeting, held in Richmond, Va., May, 1881.

This table shows that the total number of periodicals has increased in the five years from thirteen to twenty-two, nearly sixty per cent.; that the American have increased one hundred per cent., the French fifty per cent., the German thirty per cent.; that Belgium, Italy, and Denmark have entered the lists with one periodical each; and that England and Spain have remained unchanged.

The twenty-two periodicals being published in 1880 are as follows:—

TITLES OF PERIODICALS DEVOTED TO OBSTETRICS AND GYNÆCOLOGICAL LITERATURE IN 1880.

Country.	First published.	Title of Periodical.
America.	1869	American Journal of Obstetrics and Diseases of Women and Children. Editor, Dr. P. F. Mundé. 8vo. Quarterly. New York.
	1869	Philadelphia Obstetrical Society. Transactions. Secretary, Dr. W. H. H. Githens. 8vo. Uncertain. Philadelphia.
	1873	Obstetrical Journal of Great Britain and Ireland, with an American Supplement. American Editor, Dr. J. V. Ingham. 8vo. Monthly. Philadelphia.
	1877	American Gynecological Society. Transactions. Secretary, Dr. J. R. Chadwick. 8vo. Yearly. Boston.
	1878	Obstetric Gazette. Editor, Dr. E. B. Stevens. 8vo. Monthly. Cincinnati, Ohio.
Great Britain and Ireland.	1879	Homœopathic Journal of Obstetrics and Diseases of Women and Children. Editor, Dr. H. Minton, of Brooklyn. 8vo. Quarterly. New York.
	1859	Obstetrical Society of London. Transactions. Hon. Secretaries, Dr. J. Williams and Dr. C. Godson. 8vo. Yearly. London.
	1868	Edinburgh Obstetrical Society. Transactions. Secretaries, C. E. Underhill, M. B., and C. Carmichael, M. D. 8vo. Yearly. Edinburgh.
	1873	Obstetrical Journal of Great Britain and Ireland, including Midwifery and the Diseases of Women and Children. ¹ Editor, Dr. A. L. Galatin. 8vo. Monthly. London.
	1872	Gazette Obstétricale. Rédacteur, Dr. L. E. Dupuy. 8vo. Fortnightly. Paris.
France.	1873	Journal des Sages-femmes. Rédacteur, H. Foutan. 4to. Fortnightly. Paris.
	1873	Archives de Tocologie, des Maladies des Femmes, et des Enfants nouveau-nés. Rédacteur, Dr. De Soyre. 8vo. Monthly. Paris.
	1873	Annales de Gynécologie (Maladies des Femmes, Accouchements). Rédacteur, Dr. A. Leblond. 8vo. Monthly. Paris.
	1879	Revue médico-chirurgicale des Maladies des Femmes. 8vo. Monthly. Paris.
	1880	L'Obstétrique. ² Rédacteur, Dr. A. Mattei. 8vo. Monthly. Paris.
Germany.	1870	Archiv für Gynäkologie. Rédacteurs, Dr. Crede and O. Spiegelberg. 8vo. Uncertain. Berlin.
	1877	Zeitschrift für Geburtshilfe und Gynäkologie. Rédacteurs, C. Schröder, H. Fasbender, A. Gussacrow, L. Mayer, in Berlin. 8vo. Uncertain. Stuttgart.
	1877	Centralblatt für Gynäkologie. Rédacteur, Dr. H. Feilberg, in Stuttgart, Dr. H. Frisch, in Halle, A. S. 8vo. Fortnightly. Leipzig.
	1877	Gynækologiske og obstetriske Meddelelser. Udgivne af F. Horwitz. 8vo. Half-yearly. Kjøbenhavn.
	1879	Annali di Ostetricia, ginecologia e pediatria. Editore, Dott. C. Alessandro, Università di Modena. 8vo. Monthly. Milano.
Spain	1875	Sociedad ginecologica Española. Anales. Secretario, Sr. D. A. R. Rubi y Pacheco. 8vo. Monthly. Madrid.

¹ Discontinued after vol. xii, No 12, December 30, 1880.

² Terminated on the death of the editor, 1881.

Belgium. 18

Journal d'Accouchements. Écho de la Maternité de Liège. Rédacteur, Dr. N. Charles. 4to. Fortnightly. Liège.

In 1876 was published the Zeitschrift für Geburtshilfe und Frauenkrankheiten. Rédacteurs, Dr. E. Martin and Dr. H. Fasbender, vol. i., 8vo, uncertain, Stuttgart, which was converted into the Zeitschrift für Geburtshilfe und Gynäkologie in 1877.

In 1879 was published by the New York Obstetrical Society, Transactions for the years 1876, 1877, and 1878. 8vo. Vol. I. Uncertain. New York. 1879.

The special periodicals may be regarded as one gauge of the degree of interest taken in this branch of medicine in the different countries.

Certain characteristics distinguished the publications of the different countries. For instance those of Germany contain more contributions to the science of medicine, whereas those of America contain more papers of a practical nature; those of France are more controversial, being more essentially the organs of separate cliques, etc.

OBSTETRIC AND GYNÆCOLOGICAL SOCIETIES.

Another means of estimating the relative prominence of this branch of medicine in different countries is an enumeration of the special societies.

NUMBER OF OBSTETRIC AND GYNÆCOLOGICAL SOCIETIES, 1876-1880.³

	1876	1877	1878	1879	1880
International Congress	1	1	1	1	1
America	6	6	8	10	11
Great Britain and Ireland	4	4	4	4	4
Germany	3	3	3	3	3
Spain	1	1	1	1	1
France	—	—	—	—	1
Russia	1	1	1	1	1
	16	16	18	20	22

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETIES IN 1880, WITH THE PLACES IN WHICH THEIR PROCEEDINGS ARE PUBLISHED.

Country.	Founded.	Society.
America.	1876	American Gynecological Society. Transactions of Year 1879. Secretary, James R. Chadwick, M. D., Boston. Vol. IV. 8vo. Also, Abstract in American Journal of Obstetrics, New York.
	1849	American Medical Association. Transactions. Obstetric Section. Secretary, Dr. Robert Baitey, Rome, Ga. Transactions American Medical Association. XXX. 221-265
		Philadelphia Obstetrical Society. Transactions. Secretary, W. H. H. Githens. American Journal of Obstetrics, New York.
		New York Obstetrical Society. Transactions. American Journal Obstetrics. New York.
		Obstetrical Society of Boston. Proceedings. Secretary, C. W. Swan, M. D. Boston Medical and Surgical Journal.
		Gynecological Society of Boston. Secretary, Dr. H. M. Field, Newton, Mass. American Journal Obstetrics. New York.
		Obstetrical and Gynecological Society of St. Louis. Secretary, Dr. George J. Engelmann. St. Louis Courier of Medicine.
		Cincinnati Obstetrical Society. Transactions. Secretary, E. B. Stevens, M. D., Cincinnati, Ohio. American Journal Obstetrics. New York.

³ In this list are included the general societies which have sections specially devoted to obstetrics and gynecology.

		San Francisco Obstetrical Society.
		New York Academy of Medicine. Obstetrical Section. New York Medical Record.
		Chicago Gynecological Society. Transactions. Chicago Medical Journal and Examiner.
Great Britain and Ireland.	1859	Obstetrical Society of London. Transactions. Hon. Secretaries, John Williams, M. D., and Clement Godson, M. D. Vol. XXI, 411 pp. Svo. Yearly. London. 1880. Also, Abstract in Obstetrical Journal of Great Britain. London.
		British Medical Association. Obstetric Section. Abstract of Proceedings. British Medical Journal.
	1868	Edinburgh Obstetrical Society. Transactions. Secretaries, C. E. Underhill, M. B., James Carmichael, M. D. Vol. V., Part 3. Svo. Edinburgh. 1880. Also, Abstract in Obstetrical Journal of Great Britain.
		Obstetrical Society of Dublin. Abstract of the Proceedings. Obstetrical Journal of Great Britain. London.
Germany.	1866	Versammlung deutscher Naturforscher und Aerzte in Cassel. Gynäkologische Section. Verhandlungen. XVI. Centralbl. f. Gynäk. Berlin. Also, Arch. f. Gynäk. Berlin. Also, American Journal Obstetrics. New York.
		Gesellschaft für Geburtshilfe und Gynäkologie in Berlin. See Ztschr. f. Geburtsh. u. Gynäk.
		Gesellschaft für Geburtshilfe in Leipzig. 1878-79. Mittheilungen. Arch. f. Gynäk. Berlin.
France.		Französischer Naturforscherversammlung. Sitzung zu Montpellier. Gynäkologische Section. Centralbl. f. Gynäk. Berlin.
Spain.		Sociedad ginecológica española. Anales Año de 1879. Secretario general, Sr. D. A. R. Rubi y Pacheco. Tomo V. Svo. Madrid. 1880.
Russia.		Allgemeines Verein St. Petersburger Aerzte. Gynäkologische Section. Verhandlungen. St. Petersb. med. Wehschr.

We see here at a glance how greatly America predominates in this list, containing as many societies as exist in the rest of the world. Too great significance must not, however, be attached to this fact, for one cause of this development of societies is purely geographical. In England it is possible for those who are

specially interested in gynecology and obstetrics to attend the meetings of the Obstetrical Society of London, as actually happens, whereas in America the distances to be traversed are so great as to render this impossible. As a result of these two extremes we find the English society has seven or eight hundred members, while the membership of the American societies ranges from twenty to fifty. The lack of any special society in France is striking, and unaccountable when contrasted with the large number (6) of special journals issued in that country.

OBSTETRIC AND GYNECOLOGICAL LITERATURE.

We now come to the consideration of the whole bulk of the special literature; it may best be appreciated by the aid of this table.

		Sep. Pub.	Articles.	Articles.	Total.
Last six months of 1876	..	91	= 1374	+ 753	= 2127
1877	..	194	= 2388	+ 1698	= 4086
1878	..	168	= 1320	+ 2203	= 3523
1879	..	265	= 2194	+ 2644	= 4838
1880	..	201	= 2410	+ 2770	= 5188

In this table I have resolved the separate publications into their equivalents in journal articles, reckoning an article at an assumed average length of ten pages, which is certainly above rather than below the average length of articles. The rate will, however, serve as a convenient basis for the reduction.

It will be noticed in the first place that the volume of this special literature is increasing at the rate of twenty-five per cent. a year. The volume of literature thus shown to be devoted yearly to a single branch of medicine is certainly appalling and fully justifies the urgent need for specialization of practice already in process of evolution. Even admitting that ninety per cent. of these writings merely reiterate facts in medicine already too familiar to gynecologists, yet there still remains an immense amount of reading incumbent upon one who would keep abreast with the advances in this, to say nothing of the collateral branches of medicine.

A still further analysis of these figures for one year (1880) discloses some interesting facts with reference to nationalities.

ANALYSIS OF THE LITERATURE OF THE YEAR 1880 BY NATIONALITIES.

Countries.	Obstetric.				Gynecological.				Total Obstetrical and Gynecological.		Total Books and Papers.
	Books.	Equiv.	Papers.	Total.	Books.	Equiv.	Papers.	Total.	Books.	Papers.	
America	9	126	498	624	9	392	359	721	18	857	1345
France	51	398	350	948	49	409	301	710	100	651	1658
Germany	19	251	170	421	22	218	215	433	41	885	854
Great Britain and Ireland	5	105	164	269	7	104	166	270	12	330	539
Italy	9	75	71	146	3	20	79	99	12	120	245
Spain	3	28	39	67	-	-	25	25	3	64	92
Russia	5	30	21	51	5	32	14	46	10	35	97
Belgium	2	65	29	64	-	-	19	19	3	48	83
Australia	-	-	10	10	-	-	22	22	-	32	32
Hungary	-	-	5	5	-	-	20	20	-	25	25
Poland	-	-	14	14	-	-	11	11	-	25	25
Denmark	2	15	13	28	-	-	19	19	2	32	47
Canada	-	-	12	12	-	-	11	11	-	26	23
Sweden and Norway	-	-	8	8	-	-	13	13	-	21	21
Brazil	-	-	12	12	-	-	9	9	-	21	21
India	-	-	5	5	-	-	6	6	-	11	11
Switzerland	-	-	2	2	-	-	6	6	-	8	8
Mexico	-	-	6	6	-	-	-	-	-	6	6
Algiers	-	-	1	1	-	-	3	3	-	4	4
Turkey	-	-	3	3	-	-	1	1	-	4	4
Chili	-	-	2	2	-	-	2	2	-	4	4
West Indies	-	-	1	1	-	-	2	2	-	3	3
Holland	-	-	7	7	-	-	3	3	-	10	10
Greece	-	-	2	2	-	-	2	2	-	4	4
China	-	-	-	-	-	-	2	2	-	2	2
Japan	-	-	-	-	-	-	1	1	-	1	1
Central America	-	-	-	-	-	-	1	1	-	1	1
Portugal	-	-	-	-	-	-	1	1	-	1	1
Venezuela	-	-	-	-	1	2	-	2	-	2	2
Total	106	1263	1445	2708	96	1147	1313	2459	201	2770	5188

In the first place, France has issued the greatest volume of literature, equivalent to 1658 articles; America 1345; Germany, Great Britain, and Ireland 488. Analyzing these we have —

France, . . . obstetrical, 948; gynecological, 710 = 1658
America, . . . obstetrical, 624; gynecological, 721 = 1345
Germany, . . . obstetrical, 421; gynecological, 433 = 854
Grt. Brit. and Ire., obstetrical, 269; gynecological, 270 = 539

This predominant interest of France in obstetrics may be shown to be restricted to a moderate number of writers, for on analyzing the French contributions closely it appears that fifty-one separate publications (books, theses, etc.) were published during the year, which had been estimated as equivalent to 598 articles; deducting these from 948 we have remaining only 350 real journal articles. In America only nine books were issued, equivalent to 126 articles, leaving 498 articles. In Germany a similar process reduced the articles to 170, in England to 161.

Under gynecology similar reductions change the relations as follows: France 301 articles; America 359 articles; Germany 215 articles; Great Britain and Ireland 166.

The inferences from these figures may be summed up as follows: In America there is a much greater number of contributions on both general branches than in any other country. In France the whole volume of obstetric literature, nevertheless, exceeds that of America by one fifth, a curious discrepancy which may be attributed mainly to two factors: first, the publication of graduation theses, and second, the stimulus given to the professors to the writing of treatises from the rivalry engendered by the close propinquity of the fields of their labor; that this, by their being mostly inhabitants of Paris, and having charge of competing clinics. The cause of the small number of contributions from Germany is probably due to the fact that they emanate chiefly from university professors and instructors, whose chief motive is the desire for academic promotion, and whose writings are consequently, for the most part, records of extensive research or investigation and addressed mainly to the ministry of education; they are hence much longer, on the average, and require a longer time for their preparation. I am at a loss to explain the lack of interest displayed in England by these figures.

SPECIAL SUBJECTS IN OBSTETRICS AND GYNECOLOGY.

Carrying my analysis one step farther, I shall finally bid you scrutinize a table in which are given the number of articles upon certain definite topics in the successive years, and shall offer a few suggestions in explanation.

Under the general heading of Ovariectomy we see a marked increase from year to year. Under the sub-head of Ovariectomy there is a steady increase, while in the past two years there has been a steady decrease in the number of Cases of Ovariectomy; the cause must be apparent to all. Normal Ovariectomy, which was devised and first carried out by the genius and pluck of our countryman, Dr. Battey, has deservedly claimed more attention during the past three years than any other new operation, but during 1880 its volume of literature has been on the wane, its true value and limits of usefulness having been nearly defined.

TABLE OF SPECIAL TOPICS.

	Last half of 1876	1877	1878	1879	1880
Ovariectomy	4	30	36	45	158
Ovariectomy during pregnancy	—	3	2	—	—
Ovariectomy, vaginal	1	1	1	—	—
Ovariomy, antiseptic	—	—	14	25	20
Ovariectomy, double, cases of	—	—	—	12	5
Ovariectomy, cases of	45	92	143	126	76
Total	50	123	196	208	259
Ovariectomy, normal	—	3	19	108	32
Porro's operation, Cesarean section, with extirpation of the uterus	—	—	—	24	41
Albuminuria	8	5	7	4	33
Eclampsia	5	—	—	—	—
Puerperal convulsions	35	80	82	184	94
Total	48	85	89	188	127
Forceps	9	17	29	45	37
Hæmorrhage, post-partum	12	29	34	44	42
Hysteria	5	9	25	11	11
Hystero-neurosis	—	4	7	11	—
Hystero-epilepsy	—	—	9	21	6
Total	5	13	41	43	17
Intra-uterine injections	—	2	10	7	11
Abortion	22	16	46	39	32
Abortion, criminal	—	—	4	10	3
Total	22	16	50	49	35
Menstruation	1	29	25	21	51
Menstruation, anomalies of	3	20	23	5	9
Total	4	49	48	26	60
Uterus, fibroid tumors of	21	67	105	186	168
Transfusion of blood	3	7	6	6	2
Placenta prævia	10	59	40	44	59
Pessaries	10	20	14	26	21
Perineum, rupture of	7	28	32	37	20
Pregnancy, extra-uterine	43	55	52	64	77
Phlegmasia, alba dolens	—	6	15	12	23
Puerperal septicæmia	8	11	9	11	22
Uterus, cancer of	33	27	26	52	81
Uterus, cervix, incision of	5	6	1	2	3
Uterus, cervix, laceration of	3	10	12	31	26
Uterus, inversion of	5	25	35	57	49
Uterus, rupture of	9	19	19	16	38
Vomiting in pregnancy	1	7	23	36	14
Lying-in hospitals	20	32	48	106	22
Monstrosities, monsters	—	3	35	52	64

Porro's Cesarean Section with Extirpation of the Uterus appeared as a new operation in 1879 and has since been vigorously advocated and discussed.

The cerebral and systemic effects of renal disease recorded under several headings in the next table show in the aggregate a marked increase in prominence quite commensurate with their importance.

The Forceps were brought forward as a special topic in 1878 by the invention of a new form by Tarnier, and in 1879 by the formal discussion of the extent of their utility at the Obstetrical Society of London; hence the greater figures under these two years.

Tumors of the Uterus continue to attract an increasing interest proportionate to the extension of abdominal surgery.

Extra-uterine Pregnancy has been brought to the front during the past five years mainly through the labors of Parry and Thomas, both Americans.

Puerperal Septicæmia evinces a small but increasing

popularity commensurate with that interest now taken in all diseases attributable to putrefactive changes or the development of germs.

Cancer of the Uterus received an impulse in 1879, which is more than sustained in 1880, by the publication of the alleged curative effect of Chian turpentine in the hands of Dr. John Clay, of England; a claim which has not been corroborated by the experience of other observers. This subject will doubtless fall to its normal level in the present year.

Incision of the Cervix Uteri had its day before the years covered by my tables and is fast sinking into oblivion.

Laceration of the Cervix Uteri and its cure by the simple and admirable operation of Dr. Emmet is the topic of the day, in this country at any rate, but can scarcely be said to have passed from the state of novelty to that of criticism. It is destined to be a fertile topic for several years to come, when it, too, will be assigned its proper sphere — a very restricted one, as I believe — and cease to excite discussion.

The treatment of the Vomiting in Pregnancy by dilatation of the cervix uteri devised by Dr. Copeman, of England, brought this topic forward in 1878 and 1879, as seen by the figures; its decadence in 1880 is manifest.

The subject of Lying-in Hospitals was prolific of discussion in 1878 and especially in 1879, but is now on the wane.

GENERAL CONCLUSIONS.

The above quantitative analysis of obstetric and gynecological literature with regard to nationalities manifests the predominance of America in this branch of medicine. America contributes more journal articles than any other nation; supports by contribution, both literary and pecuniary, as many special periodicals as France, and twice as many as either England or Germany; and carries on as many special societies as all the other countries of the world together.

England, despite the labors of Wells, Keith, Thornton, Barnes, Duncan, Tait, Leishman, and Playfair, is fast losing its preëminence in this branch of medicine, and has recently demonstrated its inability to support even one special journal by the discontinuance of the *Obstetric Journal of Great Britain and Ireland* on January 1st of the present year.

France is exhibiting an unnatural activity under special influences already adduced.

Germany holds on the even tenor of its way, while Belgium, Italy, Spain, Denmark, and Russia are awakening to a more active participation in the advance and dissemination of obstetric and gynecological lore.

I have throughout these pages restricted myself to a quantitative study of the literature. I cannot close without giving in a few words an estimate of the quality of each nation's contributions to the science and practice of gynecology and obstetrics.

Germany unquestionably advances pure science more than any other nation; the papers in its three journals are the most profound and the most critical.

France manifests a great dearth of original ideas, and a most discursive style of discussion, but considerable painstaking historical research. Its journals are prolix and, for the most part, profitless reading, and exceed in number the legitimate demand.

England exhibits a waning interest in this branch of medicine, little originality, but a notable discrimina-

tion in adopting new theories and applying them to practice. Its only special journal died a natural death at the close of the last year.

To America I have no hesitation in according preëminence in this special field. Our countrymen meet the emergencies incident to child-bearing with a quickness of perception and readiness of action rarely seen in other countries. Their ingenuity has led them to devise new operations in gynecology and to carry them out with brilliant results, so that to-day the practice of that branch has reached a stage here far in advance of other nations. Of course our natural aptitudes lead many of us to overestimate the beneficial results of surgery, but taken all in all close observation and study in most of the countries of Europe has confirmed me in the opinion that in obstetrics and gynecology America leads the world.

The two most prominent exponents of our branch in America, *The American Journal of Obstetrics* and the *Transactions of the American Gynecological Society*, present a more happy blending of scientific facts and practical suggestions than is found in any other special gynecological or obstetrical periodicals in the world.

RECENT PROGRESS IN MATERIA MEDICA AND PHARMACY.¹

BY WILLIAM P. BOLLES, M. D.

PAPAIN.

Carica Papaya is a native of the Moluccas, but has been introduced into various parts of India, South America, and the West Indies, where it is valued for its pulpy fruit. It is a small-sized tree of palm-like aspect, with a straight, single trunk and a crown of large palmate leaves in the axils of which are the flowers and fruits. It contains a not abundant amount of white milky juice which can be obtained either from the stem or the green fruit by incisions, as a neutral, opaque, creamy liquid, having a bitterish taste and an odor recalling that of petroleum or vulcanized India-rubber. Under the microscope it appears cloudy and shows a little starch, besides coarser impurities. Upon standing it separates into an insoluble pulp and a colorless limpid serum. Drying converts it into a white hard mass with softer spots upon the surface, of a gelatinous material; iodine colors it yellow, but glycerine preserves it unchanged. For a number of years it has been known that the juice of the papaw tree had a remarkable solvent action upon the animal tissues. The women of Quito used to put it into meat which they were to boil. Endlicher (see Guibourt) noticed that a few drops diluted with water softened the flesh of animals and that a leaf of the tree wrapped around a piece of meat for a single night had the same effect. Wittmak several years ago obtained the juice by incising the green fruits, and made a number of experiments with it, with the following results: a piece of fresh lean beef weighing ten grammes heated in a mixture of the juice and water began to fall to pieces before the boiling point was reached and separated into shreds at the end of five minutes. Hard boiled egg was softened by digestion in the juice. Fifty grammes

¹ Pharmaceutical Journal and Transactions. American Journal of Pharmacy. New Remedies. The Pharmacist. The Chemist and Druggist. The Chemists' Journal. Proceedings of the American Pharmaceutical Association, etc.

of meat wrapped in a leaf of the tree became perfectly tender upon short boiling while a piece not so enclosed remained hard and tough. The dried sap coagulated ten thousand parts of milk at 35° (C?) and, according to H. J. Rose, possesses also the power of converting starch into sugar.

Messrs. A. Wurtz and E. Bouchat in 1879 obtained a white powder by precipitating a concentrated aqueous solution of the juice, by an excess of alcohol, and purifying by redissolving and precipitating again. This, which they ascertained to be the active principle, they named "Papain," and have studied with great care.

It is a stable amorphous powder with little or no odor, and a slightly astringent taste, freely soluble in cold water, becomes slightly turbid upon boiling, is precipitated by the mineral acids and redissolved in an excess of them, also precipitated by tannic acid and by the neutral acetate of lead. It contains a large proportion of nitrogen. In its action upon fibrin it is more energetic than pepsin; quicker and capable of enduring a higher temperature.

Shortly after this Dr. Peckott published an account of some analyses of this substance made by him several years before in Brazil. He, it would appear, had obtained the same principle, to which he gave the name "Papayotin."

An interesting peculiarity in the course of preparation was noticed by Wurtz: he found that when all the liquid had been separated from the coagulated juice the pulp, if again moistened with water, would yield a further quantity of papain greater than the first, and a third and fourth washing yielded almost equally good results. This led him to believe that the papain is produced in the pulp by the action of water upon it, and does not exist, at least in full amount, in the undiluted juice.

The digestive power of papain or papayotin is enormous, and in a more recent paper the same observer has given some instances of it. Dissolved in five thousand parts of water and acidulated with a trace of hydrocyanic acid, one part of pure papain digested nine hundred and eighty out of one thousand parts of moist fibrin, the greater portion of which was transformed into peptone. Again it *liquified* two thousand parts of moist fibrin, and in another series of experiments it was made to partially digest itself.

Its mode of action upon flesh was illustrated by two experiments, and showed "that it formed with the fibrin an ephemeral insoluble compound which by the action of water gives the soluble products of hydration of the fibrin, and being again set free can exercise its action upon a new portion of fibrin."

Papayotin is for sale in very limited quantity as a snow-white, odorless, and almost tasteless powder. It is certainly a promising drug, and if with increased demand it can be supplied sufficiently cheaply may be a useful medicine. It, as is asserted, it will liquify living tissues, its use in exuberant granulations, diphtheritic exudations, and tumors should be tested.

PETIT'S PEPsin.

M. A. Petit has just published an elaborate résumé of the various modes of preparing this substance, and compared them with his own, which he also gives. This consists in carefully washing the stomachs with water, then separating the mucous membrane by scraping with a rounded knife; this is then cut as small as possible and macerated with four times its volume of

distilled water containing five per cent. of alcohol, the mixture is shaken every half hour for four hours; filtered and evaporated rapidly in large flat dishes at a temperature not exceeding 40° C. With sufficient care a pepsin can be made in this way which will *digest* one thousand times its weight of strongly dried fibrin. Sheep's pepsin has only one fourth the strength of pigs'.

ALKALOIDS OF THE SOLANACEÆ.

The close relation of the alkaloids of this family has been long recognized, but owing to the difficulty of obtaining them absolutely pure, their number and high cost, their exact points of resemblance and difference, have not until recently been pointed out. Among those who have succeeded in doing this M. Ladenberg stands easily at the head, and a portion of his results was summarized in the Report in *Materia Medica* and *Pharmacy* for last summer.

He finds in belladonna two alkaloids: one atropine, the other hyoscyamine; the atropine exists in the greater proportion.

Stramonium yields also two alkaloids, the lighter and more abundant of which is hyoscyamine, the heavier probably a mixture of atropine and hyoscyamine.

Hyoscyamus contains two alkaloids, crystalline hyoscyamine and an amorphous alkaloid still under investigation.

Duboisia contains hyoscyamine only.

The synthesis of atropine from tropine and tropic acid was announced last year; he has now obtained atropic acid by the action of cyanide of potassium upon dichlor-ethyl-benzol, and it looks as if atropine would before long be made from materials none of which are yielded by solanaceous plants. In the mean time he had shown that hyoscyamine consisted of two products, hyoscinic acid and hyoscyne, corresponding to the tropic acid and tropine of atropine; these substances he has united to form atropine, as follows:—

- (1.) Tropine from atropine and hyoscinic acid from daturine.
- (2.) Hyoscyne from hyoscyamine, and tropic acid from atropine.
- (3.) Hyoscyne from hyoscyamine, and hyoscinic acid from the same source.

In all three cases a genuine atropine was the result.

One of the artificial tropines, *orytolinetropine*, or, as it is generally called, homatropine, promises to be a moderately useful mydriatic, more transient in its action than atropia itself, but nearly equally strong.

A one per cent. solution of homatropine or one of its salts will dilate the pupil in a few minutes, and allow it to resume its contractile power in twenty-four hours or so. Internally given its action is similar to but less efficient than that of atropine.

MORPHINE AND CODEINE.

Some new chemical properties of morphia have recently been published by P. Chastaing, which are, in brief, that this substance dissolves in the alkalies soda, potash, baryta, and lime, equivalent for equivalent, and forms with them definite crystalline, but easily decomposable, "salts." It is, therefore, in these respects a phenol. The close relation between the composition of morphine and that of codeine has attracted the attention of other chemists for some time, but the actual conversion of one into the other has only been accomplished this year.

The discoverer of the process, M. Grimeaux, has

succeeded in producing codeine from morphine, resembling in all respects the natural alkaloid. This process, which at present is a wasteful one, and accompanied with a great amount of other decomposition products, is to treat the morphia-soda compound with iodide of methyl, exhausting the product with ether, and purifying. Only ten per cent. of the weight of the morphine was obtained as codeine, the rest being chiefly iodo-methylate of the morphine-soda, which in turn could be converted into iodo-methylate of codeine by adding another equivalent of iodide of methyl.

The codeine produced was examined as to its composition, melting point, solubility in water, alcohol, and ether, its salts and crystalline form. Its composition and preparation show it to be a methylic-ether of morphine, and further investigations in progress are showing that morphine may be the foundation of a series of such bases, having to it the relation of ethers. One such was indeed prepared with iodide of ethyl in crystalline plates, and capable of forming salts. M. Grimeaux proposes to call these substances codeines — codo-methylene, codethylene, etc. — Codethylene is a tetanizing poison.

QUEBRACHINE.

Aspido-spermine, the first alkaloid obtained from quebracho, appears to have disappeared and those who had looked to it for the favorable effect in dyspnoea, claimed by Dr. Penzoldt for the bark itself; this fact and the assertion of Frande and Wulfsberg that aspido-spermine was only paytine, has induced Hesse, the discoverer of both, to re-examine the subject. The result of this is to establish the identity of aspido-spermine (which, however, has not yet been crystallized) and also to discover a new alkaloid, quebrachine, of promising activity, and crystallizable, but the only record of its usefulness so far is that in the dose of 0.4 gramme "it killed a rabbit."

ALSTONIA SCHOLARIS; DITA BARK.

Under the name given above a thick, rough, remarkable looking bark has lately been introduced as an antiperiodic and febrifuge. Its value in medicine is by no means proved, but as it has yielded easily some definite chemical principles, it has proved a source of considerable interest to several pharmaceutical chemists, and been pretty carefully examined, with, however, discrepant results. These have been still more confused by the presence of two other alstonias, *A. constricta* of Australia, and *A. spectabilis*, whose barks yield other series of somewhat similar products. At least three alkaloids have been discovered in each, and, what seems discouraging, more are to be expected; if any prove to be of medicinal value they will be again noticed.

THE STABILITY OF CALOMEL.

Chemists from time to time unsettle the nerves of the prescribers of this once famous and still useful medicine by announcing its easy decomposition, or rather its elevation to the bichloride, in the stomach, by some other medicine or even household chemical. M. Verne has recently failed to find any change in the drug in the presence of salt, sugar, or citric acid, but Mr. Ph. Hoaglan, in following out the same investigations, found evidence of the poisonous chloride in mixtures with citric acid after fifteen days, with salt after one hour, and with water even after three hours, but none with calomel and sugar.

It will occur, however, to every one that calomel has probably never existed in the human stomach except in the presence of water and salt, that citric acid as lemonade, and even the tincture of the chloride of iron, are often also present, so that if the reaction were more than infinitesimal not many of our fathers at least would have lived out their allotted days. There really appears to be no medicine so free from danger of poisoning as a single dose of calomel.

RESORCIN, HYDROQUINONE, ETC.

The note upon resorcin in the last report has been justified by subsequent experience, as it is now easily obtainable and in moderate demand. Internally as an antipyretic it is claimed by Professor Lichtheim, of Berne, to be in some respects superior to salicylic acid and quinine; its effects appear to be less durable. Hydroquinone and pyrocatechin have similar antipyretic properties, and may prove useful. Hydroquinone has the advantage in hypodermic use of not being in the slightest degree irritating, and it can be given to the extent of one or two syringefuls of a ten per cent. solution with no more harm or damage than injections of pure water.

PELLETIERINE, ETC.

Since the notice of this alkaloid in the first report for 1880, Tanret has isolated and named the associated alkaloids of pomegranate bark as follows: *Methylpelletierine*, a liquid with hygrometric salts; *pseudo-pelletierine*, crystalline; *pelletierine*, an extremely unstable liquid; *isopelletierine*, also liquid. The most desirable preparation for medical use is the tannate of pelletierine, the full dose of which as a taenicide is 0.4 gramme, followed by castor oil or jalap. It has proved very successful.

XANTHORCEA RESIN; "GUM ACAROIDES."

This resin, like Chian turpentine, had been so long forgotten that none of the present generation had ever seen it. Of late, however, there have been a few inquiries for it, and consequently notices about it are appearing in the pharmaceutical journals. There is no reason to regard it as of any special value.

CORN SILK, STIGMATA MAIDIS.

This easily obtainable material has been considerably employed within the past year or two as a diuretic, and also a "demulcent" in chronic vesical catarrh and in retention of urine. The reports of cases are so favorable that it should certainly receive a trial in these obstinate cases, and may be prescribed in the form of infusion or syrup, or just now may be obtained fresh, and prepared as a domestic remedy.

EXTEMPORANEOUS PILL COATING.

The advantages of coated pills, if they can be obtained without any loss of their medicinal value, are undeniable, and it is one of the greatest opprobriums of modern pharmacy that some plan for covering them quickly and cheaply has not been devised. The trouble is not so much with the material to be used as with the means of applying it, sugar, gum, gelatine, cocoa butter, dextrine, and a dozen other things answering the purpose if properly and freshly applied. Pills, whether coated or uncoated, should be fresh. Moreover, the physician needs to have his own special prescription filled and coated at once. For these rea-

sions the various ready-made pills, however carefully they may be prepared, can never command his unqualified approval. There have been many devices for extemporaneous pill-coating, but none entirely satisfactory or convenient. One of the latest, however, is sufficiently so for gelatine coating as to make it practicable, and if physicians should insist upon having their pills made tasteless would no doubt be followed by more perfect ones. Of course it must not be expected that these hand-made pills will have the finish of the others, but that is of less consequence in view of the fact that the very polishing of sugar-coated pills is one of the causes of their insolubility, and that the desire to prevent the coating from being stained by the mass inside has led manufacturers to varnish their pills before covering them with sugar. The gelatine coated pills appear to be the least objectionable in this respect.

ELASTIC GELATINE CAPSULES.

By far the prettiest novelty of the *materia medica* exhibition of the Massachusetts Medical Society this summer were samples of elastic capsules containing various nauseous and oily medicines. They are composed of gelatine and glycerine, and have about the consistence of the hectograph pad. They are almost as elastic as India-rubber, and seem also as tough. Stretching them considerably does not rupture them, neither does doubling them up, in the case of the larger ones; yet the coating is thin, easily dissolved, agreeable to the taste, and, so far as the writer could see, perfect. Their pliability makes it possible to swallow very large doses at once, a great advantage in regard to economy as well as convenience. They are made up to the capacity of half an ounce for cod-liver oil, and are said to go down as easily as oysters.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. R. T. EDES.

INTERNAL ORIGIN OF CONSTITUTIONAL SYPHILIS.

CASE I. Michael D., aged twenty-nine, laborer, entered City Hospital April 26, 1881, on account of severe pains in his jaws, and nowhere else.

He was well until ten weeks ago, when his right eye became sore. He has a slight eruption on arms and chest, also over his bowels and upper part of thighs. It consists of reddish spots, very slightly raised, a little scaly, and shining on top. He does not seem to know anything about the origin of this eruption. Has had no sore upon the penis, and the glands in the groin, though perceptible, are not distinctly enlarged.

The right eyelid is red, thickened, and partly destitute of lashes. It appears that, feeling some irritation in this eye, probably from coal-dust, a fellow-laborer removed the offending substance with his tongue. He knows nothing of the health of this man. Four or five weeks after this he began to have pain in jaws and sore throat. Now the glands behind angle of right jaw are enlarged.

His ears were examined by Dr. J. O. Green, who found serous inflammation of both tympana, but thought the pain not immediately connected with this. He was treated with protiodide of mercury, iodide of potas-

sium, with morphia, piscidia erythrina, and "tonga" for the relief of the pain. It is not clear that any relief was obtained from the last two drugs.

He was discharged relieved, the pain and eruption having nearly disappeared.

CHOREA WITH ACUTE MELANCHOLIA; AMENORRHEA; RECOVERY.

CASE II. Fannie O., aged seventeen, factory girl. Has not had rheumatism. Had chorea eight years ago. Menstruation began eleven months ago. Three months ago began to be "nervous with twitching of arm and head."

March 3d. Now cannot sleep; appetite poor; bowels constipated; slight headache. Says a doctor told her "her brain was all tired out." (Her occupation was affixing labels to shoes.) Menstruates every two weeks, and generally flows six days each time, with pain. Urine normal.

She was, when first seen, rather a delicate-looking girl, with some slight choreic movements, which gradually diminished in intensity until about March 27th, when they were noted as increasing in violence, and her manner became a little peculiar. The chorea increased until about April 6th, after which it became less marked, when her mental condition gave rise to the more prominent symptoms.

She usually lay in bed with an apathetic expression, saying, when urged, that she did n't feel very well, and that her head ached. At times she became delirious, but there was never any fixed delusion. She was extremely constipated, resisting the action of enemata and the strongest cathartics. Everything done for her at this time in the way of administering food or medicine was vigorously resisted. She became somewhat emaciated; her temperature varied from 98° to 100° F., the pulse from 90 to 120; urine and faeces were passed in bed.

At this time one could hardly avoid the suspicion of meningitis, probably tubercular, although there were never the slightest symptoms of any local paralysis. An occasional cry, which the nurse compared to that of a wild beast, complaints of soreness to touch, and well-marked "tache meningitique" (never a symptom of much value), added somewhat to this probability. Soon, however (in the early part of May), she began to improve, to take more interest in her surroundings, and finally to assist in the work of the ward, as well as to gain appetite and color.

She left the hospital July 13th for St. Luke's Home, whence she was discharged at her own urgent request to go to work. She had menstruated but once in the hospital before her symptoms became severe.

In regard to the medicinal treatment, it was at first chiefly that which we have found most useful in chorea, namely, Fowler's solution. When the choreic movements increased in intensity she took fluid extract of conium in doses increased to seventy-five minims, which had no decided effect, although on one or two occasions she was thought to be quieter after them. For a time all medication was stopped, as the administration of a sufficient supply of food seemed to tax sufficiently the energies of the nurses.

ACUTE PARENCHYMATOUS NEPHRITIS AND CARDIAC MERMER. A CONTRIBUTION TO NATURAL HISTORY.

CASE III. J. C., an employee of a Philadelphia iron company, entered hospital July 17, having been in this

country only about one month. On the 7th of July he became exceedingly drowsy and inactive, and had no inclination to perform his daily labor. Soon began to be troubled with nausea and vomiting, which persisted for several days with only slight remissions. No vomiting at time of entrance; slight fever; excessive thirst; skin very dry; pain and tenderness at epigastrium, but not complained of now; marked swelling of abdomen, legs, and ankles, which has subsided to a considerable extent; frequent micturition, but diminished daily amount, according to patient's estimation about one third normal amount of urine passed; bowels constipated; appetite very poor. For the last few months has been disturbed very much by shortness of breath and palpitation of the heart.

Physical examination: Impulse of heart felt most distinctly just below and within region of the nipple; at the apex the only abnormality is a slight indistinctness of the first sound; slight reduplication or indistinctness of second sound; at left of sternum, in the third intercostal space, was heard a loud systolic murmur, not transmitted.

July 18th. Urine normal color, acid, 1024, and one per cent. of albumen, numerous hyaline and fine granular casts, few casts with crenated blood discs, uric acid crystals in abundance.

July 20th. Urine pale, acid, 1018, one half per cent. of albumen; few hyaline casts; no blood.

July 21st. Urine pale, acid, 1012, and one half per cent. of albumen; occasionally a hyaline cast; considerable mucus.

July 26th. Urine normal color, acid, 1022, and one half per cent. albumen; very few hyaline casts; few blood globules. Cardiac murmur now very much diminished in intensity, and limited to a small area.

July 28th. Urine pale, acid, 1022, one half per cent. of albumen; no casts or blood.

July 29th. Urine pale, acid, 1010, good trace of albumen, normal sediment.

July 31st. Systolic murmur is no longer heard, at present first sound is slightly muffled. Patient discharged well, at his own urgent request, with only a slight trace of albumen in urine. No medicinal treatment of any sort at any time during his stay in the hospital.

OPIUM POISONING; ATROPIA; RECOVERY.

CASE IV. Mrs. B. was admitted to hospital in a comatose condition on the 23d of May, at 4.20 p. m., and was said to have taken laudanum with suicidal intent. An empty one-ounce bottle was discovered in one of her pockets. Could not be aroused. Respirations only 5 per minute; pulse 50, slow, full, and of a "sledgehammer" quality; pupils strongly contracted. One tenth of a grain of apomorphia was administered subcutaneously at 7.30 o'clock, and fifteen minutes later a fifteenth was added. No emesis produced. One half an ounce of wine of ipecac also failed to produce the desired result. At 8.30 p. m. a fortieth of a grain of sulphate of atropia, subcutaneously, was soon followed by a marked rise in pulse from 50 to 100, and the respirations increased from 5 to 17; pupils now moderately dilated. Contents of the stomach were removed by means of the stomach-pump, but nothing was obtained which had the odor of or resembled laudanum. The faradic current was then applied almost continuously, but it would not arouse patient. In about an hour atropia repeated by the injection of

another fortieth of a grain. Respirations 25; pulse remained about the same, perhaps somewhat weaker; pupils still dilated. Between ten and eleven o'clock the pulse began to flag, and become more irregular. Two subcutaneous injections of brandy. At 11.15 p. m. one twentieth of a grain of atropia injected, but was succeeded by no marked change. At twelve m. the conjunctiva, which before had been completely insensible, showed some reaction on being touched.

May 24th. At one a. m. patient had a convulsion, head being drawn back and respiration ceasing for a few minutes. Electricity to face, lips, and chest. Patient soon breathed again. Consciousness restored in the course of two or three hours. During day patient received as nourishment only milk and limewater. Occasional vomiting; hoarseness, sore throat, and a sore feeling all over body complained of.

May 25th. Steady improvement; pulse of good strength; no vomiting.

Examination of specimen of urine drawn on night of entrance showed it to be pale, acid, 1003, and containing a slight trace of albumen, also hyaline and finely granular casts.

The patient remained in the hospital several weeks on account of a burn from a hot-water bag which was overlooked during her unconscious condition. Her general health continued good till about the 1st of July, when she became very much depressed and acted strangely, manifesting signs of mental weakness, and having a suspicious hankering after the medicine closet.

July 12th. Appears very dull and stupid, and is negligent. Urine passed in bed. Tincture of nuxvomica, eight minims, three times a day.

July 13th. Urine, normal color, acid, 1020, faint trace of albumen; epithelium in abundance from the whole urinary tract; few pus cells.

Patient remained in hospital for some time after having recovered from the immediate effects of the laudanum on account of pains in various parts of the body. Opiates were frequently administered, but at length it was discovered that a small amount of quinia answered just as well, and the practice of deception then followed.

Discharged well July 30th.

The two most interesting points in the case, are, first, the great improvement in the symptoms following the use of atropia, which was given in somewhat larger doses than recommended by Bartholow, but in very far from the heroic method of Fothergill. Second, the condition of the urine during narcotism, which was almost exactly that characteristic of chronic interstitial nephritis, low specific gravity, small amount of albumen, and some hyaline and granular casts. This might easily have led to a diagnosis of uræmic coma.

I do not find opium poisoning mentioned anywhere, even in the exhaustive article of Dr. Ellis,¹ as a cause of albuminuria or of the presence of casts. I am, however, now inclined to think that I have seen this association at least once before in a case which was at the time supposed to be uræmic.

There is no reason, however, why many poisons which profoundly disturb the circulation should not give rise to this phenomenon temporarily, just as alcohol sometimes and aconite² have done.

¹ JOURNAL, vol. cii.

² Case of Dr. J. E. Blake, New York Medical Journal, vol. xxi.

SUSPECTED OPIUM POISONING; IMPROVEMENT AFTER ATROPIA; MULTIPLE CEREBRAL HEMORRHAGES; DEATH.

CASE V. L. W., a middle-aged, single man, was admitted to hospital on the evening of the 19th of July in a completely comatose state, with the simple history that he was thought to have taken some preparation of opium two days previous, that day being Sunday; supposed to have lain in his room all this time unconscious.

Respiration jerky and slow, twelve to the minute; pulse very rapid; pupils "pin-hole," and non-responsive; slight reflex sensibility remaining in eyelids.

One thirtieth of a grain of sulphate of atropia given hypodermically, and then a tenth of a grain of apomorphia likewise. No emesis followed use of latter drug. In less than fifteen minutes, however, the atropia had manifested its presence in the circulation, for the pulse arose to 120, and the respirations to 16 per minute. Muscles responded vigorously to a strong electric current, and in a half an hour patient muttered a few words incoherently. He also moved about in bed, and seemed to experience some pain during the application of the electricity; pupils now quite widely dilated during stimulation of surface, but more or less contracted after the withdrawal of the battery. Wine of ipecac given at this period also failed to set up vomiting. Pulse now 142; respirations 14. Then followed a gradual diminution in the pulse-rate, and patient, upon being spoken to loudly, would swallow the brandy and milk offered to him, though with considerable difficulty. Acknowledged that he had taken laudanum, but as to how much he would n't say. Respiration quite deep and noisy; external strabismus of both eyes; face somewhat congested; pupils moderately dilated; reflex sensibility present in both lower extremities; unconscious. At 10.50 p. m., pulse 104; respirations 12; pupils well contracted, apparently as though a fresh quantity of the hypnotic were acting in the system.

July 20th. Breathing that of natural sleep; considerable amount of opposition when eyelids were held open; strabismus still present.

July 21st. At five A. M. patient asked for some brandy, and also complained of feeling very cold. Pupils normal. Urine normal color, acid, 1020, and no albumen, numerous fine granular and hyaline, and occasionally epithelial casts. At 12.15 p. m., pulse 128; respirations 30; and temperature 101.8° F. At 7.15 p. m., pulse 160; respirations 56; and temperature 101.8° F. Cold tub bath now given [95° F. cooled down to 75°] and then followed a reduction of pulse-rate and temperature. Stimulants were freely given by enemata, and patient showed no signs of collapse. At 9.30 temperature had fallen to 101.9° F., and pulse to 132. During night, however, symptoms slowly increased in severity, and death took place at 5.45 A. M. on the 22d.

The following is an abstract of the report of the autopsy by Dr. Gannett:—

Autopsy six hours post mortem.

Calvaria and membranes of brain not remarkable; cerebrum normal; white substance throughout thickly studded with dark-red nodules, varying in size from a pin's head to a split pea, and not to be washed away by water; in corpora striata a few similar nodules.

Heart normal.

Lungs. Pleural surfaces *left*, adherent laterally.

Lung partly contracted, lower lobe dense, and of a dark color. On section surface of lower lobe moist, and on pressure yields considerable aerated serum. Lower portion of upper lobe in area about size of hen's egg, where lung tissue is somewhat denser, and on pressure yields numerous points of pus. Bronchi contain considerable muco-purulent material; mucous membrane reddened and injected. Pleural surfaces *right* also adherent laterally. Lower lobe presented appearances similar to those described in connection with lower lobe of left lung. Lower portion of upper lobe, an area size of lemon, considerably denser than neighboring lung substance, and on pressure there appear on surface numerous large drops of thick pus.

Spleen slightly enlarged, and rather soft. On section showed slight increase of pulp.

Other organs not remarkable.

Diagnosis. Multiple hemorrhages in the brain, chronic adhesive pleurisy, pneumonia from inhalation of foreign bodies, and purulent bronchitis.

CONGENITAL DISLOCATION OF PATELLAS.

BY JOHN SHAPLEIGH, M. D., ST. LOUIS.

AN interesting case of congenital dislocation of both patellas has recently come under my observation in the St. Louis City Hospital. The patient is a man of thirty-nine years of age, of good constitution, and was under treatment for intermittent fever. Both patellas are dislocated outward, resting on the upper and outer surface of the external condyle of the femur. The anterior surface of the latter bone is left uncovered by muscle or tendon as the quadriceps extensor passes on the outer side. Both patellas are movable and may be plainly felt in their abnormal position. They are about the normal size. The patient claims that the deformity is congenital, and states that his grandfather, father, and one of his children had the same dislocation. There was no impediment to walking, and patient served in the army during the war. He has since had the right leg broken in two places, and there is a little limp with that foot. This case is very similar to one reported by Dr. E. T. Caswell, of Providence, R. I., and quoted by Hamilton in his work on Fractures and Dislocations. (Page 767, ed. 1866.) In both cases the dislocation was outwards, and in both there is a certain kind of heredity.

EMPHYEMA IN A CHILD ONE YEAR AND A HALF OLD—ANTISEPTIC OPERATION.

BY JAMES B. AYER, M. D.

ALICE T., a bright child, seventeen and one half months of age, previously healthy, was attacked with pleurisy April 17, 1881, and on the 25th the left pleural cavity was found to be distended with fluid.

She frequently suffered from dyspnea and could not rest upon the healthy side. There was immobility of the left side of the chest, which measured one half inch more than the right side. The heart was dislocated to the right of the median line of the sternum.

Until May 22d (twenty-eight days) I kept her upon as thorough treatment as was permissible without weakening her. Poultries, counter-irritants by iodine, strapping, laxatives, diuretics, and diaphoretics were employed without benefit.

May 22d, after etherizing her, Dr. J. C. Warren aspirated the chest in the sixth intercostal space in the line of the axilla. Finding thick pus he made a free opening, evacuating about six ounces. Carbolic spray was used; a drainage-tube inserted, and Lister dressings applied.

The dressings were changed June 23d, 27th, and 31st. On the first occasion I estimated that less than one half ounce of odorless pus and serum had escaped. At the subsequent dressings there was still less.

On the eleventh day after the operation, finding the discharge slight and all symptoms favorable, I removed the tube and dressed the wound with cosmoline, continuing the Lister dressing. The wound healed rapidly, but forty-eight hours after the removal of the tube she contracted a severe cold, coughed violently, and again an effusion could be detected, but not in large amount. She was also troubled with conjunctivitis.

In ten days, however, there was decided improvement in regard to the cough, effusion, and conjunctivitis, and on the thirty-third day after the operation the effusion had entirely disappeared and air entered the lung freely. The little patient was able to be out of doors, and was rapidly gaining flesh and strength.

The case is of interest on account of the patient's age.

Reports of Societies.

GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

STATED MEETING, FIRST THURSDAY OF JULY.

President, WILLIAM G. WHEELER, M. D., in the chair.

T. M. DURELL, M. D., of Somerville, read by appointment a paper entitled

FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM DEPENDENT UPON DISEASE OF THE UTERUS.

The author first instanced the relation existing between the uterine system and the nervous system in a physiological state, as evidenced by the disorders of the latter incident to menstruation and pregnancy; and hence inferred that disease of the one apparatus must naturally induce disorder of the other; the outcome of which, under the forms of hysteria, catalepsy, and hystero-epilepsy, was the especial subject of the paper.

First of all, the position of Grailly Hewitt was endorsed, that although no connection between the generative function and hysteria has ever been demonstrated, still we believe that a connection exists; and, still further, so far as organic cause can be assigned for the production of the neurosis, it must generally be referred to a chronic flexion of the uterus. Hewitt still further asserts he does not remember a single exception, as respects causation of hysteria, among all the cases he has observed. At the same time it is to be borne in mind we may have hysteria without flexion and we may have flexion without hysteria. We are further to consider that uterine disease acts only as an exciting cause of the hysterical disturbance; back of this must be the irritable condition of the nervous system peculiar to the individual. Hysteria which has lasted for some time, and proceeded to such extent as to get beyond control of the patient, may eventuate in another stage which has been called catalepsy; and the so-called hysteria-

epilepsy is an exaggerated type. The following illustrative cases were given:—

An Irish servant-girl, sixteen years of age, always well up to six months before, when she strained herself by lifting a heavy tub of water and complained that something gave way. Had pain in back and vagina, painful micturition, severe headache, and was unable to stand long at a time. These symptoms, together with painful menstruation, increased until she began to suffer from trembling and vertigo, and finally convulsions attended with a period of unconsciousness. These attacks at last became as frequent as three or four in one day. Examination showed unusual hyperæsthesia of the parts, uterus prolapsed and retroflexed. The uterus was replaced and held in position by a Hodge pessary, which was worn three days, during which time she had no convulsion. Thereafter the instrument became displaced and finally dropped out, two hours after the loss of which a convulsion occurred. Another supporter was introduced and worn some time with complete success. Patient passed out of the care of the doctor for seven months, after which she reported she had worn a supporter all that time and had had no return of the convulsions.

CASE II. A teacher, twenty-four years of age, of nervous temperament, and who had overworked for the past three years. Presented a group of hysterical symptoms, chiefly marked by a dry, harsh cough, lasting several hours and ending in a kind of convulsion, this condition being especially prominent at the time of menstruation. Examination disclosed uterus markedly retroflexed and somewhat prolapsed. Introduction of a pessary, suitably adjusted, resulted in entire removal of hysterical cough and allied symptoms.

CASE III. Dressmaker, thirty-six years of age, suffering from paroxysmal cough, with tendency to convulsion, attended with more or less of coma; menstruation painful and difficult; patient thought she had consumption, but examination disclosed heart and lungs healthy; but vaginal examination revealed fixed retroflexion; reposition was gradually effected by treatment and finally maintained by a Cutter pessary; result, slow and steady, and at last complete, recovery from nervous symptoms.

The author remarked in conclusion that while three cases could not establish much of themselves, they were still of great interest taken in connection with Hewitt's reports; in all was present the invariable condition, namely, flexion of the uterus. If we look upon recovery as simply coincidence, it is surely a remarkable one, that it should take place immediately and invariably upon replacement of the uterus. The connection between hysteria and flexion may be difficult to explain; but there is much evidence both that it is real and that such relation is too often overlooked by the profession.

DR. WARNER asked if any other malposition of the uterus might not give rise to hysterical phenomena; in his own experience had found anteversion more often responsible than any other displacement. Dr. Durell replied that his experience had naturally been limited, but, so far as it went, it emphatically supported the position of Dr. Hewitt, as already declared.

PROFESSOR NELSON, of Chicago, being present by invitation, was called upon by the chair for an expression of his opinion. The doctor replied he would render his opinion on the subject of discussion rather by a series of questions than by positive assertion. And, first, in respect of physiological conditions, what is it in

pregnancy that occasions the nausea, vomiting, the general increased nervous excitement? Do these depend on a modified position of the uterus or upon increased vascularity? And do they originate in an influence emanating from the uterus or from the ovaries, or from both? This problem solved we shall have data for our pathological investigations.

Again, in displacement of the uterus, is it the uterus or the ovaries, which are generally also displaced, that causes the reflex trouble? Were he to venture an opinion, should incline to the belief that the ovaries were chiefly instrumental in originating the disturbances we call hysteria and allied conditions; but still evidence might be presented within the coming year which would lead him to take a different position. One question more. Is not a constant state of hysteria, associated with generative disease, the result of disease of the ovaries?

A woman had worn a sponge as a supporter till there was occasioned dilation of the external os of the size of a silver dollar, while the internal os was of normal size. Every measure of treatment for removal of this lesion failing, at last an operation for cure of laceration was resorted to with entire success. Patient did not come out of the ether well, or suffered from shock of operation, or for some other reason went home a little strange. With first ensuing menstruation showed great nervous excitement, with next menstruation was actually insane, and with the third was markedly insane, and thereafter insanity continued from one period to another. Consultation with an eminent obstetrician brought out the opinion that the case was allied to puerperal mania, and Battey's operation was proposed as means of cure. Examination at this time showed the left ovary enlarged, the right ovary prolapsed, the left broad ligament shortened and thickened. Patient fully understood the significance of the plan of relief proposed, and declared emphatically no doctor should be allowed to "alter" her. She was, therefore, left without treatment, and was subsequently reported to have entirely recovered. Professor Nelson would ask in this case, Was it the prolapsed ovary, or the inflamed broad ligament, or the inflammation of the uterus that caused the mental and nervous trouble?

A PIECE OF SPONGE RETAINED IN THE VAGINA CAUSING SUSPICION OF CANCER.

Dr. W. S. BROWN was reminded by Professor Nelson's experience with the sponge of a case which had fallen into his hands. A woman had received an injury in San Francisco, attended with flooding, to arrest which plugging with sponge was resorted to, the sponge having been, as was believed, removed after a few days. This patient afterwards came East, and was thought to have cancer on account of local irritation and abundant fetid discharge. Dr. Brown, having been called in consultation, detected the offending fragment of sponge, and at once relieved her both of her sufferings and of all suspicion of malignant disease.

Dr. FILLIP doubted if one could read attentively Charcot's great work on Diseases of the Nervous System without being impressed with the force of the evidence adduced making the ovary rather than the uterus chiefly responsible for hysteria and allied nervous distress. Such evidence had perhaps the more weight in view of the fact that the writer was a neurologist, and not strictly a gynaecologist, and so less likely

to be swayed by considerations which might unduly influence a specialist of the latter class. Trousseau goes farther, and identifies hysteria with an aura originating at times in the hypochondriac and again in the solar plexus, still again he distinguishes a fourth variety, namely, that of cerebral origin. The doctor believed he had seen one striking case in an *adult male* illustrative of the last division, that is, hysteria originating in mental and emotional conditions.

Dr. W. S. BROWN added that he believed the ovary to have much more influence than the uterus in causing nervous disturbance, and, farther, he should take different ground from that of Dr. Warner, and should agree with the author of the paper and with Hewitt respecting the position of the uterus, so far as the uterus exerted any influence. Indeed, if we were to regard antelexion causally associated with hysteria, and were to accept the statement of certain authorities as to the frequent tendency to antelexion in young girls, we should expect to find hysteria much more common than it is.

Dr. WHEELER remarked the infrequency of death from hysteria and allied neuroses, and therefore the lack of opportunity afforded the profession of determining by post-mortem examination the condition and relations of the pelvic organs. We have to depend too much on rational symptoms for certainty of pathological conclusion. It is surely true, as Professor Nelson remarked, we cannot have any considerable displacement of the uterus without having also derangement of circulation in the ovaries.

Dr. MARCY objected to the too general and indefinite use of the term hysteria; it is too much like the *amaurosis* of a somewhat earlier day, which condemned many a patient to hopeless blindness who was suffering from temporary functional conditions of the eye. Believed we should yet wholly discard the objectionable term. Had seen closely similar nervous conditions arise from disease located wholly aside from the uterine system; had seen all the symptoms of so-called hysteria manifested in the male suffering from enlarged prostate.

Dr. GIDDINGS, of Gardiner, Me., communicated, through Dr. Marcy, a paper entitled

A RARE CASE OF DOUBLE OVARIOTOMY, ILLUSTRATING TO SOME EXTENT THE VALUE OF ANTISEPTIC SURGERY,

of which the following is an abstract:—

A woman, aged forty-seven years, had passed the change in life, presented an enlargement of the abdomen, which was diagnosed ovarian tumor. Had examined her twice before within a year, and in April, current year, prepared for an operation. Her surroundings being regarded unfavorable, a thorough process of disinfection was entered upon a week before the operation was performed. All dispensable pieces of furniture were removed from the patient's room, and all that must remain, with curtains, walls, etc., were covered with a twenty-five per cent. carbolic spray. Instruments and clothing of surgeon and assistants were also treated in the same way immediately before operating. Strength of spray used during operation fifteen per cent. Tumor was exposed in the usual way, and the presence or absence of adhesions determined by sweeping a silver male catheter around it,—none existed. The sac, unilocular, was emptied and drawn out, when it was found that it was attached

from the utero-vaginal junction to the fundus of the womb by a broad pedicle. This was secured by a chain-stitch of carbolized silk, a ligature of the same was then thrown about the whole, a clamp was applied and the mass severed. Satisfied there was no danger of hemorrhage, the clamp was removed and the stump dropped into the pelvic cavity.

Turning attention to the other ovary, it was found enlarged, in size about that of a coffee-cup, and presenting papillomatous growths, of which description was given. This tumor was also removed.

Double ovariectomy has been less often done in Europe than in this country, Spencer Wells having accomplished it but twenty-five times in his first five hundred cases. The author farther believes, from his review of the literature of the subject, that the coexistence of two entirely distinct tumors, as in the present case, is very rare; Dr. Homans has met with five papillomatous growths in the course of forty-three ovariectomies. The nature of papilloma is to return speedily to the other ovary, involving the peritoneum and contiguous structures and organs in its development, hurrying the patient to a fatal issue. The present patient is of course secure as respects the other ovary, and her very satisfactory convalescence, increase of weight, etc., give encouragement she may escape the usual order of things. The paper closed with a circumstantial account of the recovery of the patient from the operation.

Dr. MARCY said the prime question concerns the pathological nature of the growth of the second ovary.

Dr. WHEELER had seen one case of papilloma in the last eighteen months; it was removed, but the patient died. Had assisted Dr. Thorndike in a case where papilloma was developed in the cyst; case took on afterwards what appeared like a malignant character, and patient died in three months. In the question of such possible complication with the ovarian tumor the books mislead; cancer is more common than we are given to understand; had himself seen within a few years four or five ovarian tumors showing cancerous complication at time of operation. The question of the future immunity of Dr. Giddings's patient will be of importance for future inquiry.

Dr. W. S. BROWN asked if ascites was present in Dr. Giddings's case. In all cases of papillomatous tumor, so far as he was informed, where there was grave suspicion of malignancy, there was complicating ascites. If this feature were absent he should judge favorably of the future chances of the patient. Spencer Wells gives a similar opinion. Again, as to cancer associated with ovarian tumors being more rare than the books state, he should believe it was rare as a primary affection, but not rare as an outcome of cancer developed elsewhere.

Dr. MARCY could not answer the question as to the presence of ascites, but should judge from the record of the case that it was absent. The doctor recalled the case of a woman with ovarian tumor who burst a cyst while dancing, and when it came to the operation the papillomatous masses were found sprouting from various points independently of the place of its original development.

UTERUS AND OVARIES REMOVED BY GASTROTOMY.

On call for pathological specimens, Dr. MARCY showed the specimen of a uterus enlarged by multiple fibroids, with both ovaries having undergone cystic de-

generation, which he had removed by gastrotomy nineteen days previous.

Mrs. S., aged forty-four years, for six years an invalid, confined to the bed, her sufferings, chiefly pelvic, almost never absent. Emaciation extreme. Husband and patient both longed for relief at almost any cost and risk. Operation done in Dr. Marcy's private hospital, with all antiseptic precautions. Heat of patient maintained by hot water circulating in a rubber coil placed under the entire body, with view of prevention of shock by abnormal lowering of temperature. In the removal of uterus and ovaries the division was made elliptically, and thus the stump was covered by peritoneum, which was secured by animal ligatures and dropped back into the abdominal cavity. External wound treated as in ovariectomy. Convalescence satisfactory, temperature being maintained at about 99° F., with the exception of once or twice for a few hours, when it exceeded 100° F. Hemorrhage was controlled, and no raw surface allowed in the abdominal cavity. This would appear an important advance in the extirpation of the uterus.

Dr. W. S. BROWN noted the important step, in Dr. Marcy's operation, of covering the stump with peritoneum, so that the risk of septicæmia was much reduced. Spencer Wells has lately adopted this precaution, and regards it of essential value as a safeguard.

Dr. MARCY rejoined that for such investment of the pedicle the profession was largely indebted to Dr. H. R. Storer; for Spencer Wells uses a kind of clamp which divides the pedicle into five or six parts, about each of which a double ligature is applied, causing a multiplication of knots. We used a needle that will allow us to sew double. Tait does not believe it possible to so occlude the pedicle of a uterine tumor that it is safe against hemorrhage. The doctor reported his clitorodectomy case as still doing well.

Dr. M. L. BROWN showed the product of an abortion, with the following history: A married woman had been absent from her husband for a number of months. On the day of her return she began to menstruate, but the husband insisted on intercourse. The ovum, which the doctor exhibited, was extruded twenty-seven days after the coitus, and was of interest both on account of definiteness of date and as representative of what is not often seen, namely, a fœtus of one lunar month's development.

Dr. Brown also illustrated a ready device to which he had resorted under circumstances of flooding to incipient exsanguination. The doctor had no syringe with him, and the patient could retain nothing on the stomach. He therefore fashioned a cone out of bar soap, in the cup of which was fitted a ball of the same material. Into the cup was placed a drachm of Squibb's ergot, the ball applied as stopper, and the instrument then pushed into the rectum in such way as to insure its rupture when it had well passed the sphincter. The hemorrhage was almost immediately arrested, whether by virtue of the remedy or otherwise, and the patient saved.

On motion, the thanks of the Society were voted to Dr. Giddings, and he was nominated for corresponding membership.

— A correspondent of the *Lancet* tells of the recovery of a boy of seventeen after having his "right arm with scapula attached dragged clean from his body."

Recent Literature.

A New Form of Nervous Disease, together with an Essay on Erythroxylon Coca. By W. S. SEARLE, A. M., M. D. New York, Fords, Howard & Hurlbert, 1881. Pp. 138.

This little book, written by a homeopathic physician, consists of two essays; the first concerning a symptom or group of symptoms which he has dignified as a new disease. Several cases are briefly described, and analyzed. There is no cause, however, for speaking of the collection of symptoms found in these cases as a new disease.

A brief abstract of the section devoted to an analysis of symptoms will enable us to understand the subject more clearly. We are given two central phenomena, one of shock, the other of venous congestion. Either of these may antedate, and, perhaps, postulate, the other. The shock may burst upon the patient without any previous congestion of the head, others may suffer from various forms of headache or from congestion of the cerebellum for months and years preceding the shock. Peculiar occipital sensations did not appear till after the shock.

The author thinks that the profession have not fully appreciated the character of the shock, to which he refers as a profound and serious symptom, giving rise to the conviction that instant death is impending, and terrifying the patient; it is generally referred to the occiput and is accompanied by vertigo only when thus situated. When in the cerebrum or the ears vertigo is rarely present.

In many of his cases the author found symptoms which he refers to a congestion of the cerebrum or cerebellum. These symptoms were not uniform, and were chiefly uncomfortable sensations in the head, a sense of weight and fullness, sometimes pain in the back of the neck, more rarely headache, cold hands and feet, slight disturbance of vision. There is no good reason why these should be referred to congestion of the cerebellum.

Under the sections of pathology and diagnosis Dr. Searle has chiefly discussed the theory of discharging lesions and epilepsy, saying many things which might be criticised if they were worth it, and neglecting to explain how the shock may be produced.

Dr. Mitchell¹ mentions these cases of shock among other disorders of sleep, and says, "The clinical relationships of these attacks are to epileptic fits, and to those well known, and, I may say, normal phenomena of a certain movement of the body at the moment of going to sleep, or even at other times." He then speaks of the attack as a "more or less violent discharge from a centre of general sensation."

While it is possible that the centres of sensation may be abnormally excited so as to give rise to various sensory phenomena, it is not easy to imagine how such excitation could produce all the phenomena met with in many of these cases. As the symptoms are very easily and simply explained upon another hypothesis it is not necessary to have recourse to the above-mentioned theory.

It is well known that in certain diseases of the labyrinth of the ear, more especially when the semi-circular canals are affected, peculiar symptoms arise, which

are thus briefly enumerated by Trousseau, — the patients are suddenly attacked with vertigo, nausea, even with vomiting, they may fall to the ground after having walked a short distance like an intoxicated person, they rise with difficulty, remain pale, are covered with a cold sweat, almost lipothymic; and these symptoms may be frequently repeated. Since Ménière first described these phenomena they have been carefully studied by many observers. Toynbee saw giddiness and other cerebral symptoms caused by pressure of wax upon the membrana tympani and by syringing the ear. We have seen such phenomena from these causes, but preferred to quote others in support of these statements. The pressure of the wax or the impulse of the water upon the drum of the ear communicated through the ossicles causes the stapes to exert a pressure upon the vestibule which is communicated to the fluid in the semi-circular canals. A sudden and forcible contraction of the tensor tympani muscles would also produce pressure through the stapes upon the fluid in the labyrinth. Such contraction would also be accompanied with a sensation of sound, which would give to the patient the impression of a shock, an explosion in the head, or a blow upon the head; this, with the accompanying vertigo, nausea, etc., form one feature of the combination of symptoms which in this essay is called "a new form of nervous disease." Sometimes there is only the sense of "shock" without vertigo or nausea, a spasmodic contraction of the muscles belonging to the Eustachian tube would explain such a shock. In conversation with Dr. C. J. Blake in regard to the phenomena under consideration he mentioned that he had experimented in applying electricity to the Eustachian tube; the result was a sensation as if a blow had been received upon the side of the head. As the tensor tympani takes its origin from the inside of the Eustachian tube it is quite probable that both muscles may be affected by spasm at the same time.

The other phenomena mentioned by Dr. Searle as belonging to his new form of nervous disease are such as are very common in cases of nervous exhaustion from over-work or other causes or in dyspepsia.

The section on treatment is quite interesting as showing the comparative inefficiency of specific, that is, homeopathic, treatment. In regard to coca the author says, "I cannot regard it as antipathic in the strict sense of the word. It certainly is not homeopathic, but it is still (however it may act) one of the most reliable remedies for the palliation, and, perhaps, cure, of this malady." It appears that of twenty-one cases the result was not known in four; two still remained under treatment; three were in the practice of other physicians who make no mention of the treatment; nine took coca and were either cured or the recovery commenced while using that drug; another recovered while using phosphorus. Only five received homeopathic treatment alone.

Homoeopathy seems to have failed in treating the condition under consideration. The account of the treatment in the cases reported is very defective. It is not possible to judge from the account how much influence diet, rest, and the regulation of the patient's life generally had to do with the recoveries.

This little essay does not deserve so long a notice, but being dignified with a quasi-endorsement in the shape of a short note from Charcot, and being apparently an honest effort to explain a certain phenomena, it has seemed to us better to give it some notice.

S. G. W.

¹ See *Lectures on Diseases of the Nervous System, Especially in Women*.

Medical and Surgical Journal.

THURSDAY, SEPTEMBER 15, 1881.

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No. 4 PARK STREET, BOSTON, MASS.

FIRST ANNUAL REPORT OF THE NEW YORK STATE BOARD OF HEALTH.¹

By far the largest portion of this volume is taken up with the appendix, and the first report given after that of the executive and finance committee is that of the standing committee on registration and vital statistics. The committee has devoted itself energetically to two distinct branches of labor, namely: First, the correct and thorough registry and tabulation of the movement of the population of the State, as to its increase by birth, its extension by marriage, and its decrease by death; and, second, the faithful record of those diseases which have made up the death-rate of the year with a review of reported epidemics -- their character, location, and severity, together with the measures advised for their suppression or prevention in the future. In furtherance of this work the committee has distributed a number of circulars, forms, and copies of laws to city and town boards of health, physicians, and health officers, clerks of school districts, and town clerks and supervisors throughout the State; and complete records of a number of epidemics, detailing their primary causes, severity, and extension, with maps of localities affected, have already been secured, while the system of vital registration provided by the State Board of Health has been put into successful operation in a considerable portion of the State.

The report of the committee on quarantine, external and internal, includes a very interesting *résumé* of the history of quarantine laws enacted from time to time for the protection of the port of New York, and enters to some extent into a discussion of some of the mooted points respecting the general subject of quarantine. The principal diseases against which the Laws and Regulations of Quarantine at the Port of New York are directed are, yellow fever, small-pox, ship fever, and cholera, and a full account of the methods at present adopted with unqualified success against these affections is given. The latter part of the report of the committee is devoted to the subject of internal quarantine, and after pointing out the dangers which are liable to arise from the neglect of proper precautions during the prevalence of contagious and infectious diseases, mentions some of the measures which the committee have adopted for the suppression and prevention of such diseases in the various portions of the State. The diseases recognized by the health

authorities as contagious or infectious, and which require sanitary supervision to prevent their introduction or mitigate their severity and limit their propagation where they prevail are enumerated as follows: malignant cholera, yellow fever, typhus fever, typhoid fever, relapsing fever, puerperal fever, cerebro-spinal fever, small-pox, diphtheria, dysentery, and measles.

In the report of the committee on public institutions a detailed statement, with illustrative diagrams, is given of the system of ventilation, heating, drainage, and water-supply of the State Lunatic Asylum at Utica, under the charge of Dr. John P. Gray, which is pronounced the most perfect of any public building that the members of the committee have ever visited. The committee on sanitary legislation, rules, and regulations, furnish in their report a complete set of model sanitary regulations, which have been devised after the most mature deliberations, and copies of which have been distributed to the health authorities in every district of the State.

After the reports of the standing committees follows the excellent address, entitled, *What the State Owes to the People*, which was delivered before the American Public Health Association at its eighth annual meeting in New Orleans, December, 1880, by the Hon. Erastus Brooks, one of the State commissioners of health, and then comes an abstract of the minutes and transactions of the Board up to the date of the report. In the report of the secretary the duties of the Board, which have been under the constant cognizance of that officer, are grouped as follows:—

(1.) The establishment of official relations by communications and conference with existing and organizing local boards of health in the State.

(2.) The communication of such information, requests, and incentives to these local authorities as, in their official capacity, should organize and maintain local boards of health where there are or at the time were none.

(3.) The exchange of information and practical suggestions, concerning local duties and sanitary interests, with the proper local authorities, especially those of towns, villages, and counties.

(4.) The systematic daily disposal of official papers and business of the central office of the board, in accordance with the by-laws and the statutes, and with this view of local duties and local authority.

(5.) The organization of the methods and system for the registration of births, marriages, and deaths, and of the prevalent diseases throughout the State, and the organization of the central bureau of registration of vital statistics.

(6.) The maintenance of correspondence and useful relations with other State boards of health and with the National Board.

The remainder of the volume is taken up with the special reports upon prevalent diseases previously referred to. The first of these are in reference to diphtheria; and the occurrence of the affection in an isolated wilderness region in Hamilton and Fulton counties furnished an opportunity for unusually exact

¹ Continued from page 235.

observations upon the origin and discernible causes of this disease in a district where, as it is believed, no case of it had ever before been seen. In the report of the epidemic at Geneva, by Dr. N. B. Covert, some very interesting observations, based upon the analysis of the waters, are given in regard to the relations of the disease to the pollution of wells.

Dysentery comes next, and in the detailed report of a limited house-epidemic at Southampton, Long Island, during the summer of 1880, by Dr. P. Brynberg Porter, of New York, it is conclusively shown, from the careful investigations made, that contamination of the drinking water by privies and cess-pools, rendered more than usually pernicious by certain meteorological conditions which prevailed at the time, was undoubtedly the source of the trouble.

Then follow some reports of house-epidemics of typhoid fever and cholera morbus in different portions of the State, and others showing the effect upon the public health of abandoned canals, stagnant ponds, obstructed water-courses, and other sources of malaria; while the concluding section of the volume is devoted to the account of small-pox as it prevailed in West Troy and neighboring towns, and the measures that were adopted for its suppression. From the above brief sketch it will no doubt be seen that, as was stated at the outset, the report affords sufficient evidence that a satisfactory amount of work was accomplished by the Board during the first six months of its existence, as well as that it gives assurance of increasing usefulness in the future; and certainly no one who at all appreciates the patent fact that "public health is public wealth" will be inclined to begrudge the very trifling expenditure on the part of the State which is necessary for the maintenance of such an organization.

MALARIAL INFLUENCES IN NEW ENGLAND.

We took occasion lately to refer to the increasing development of malarial influences in various parts of New England. The next annual report of the Massachusetts Board of Health will present a paper by Dr. J. F. A. Adams, of Pittsfield, on the appearance and spread of malaria in the western part of this State, which, if throwing no light upon the origin and mode of propagation of the poison, will at least give all the facts of the phenomena as they have presented themselves in that neighborhood. This paper will be read with interest.

The July bulletin of the secretary of the Connecticut State Board of Health contains the following in regard to malarial diseases:—

"Malarial diseases appear to have taken a step eastward and northward, as a death from malarial fever is reported from Norwich. I have not yet learned of any east of the Thames River. In many places they are reported as increasing, as in Bloomfield, New Canaan, Unionville, and other towns in various parts of the State, while others report decrease, as in Clinton and Colliard. Collinsville claims entire exemption from malaria in every form unless imported, as thus far no

cases have originated there. If flowing large areas and alternately covering and exposing the bed of the pond produced malaria we should have it here. If vegetable decay alone produces it we should have a fearful epidemic at Poquonnoc Bridge, instead of scarlet fever, as the river was absolutely choked with vegetable substances decaying and alternately covered and exposed. Yet no case of malaria has ever originated in this town."

The progressive spread of malaria in this part of the country, where most of the conditions usually supposed to be conducive to its propagation are apparently absent, might easily become a fit subject of investigation by the National Health Board.

MEDICAL NOTES.

—When dispensers of patent remedies take to sanitation something startling is to be looked for, but the true inwardness of some of the advocacy of particular schemes is not often so clearly brought out as in a recent issue of an Arkansas paper. A certain "doctor," "at the solicitation of a number of medical men and other scientists," delivers himself on sewerage to the effect that he would—

"Flash the lightning through cess-pools that would blast all spores and germs. The probable fact has not yet been mentioned, but electricity, that now conveys our thoughts and speech, and gives light and health, will finally be the di-infecting agent of poisons on and under the earth, as it is now the purifier of contaminated clouds."

Possibly the fact has not been mentioned, but on reading in the same paper that the doctor is the author of an electro-medical institute for the cure of some thirty-five diseases "not amenable to ordinary treatment," the source of the inspiration that would set thunderbolts to cleaning sewers becomes obvious. — *Sanitary Engineer*.

—According to the director of the Bureau of Statistics at Vienna out of 102,831 individuals who have passed the age of ninety-nine years 60,303 are women, and only 42,528 are men. In Italy 241 alleged centenarian women are found for 141 men of that age.

—Under the heading of Philanthropy and Typhoid Fever the *Sanitary Engineer* contains the following:—

"The English colony at Rugby, Tenn., has lately had a severe experience, proving once again that the most philanthropic intentions are no protection against the consequences of the neglect of proper sanitary precautions. A severe epidemic of typhoid fever, with twenty cases, according to the Cincinnati *Commercial*, out of a population of less than four hundred, has overtaken the colony in consequence of careless and filthy habits. This epidemic is attributed by the physicians to the pollution of the drinking-water of the hotel where many of the colonists got their meals. The water was obtained from a shallow artesian well close to the hotel, and also from a cistern near by supplied with rain-water from the roof. The water

in this cistern became very impure from the throwing of slops on to the roof which drained into the well. There are no water-closet accommodations and the dejections of the sick were thrown away in the slops, which ran through a ditch into a cess-pool fifty feet from the hotel. This cess-pool was very filthy, giving out an unendurable stench, and it is believed its contents easily found their way into the cistern and well. It is also supposed that dejections from the first case of fever entered the drinking-water. The disease was especially centred about the hotel, deriving its supply from these sources, where there were three sick, and there were also three other patients in the annex a few blocks away. The colonists have altered their practice since the physicians have called these facts to their attention; their water is now brought from streams at some distance, and probably they will not again need to be taught that philanthropy and dirt are not congenial."

— Specially in your walk in life avoid theological discussions and politics. All of you have, I trust, confidence in some form of Christian religion, and what I would say to you is, support your own form of belief and everything connected with it to the best of your means; sympathize with and aid your own clergyman, and all other clergymen of whatever denomination, for our profession and theirs can do much and good work in common; be at all times tolerant to the religious opinions and feelings of others, and keep in remembrance one great principle of the Christian religion, "Let brotherly love continue." — *Professor Annandale.*

NEW YORK.

— Dr. A. E. M. Purdy, president of the New York County Medical Society, recently caused the arrest of several persons on charges of practicing medicine without legal diplomas, and all the cases were brought up at the Jefferson Market Police Court. One of the prisoners was held in three hundred dollars bail to answer, but the others, who were drug clerks, known to have prescribed over the counter, were simply reprimanded by the court, and discharged.

— To obtain the best possible plans for the new hospital, which is to be erected in Brooklyn by Mr. George I. Leucy, at an expense of two hundred and forty thousand dollars, the committee in charge of the building arrangements, consisting of Dr. Louis Pilcher, Dr. A. E. M. Purdy, ex-Mayor Samuel Booth, and Mr. John French, have decided to award three prizes, amounting in all to fifteen hundred dollars, to be divided among the architects who furnish them with the three best plans. The ground donated for the hospital covers an entire block, and the buildings will consist of an administrative department, three or four stories in height, and several pavilions of one and two stories. A chapel will also be erected on the grounds, and the institution will be under the control of the Methodist denomination.

— Dr. Elwyn Waller, chemist to the Board of Health, has just made an analytical examination of the water from twenty-eight wells in the Twenty-Third and Twenty-Fourth Wards, the district recently

annexed to the city from West Chester County, and has found that in only two instances is the well-water really good. Six wells were pronounced unsafe, seven excessively unsafe, and the rest doubtful.

Miscellany.

LETTER FROM WASHINGTON.

LOCATION OF LEAD IN THE LIVING HUMAN SUBJECT BY ELECTRICITY.

MR. EDITOR.— Permit me to put on record through your valuable journal a discovery made in 1875 by which lead can be located in a living human subject by means of electricity. I quote from my article of that date:—

"I have discovered by a series of experiments with the electro-magnetic battery that a current of electricity thrown through the human living body gives rise to great uneasiness when passing through lead, amounting to absolute pain if the power of the battery is increased, and the current through the lead is continued any length of time." "Having in my profession but limited means of verifying or extending the experiments upon this most interesting subject, it must be left for extension in the hands of those whose field of observation is so much more extended, and who have the material for experiment so much more abundant."

My first experiment was upon my own person, having had the misfortune to receive a full charge of shot from a friend's gun whilst woodcock shooting. Each pole of the battery should have a wet sponge attached; placing one pole at the base of the brain or base of the spinal column, a distinct feeling of uneasiness is experienced when the other pole is placed so as to pass the magnetic current of electricity through the lead, and this uneasiness is quickly rendered decidedly painful if the current is continued long and increased in power, although that increased power will give no uneasiness when applied on other parts of the body.

My second series of experiments was made upon an old soldier, kindly sent to me by Dr. Norris, U. S. A. This ball was lodged four or five inches from the spinal column and a little below the fifth rib, as near as I can remember, and could be felt with the hand. Mr. McGill says "the feeling was of a stinging character," and when a stronger current was passed through the lead "caused me to jump in my chair!"

My third experiment was with Col. Morrow, of Gen. Sherman's staff. Dr. Basil Norris, Surgeon U. S. A., says of the ball in Col. Morrow's case: "The point of entrance of the ball was near the groin; the current located it on the inner aspect of the thigh near the knee." Col. Morrow says: "I am satisfied your location is a correct one."

My fourth experiment was on John Tehan at the Soldiers' Home, by courtesy of Dr. Huntington, U. S. A., in charge. The ball in this case, says Dr. Norris, "entered about the centre of the right gluteal region; the current located the ball near the hip-joint." Mr. Tehan says you found the most painful point in your experiment on him."

In the second and fourth or last case the current was longer continued and the power of the battery increased, so as to prove beyond a doubt the presence of the lead, the patients being strong men. Dr. Norris says: "Your experiments with the electro-magnetic current to find a bullet lodged in the living body, as

witnessed by me, were successful in defining a painful or burning sensation supposed to be produced by the presence of the ball." Dr. D. L. Huntington, Surgeon U. S. A., and acting surgeon of the Soldiers' Home, through whose courtesy I performed the experiment at the Soldiers' Home Hospital in presence of himself and Dr. Norris, says: "I have no hesitation in saying that I think your experiments on August 7th on the person of Tehan, an inmate of the Home, demonstrated the presence of a metallic body at or about the region between the greater trochanter of the right femur and the tuberosity of the ischium. The presence of this body was repeatedly evidenced by a sharp pricking pain, with some shock when the magnetic current was made to traverse the regions."

In all these experiments the lead was encysted, the wounds having occurred more than twenty years previous to this date. In recent wounds I have no doubt the most gentle current would indicate the presence of lead; and with a little care the location could in most cases be reduced to the diameter of one inch, which would be sufficiently accurate for the surgeon's purpose. Having located the region occupied by the ball in the manner described, the two poles of the battery should then be brought as nearly as possible opposite to its position, so as to pass the current of electricity directly through the lead, when the stinging, burning sensation will be distinctly experienced by the patient, increasing in intensity, even to a shock, if the current is continued and the power increased.

H. NICHOLS WADSWORTH, D. D. S.

1028 VERMONT AVENUE, WASHINGTON, D. C., August, 1881.

RECENT ADVANCES IN SURGICAL TREATMENT OF INTRAPERITONEAL TUMORS.¹

BY T. SPENCER WELLS.

I should not have thought it necessary, after the progress which has already been made in abdominal surgery, to insist at any length upon what I believe now to be a fundamental principle or rule of practice accepted and adopted by all the most experienced and successful operators at home and abroad, if I had not been fiercely attacked by that singular society, which, admitting the right of man to kill all the lower animals, to use them for food, their skins for clothing, their feathers for ornament, to make them labor for our convenience, denies our right to use them for any scientific purpose, or in the hope of benefiting the human race. These curious philanthropists persistently attack me because I sacrificed a few rabbits, dogs, and guinea pigs in the year 1859 in order to demonstrate, beyond all doubt, for all time to come, the fact that human life may be saved, and lifelong suffering prevented, by an improved mode of uniting penetrating wounds of the abdominal cavity. They argue that results obtained in animals are no guide to what may happen in man; that my observations were not new, and that some believe they are not true; that some think ovariectomy has, on the whole, rather shortened than lengthened the life of woman; and that its mortality has not been lessened by the knowledge gained by my experiments on animals.

Of course, I have not taken any notice of these attacks; but I wish to show you exactly what I did, and leave you to judge whether or not the human race

has been served by the death of about a dozen animals twenty years ago. Here are the specimens which I have been permitted to bring hither from the Museum of the College of Surgeons. Before I hand them round let me tell you exactly what led me to make the experiments. The first three women upon whom I performed ovariectomy all recovered. The fourth died without, as I thought, any good reason why she should have died.

I was naturally much interested in the post-mortem examination, and I obtained the invaluable service of my friend, Dr. Aitken, to make it. We found that the state of the inner surface of the wound was far from satisfactory. At that time, instead of the sutures I have used of late years, I used harelip-pins and twisted sutures to unite the wound; and we saw at once that some of the pins on the inner aspect of the abdominal wall were bare; the cut edges of the peritonæum were retracted; a portion of intestine was in contact with the wound, the impress of which was obvious on the surface of the gut. Some coagula of blood, and an abundant, consistent, lymph exudation upon the peritoneal surface of the intestine, corresponded to the edges of the incision and the surface of the wound. Recent lymph glued the opposing surfaces of the intestines to each other. I saw at once how much better it might have been if the peritoneal edges had been accurately brought together, and had united, and thought of doing this in my next case. But I found careful instructions in text-books and treatises to avoid the peritonæum, just as some few surgeons even now fear that they may set up peritonitis, or that pus from the tracks of the sutures may get into the peritoneal cavity. So I determined rather to make the experiment *in corpore vili* than on women. Dr. Richardson kindly helped, by narcotizing the animals, some with puffball and some with chloroform.

In these specimens, where the divided edges, or rather surfaces, of peritonæum have been pressed together, you see that the smooth serous inner coat of the abdominal wall is perfectly restored. You cannot see the stitches on the inside, though plainly visible on the skin; and there is no adhesion of intestine or omentum. When skin or mucous membrane are divided their edges must be brought together to secure direct union. If they be inverted union is prevented. The exact opposite holds good with serous membrane. The edges should be inverted, and two surfaces of membrane pressed together, so that the sutures are not seen; and the effused lymph makes so smooth a surface that even the line of union cannot be seen. In these specimens you can only discover it by the line of sutures in the skin. But mark the contrast in these other specimens, where the peritoneal edges were purposely excluded from the sutures. In every case where the animal was not killed within a day or two intestine or omentum adheres to the inner surface of the abdominal wall, thus completing the peritoneal sac, at the great risk of intestinal obstruction, or of permanent discomfort to the survivor, to say nothing of a want of firm union and subsequent ventral hernia. One can hardly understand the so-called reasoning which insists that this should not be demonstrated once for all in a few narcotized animals, but that we should grope our way to the realization of the truth through the sufferings and by the dissection of a series of women. You can examine the specimens now, and they will remain in our College Museum, and will serve, I trust, to dispel

¹ Extract from a speech delivered at the opening of a discussion to the Surgical Section of the International Medical Congress.

any doubt which may still be felt as to the best mode of uniting penetrating wounds of the abdominal wall. And I will go still further, and say that whenever edges or surfaces of peritonæum are divided or separated they should, if possible, be reunited. Peritonæum must be opposed to peritonæum; and this can only be done by drawing it over the pedicle, or stump, or divided parts, and fixing or uniting it as an envelope by a line of sutures or by the uninterrupted suture. I have already urged this persistently in my works on diseases of the ovaries; in the Hunterian Lectures at the College of Surgeons in 1878; in a paper on the removal of uterine tumors, brought before the British Medical Association at Cambridge last year; and in some recent papers.

THE TREATMENT OF GALL-STONE BY OLIVE OIL.

SOME of our readers may recall the mention of the use of olive oil as a remedy for gall-stones a year ago. The JOURNAL at that time called attention to the mention of the treatment in Flint's Practice of Medicine, and the opinion there expressed that the masses passed were intestinal concretions. The supposed cure has gone the usual rounds and it gives us great pleasure to reproduce from the *Lancet* the following communication, by Dr. R. Shingleton Smith, Physician to the Bristol Royal Infirmary:—

In the *Lancet* of September 18, 1880, and in the *Medical Record* of March 15, 1881, are reported cases of gall-stone treated by the administration of large doses of olive oil, with very remarkable and satisfactory results. It is stated that in both cases hundreds of gall-stones in various stages of disintegration were discharged from the bowel, and that the patients were permanently cured after one or two doses of olive oil, although repeated attacks of biliary colic had been present for twelve or eighteen months before. The writer in the *Medical Record* considers it certain that in olive oil we have a substance which, when given in a dose of six or eight ounces within an hour, has the power of bringing away the contents of the gall-bladder, and apparently without pain, and the calculi are almost disintegrated in the process.

A patient, a medical man between sixty and seventy years of age, has been subject to attacks of biliary colic at intervals for the last six or seven years. The pain comes on suddenly, and is relieved by nothing so well as injections of morphia hypodermically. Of late these attacks have been more frequent, more prolonged, and more exhausting, especially as they are generally accompanied by considerable vomiting, and great disturbance of the heart's action, with prostration. On learning the effects of olive oil in the cases reported he determined to put the matter to the test in his own case; he reasoned that it might do good, but could do no harm. Accordingly he procured a quantity of the finest salad oil, and took about six ounces within the space of one hour, sipping it slowly from time to time in small quantities and stopping as soon as any feeling of nausea was present. The result on the following morning he describes as follows:—"There was no action from the olive oil or the confection of senna taken very early this morning, but an enema brought down fæces of almost stony hardness, and hundreds of green masses of all shapes and sizes from canary-seed to a good-sized horsebean; some were imbedded in masses of hardened

faces, but floated as soon as separated; others were separate and were found floating on the surface of the water. The color was pale green; some of them were translucent. All were soft and flattened on pressure. The six ounces of oil appear to have been digested, saponified, or emulsified, for there was no appearance of oil floating in the water of the enema." Many of these masses were preserved for examination, but hundreds were thrown away. Three days afterwards they were submitted to me for examination. They were then soft and greasy to the touch, but still coated with a greenish-colored film, which disappeared on touching any spot with the finger. They had not become dry by exposure to the air, and warmth increased their tendency to liquefy, so much so that on being carried in a pill-box in the waistcoat-pocket they melted away, and left simply a greasy stain in the box and in the pocket. In consistence and texture they resembled very soft soap, and on being cut with a knife the section had a mottled appearance and the knife was greasy. No nucleus was found in any of the masses, and they were all of similar texture. The shape varied considerably; they were for the most part rounded and oval, but so easily molded that this varied with the treatment. They were found to dissolve readily in boiling alcohol, leaving only a small residue; they also broke up in boiling water, forming an opalescent solution, at once cleared by ether. The solution in alcohol gave little or no precipitation on cooling; no crystals of cholesterine were precipitated on cooling the hot solution in alcohol. The masses were not acted on by strong sulphuric acid or by iodine. The sediment in the cooled alcoholic solution consisted of a whitish powder insoluble in water, cold or hot, in nitric acid, or liquor potasse. Drops of the ethereal solution evaporated on a slide left oil globules, not quite liquid oil, but opalescent and thickened to a semi-solid consistence; under the microscope these oil drops were seen to contain minute acicular crystals, like margarine.

My examination led me to the conclusion that these masses were not composed of cholesterine, and that the principal element in their composition was oil, possibly in a state of semi-saponification. In order to get an unbiased opinion as to their chemical nature, I submitted a few of the masses to Professor Ramsay, of University College, Bristol, for chemical examination. His report is as follows:—

"They consist for the most part of olive oil, and it is impossible to separate from them any substance resembling cholesterine, for the separation of the two is a very difficult problem, the same solvents dissolving both. But under the microscope it is possible to see with a very high power that the consistency of the masses is due to the presence of a great number of very minute crystals, which appear to polarize light to some extent, and which somewhat resemble crystals of cholesterine. The fatty masses on burning give a trace of residue, and that trace shows the presence of a very minute quantity of phosphoric acid by the most delicate test that can be applied, namely, ammonium molybdate. All that I can venture to state, therefore, is that the masses are not a soap, but chiefly olive oil full of small crystals, which may or may not be cholesterine. I should require a very much larger quantity than you have given me to decide the point chemically."

The results of Professor Ramsay's examination quite coincide with mine in these respects: (1) That the composition of these bodies is totally different from that

of an ordinary gall-stone, and (2) that olive oil is the principal substance in their composition. It may, therefore, safely be inferred that they are *intestinal concretions resulting from the administration of the oil*, and that they have not been discharged from the gall-bladder by any mechanical or chemical action of the large dose of salad oil.

At the time of my writing the patient is laid up with another and more severe attack of biliary colic than he has ever had before. The bile-duct is completely obstructed, and the skin very deeply jaundiced. He followed up the first dose of oil with a second, but, in spite of this, continued to have pain in the region of the liver, which at last culminated in the present severe attack.

It must be inferred from the experience of this case that we are still unprovided with a remedy with the virtues which have been of late attributed to olive oil.

A more complete chemical examination was not possible, as the masses had undergone liquefaction and dispersion when a further quantity was inquired for.

ETHER DRUNK.

DURING the present week great publicity has been given to an instance of dead drunkenness from the use of ether. The subject, a French gentleman, is what is incorrectly called "an ether dipsomaniac." He inhales the vapor of ether freely and constantly, and is unable to manage his own affairs, so readily and steadily does he intoxicate. He is a gentleman of good means and of thirty-five years, and when he is under his favorite spell he commits mad freaks, which, if they do not make the angels weep, give more trouble than weeping to the cabmen, the police, and the civil magistrates of Paris. He has been more than once under restraint, but he relapses when he is free, and now his friends pray that he may be interdicted and that a family council may manage his property. This history is strange, but not singular. Ether intoxication is a recognized form of narcotic mania, and has been known to affect the whole of a district. After Father Mathew, by his surprising eloquence, converted the thousands of his countrymen and countrywomen to total abstinence, one of his districts converted from whisky and other alcoholic drinks was reconverted to ether. At Draper's Town, in Ireland, a man followed the good Father and married his work by teaching the natives not to inhale but to drink ether, and so effective was the teaching that for about forty years there has been in Draper's Town and about it an ether-drinking community. Dr. Richardson, who visited the district in 1877, found the custom still prevailing, and has described how the ether drinker, first washing out his mouth with cold water, gulps down from two to three ounces of sulphuric ether without wining, and in a few minutes is in the height of his frenzy. The madness is short, but active while it lasts; and although it does not seem to have been followed by any of the serious consequences related about the Parisian devotee, it is not very safe, for Dr. Morewood, of Draper's Town, has met with several cases in which dangerous insensibility has followed ether-drinking, and has, if we remember correctly, known four deaths from it. Curiously enough to the uninitiated, the effect of ether in setting up organic disease in those habituated to it is comparatively trifling compared with the effects pro-

duced by the habitual use of alcohol, so that in regard to injury of a chronic kind in the vital organs ether is the most merciful tyrant to its victims. It kills them sometimes, but it does it—as poor Frank Buckland tattooed his salmon—as if it loved them, and it does it off-hand. — *London Lancet*.

A CASE OF SUICIDE BY DYNAMITE.

THIS curious case of suicide is reported by Dr. Leadman in a late number of the *British Medical Journal*, and, as he suggests, may prove of interest in a medico-legal aspect.

J. H., aged fifty-six, a well-sinker, of irregular and intemperate habits, on July 12th concluded a "drinking bout" of several weeks' duration. During this debauch, one evening, when in company with other men, a man of the party lost a purse containing seventeen pounds. A statement made by H. led to the apprehension and trial of a respectable farmer, who had been present when the purse was taken. The charge was proved to be groundless. On the 13th, the day of the trial, H., though sober and perfectly rational, failed to appear as a witness, making some excuses to his wife and son. About noon, at the time when he should have been in court, he walked into a garth at the back of his residence, and a neighbor in an adjoining field, observing him suddenly fall, went to his assistance. He saw blood issuing from his mouth, and at once sent for me. I found the mouth full of blood, and, on examination, the soft palate torn away, the fauces rent, the tongue detached and mutilated, the teeth broken off and splintered, the superior maxillary bones separated and extensively fractured—the fractures extending to the floors of the orbits. Blood was extravasated into the eyeballs, the lower eyelids, and the upper portions of the cheeks. The inferior maxillary bone was broken into about twenty pieces. The skin of the cheeks and lips was intact, save a few scratches on the internal surface of the latter. There was no charring of the tissues. A box of matches was found in his pocket, and one, partly consumed, close to his mouth where he fell. In his trade he used both cartridges and caps containing dynamite, and was well acquainted with this terrible explosive. One of these he had placed in his mouth, and, after igniting the short fuse attached to it, deliberately awaited the result. He survived the lesions two hours, remaining unconscious the whole time. The evidence given at the inquest was considered by the jury conclusive as regarded his sanity, and a verdict of *felo-de-se* was returned. Although I have both inquired of my friends and examined several works of reference I have failed to discover a similar case recorded.

"LA FOLIE À DEUX."

Brain reproduces from the *Gazette des Hôpitaux* the account by Dr. Régis, of the asylum of St. Anne, of a form of insanity to which he gives the name of "la folie à deux." He recognizes two varieties of the disease: first, that in which, of the two individuals who become insane, the one first attacked communicates his insanity to the second, who remains on the borderlands of alienation, and may recover on being released from the dominating influence; second, more

complex and rare, where both are subject to the same form of madness, having been exposed to the same morbid causes and predispositions.

The first division has been fully described by MM. Lasègue and Falret, and may be summarized in the following statements:—

Only one of the two is insane, he having communicated his delusions to the second by a certain moral and intellectual superiority. The individuals have lived in intimate contact. The active agent communicates part of his insanity to the passive, but between the two there is a line of demarcation, the first only being legally insane. Moreover, the latter speedily recovers when removed from the influence of the former.

The second division comprises those cases of true folie à deux presenting the following characteristics, as observed in five pairs of cases:—

The two individuals become insane simultaneously. They are hereditarily predisposed to mental alienation. They live in intimate and constant contact. The exciting cause operates on both in the same way and at the same time. The mental manifestations resulting are substantially the same; the hallucinations and delusions are the same. Separation of the two is not attended by beneficial results.

Folie à deux may be defined as a monomania, usually of persecution, happening simultaneously to two

individuals, the causes of which are, first, hereditary predisposition; second, intimate and constant contact in daily life; third, an exciting cause acting on both.

SENTIMENTALITY ABOUT VIVISECTION.

THAT pleasant French traveler, Henri Havard, tells us that on his first visit to Holland he used to see quite often the heavy barges called *trekschuiten* dragged along the canal by a big dog and a woman harnessed to the same rope, while the man steered. On a later voyage he missed the big dogs and saw only the woman, or perhaps two women, tugging at the heavy boat. Informing himself as to why this change in the habits of so conservative a race as the Dutch, he learned that the local Society for the Prevention of Cruelty to Animals had secured the passage of an act prohibiting the harnessing of dogs; so the women had to do it all themselves!

In similar style, the antivivisectionists of England and this country are striving to prevent some very few of the lower animals from being used for the purposes of science, when the inevitable consequence of their success would be that the progress of medical knowledge—which means the relief of pain, the restoration to health, and the preservation of life—would thereby be retarded. — *Medical and Surgical Reporter*.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 3, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	764	404	39.14	23.17	6.41	8.51	1.18
Philadelphia.....	846,984	375	159	27.73	10.13	3.20	1.87	6.93
Brooklyn.....	566,689	—	—	—	—	—	—	—
Chicago.....	503,304	—	—	—	—	—	—	—
Boston.....	362,535	216	87	35.19	23.61	6.02	5.09	3.24
St. Louis.....	350,522	188	88	35.11	13.83	3.19	2.13	3.72
Baltimore.....	332,190	199	100	43.22	17.09	11.56	2.01	7.04
Cincinnati.....	255,708	135	76	28.89	20.00	1.48	8.15	4.44
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	93	43	40.86	22.58	6.45	2.15	2.15
Pittsburgh.....	156,381	97	58	59.79	22.68	5.15	3.09	8.25
Buffalo.....	155,137	114	66	50.88	41.23	2.63	—	3.51
Milwaukee.....	115,578	47	34	42.55	38.30	2.13	4.26	—
Providence.....	104,850	50	16	28.00	14.00	4.00	8.00	2.00
New Haven.....	62,882	20	4	20.00	—	—	—	10.00
Charleston.....	49,999	38	17	21.05	10.53	2.63	—	7.90
Nashville.....	43,461	22	8	36.36	22.73	—	—	9.09
Lowell.....	59,485	27	17	55.56	48.15	3.70	—	—
Worcester.....	58,295	19	13	47.37	31.58	5.26	—	5.26
Cambridge.....	52,740	20	10	30.00	20.00	10.00	5.00	—
Fall River.....	49,006	36	23	44.44	36.11	—	5.56	2.67
Lawrence.....	39,178	12	7	50.00	50.00	—	—	—
Lynn.....	38,284	28	14	25.00	17.86	2.98	—	—
Springfield.....	33,340	14	7	28.57	21.43	—	7.14	7.14
Salem.....	27,598	22	9	45.45	27.27	4.55	—	4.55
New Bedford.....	26,875	11	5	9.09	9.09	—	—	—
Somerville.....	24,985	13	7	46.15	46.15	—	—	—
Holyoke.....	21,851	13	7	30.77	23.0	—	7.69	7.69
Chelsea.....	21,785	10	3	30.00	—	—	—	10.00
Taunton.....	21,213	5	4	40.00	—	40.00	—	—
Gloucester.....	19,329	8	3	37.50	37.50	—	—	—
Haverhill.....	18,475	15	7	40.00	40.00	—	—	—
Newton.....	16,995	3	1	—	—	—	—	—
Newburyport.....	13,537	8	1	50.00	12.50	—	—	—
Fitchburg.....	12,405	7	4	57.14	28.57	28.57	14.29	—
Twenty-four Massachusetts towns..	187,080	80	41	48.75	35.00	7.50	—	6.25

Deaths reported 2709 (no reports from Brooklyn, Chicago, or New Orleans); 1345 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrheal diseases, whooping-cough, erysipelas, and fevers) 1023, diarrheal diseases 583, consumption 324, diphtheria and croup 139, lung diseases 119, typhoid fever 104, scarlet fever 53, malarial fevers 47, whooping-cough 32, small-pox 23, cerebro-spinal meningitis 21, measles eight, erysipelas six, puerperal fever six, typhus fever one. From *scarlet fever*, New York 23, Philadelphia 10, St. Louis and Pittsburgh six, Baltimore and Buffalo two, Boston, District of Columbia, Milwaukee, and Worcester one. From *malarial fevers*, St. Louis 15, New York 13, District of Columbia seven, Baltimore five, Philadelphia three, New Haven two, Pittsburgh and Nashville one. From *whooping-cough*, New York nine, Boston four, Philadelphia, Baltimore, Pittsburgh, and Providence three, St. Louis and Cincinnati two, District of Columbia, Buffalo, and Fall River one. From *small-pox*, Pittsburgh 11, Philadelphia nine, New York three. From

cerebro-spinal meningitis, New York eight, Philadelphia, St. Louis, and Cincinnati two, Baltimore, Pittsburgh, Providence, Lowell, Fall River, Lynn, and Chelsea one. From *measles*, New York five, Baltimore two, Pittsburgh one. From *erysipelas*, New York, St. Louis, Baltimore, Buffalo, Salem, and Chelsea one. From *puerperal fever*, New York, Philadelphia, St. Louis, Baltimore, Salem, and Newburyport one. From *typhus fever*, New York one.

Twenty-five cases of small-pox were reported in Pittsburgh; diphtheria 21, scarlet fever two, in Boston; diphtheria 10, scarlet fever one, in Milwaukee. Dysentery is still very prevalent in Buffalo.

In 43 cities and towns of Massachusetts, with a population of 1,104,991 (population of the State 1,783,086), the total death-rate for the week was 26.74 against 22.85 and 28.67 for the previous two weeks.

The meteorological record for the week in Boston was as follows:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
August 2 nd —																			
Sept. 3,																			
1881.																			
Sun., 28	30.121	71	86	63	80	63	82	75	W	E	C	5	4	0	F	C	C	—	—
Mon., 29	30.223	67	84	63	76	75	93	81	C	E	E	0	7	1	H	F	C	—	—
Tues., 30	30.196	77	93	63	77	44	84	68	SW	SW	SW	7	7	11	H	C	C	—	—
Wed., 31	30.005	80	97	67	78	35	83	65	SW	SW	W	8	11	9	C	H	C	—	—
Thurs., 1	29.858	82	96	73	64	39	69	57	SW	W	NE	8	7	11	O	H	H	—	—
Fri., 2	29.948	62	77	60	79	93	100	91	NE	NE	E	11	15	16	O	R	R	—	.78
Sat., 3	30.015	61	65	59	94	84	100	93	NE	NE	N	10	10	10	R	O	R	—	.35
Week.	30.032	74	97	59														22.23	1.13

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 3, 1881, TO SEPTEMBER 9, 1881.

CAMPBELL, JOHN, Lieutenant colonel and surgeon, medical director of the department. Granted leave of absence for twenty days. S. O. 91, Department of the South, September 2, 1881.

WHITE, R. H., captain and assistant surgeon. Granted leave of absence for twenty days from 5th inst. S. O. 125, Department of West Point, September 2, 1881.

THE censors of the Suffolk District Medical Society will meet for the examination of candidates for membership of the Massachusetts Medical Society, at 19 Boylston Place, on Thursday, September 22d, at three P. M.

SIXTH ANNUAL MEETING OF THE AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will meet in New York on Tuesday, September 20th, at three o'clock.

BOOKS AND PAMPHLETS RECEIVED.—A Treatise on the Diseases of the Nervous System. By James Ross, M. D., M. R. C. P. Lond. Illustrated with Lithographs, Photographs, and two hundred and eighty Woodcuts. Two Vols. New York: William Wood & Co. 1881. (A. Williams & Co.)

A Manual of Histology. Edited and prepared by Thomas F. Satterthwaite, M. D., of New York, in association with Drs. Thomas Dwight, J. Collins Warren, William F. Whitney, Clarence J. Blake, and C. H. Williams, of Boston; Dr. J. Henry C. Simes, of Philadelphia; Dr. Benjamin F. Westbrook, of Brooklyn; and Drs. Edmund C. Wendt, Abraham Mayer, R. W. Andon, A. R. Robinson, W. R. Birdsall, D. Bryson Delavan, C. L. Deane, and W. H. Porter, of New York city. With one hundred and ninety-eight Illustrations. New York: William Wood & Co. 8vo, pp. 478. (A. Williams & Co.)

Report of the Commissioner of Education for the Year 1879. The Prescriber's Memoranda. New York: William Wood & Co. 1881.

Manual for the Physiological Laboratory. By Vincent Harris, M. D. (Lond.), and D'Arcy Power, B. A. (Oxon.) New York: William Wood & Co. (A. Williams & Co.)

Treatment of Varicocele by Excision of Redundant Scrotum. Illustrated by New Instruments and an Account of fifteen Successful Cases. By M. H. Henry, M. D. New York: J. H. Vuil, 27 Great Jones Street. 1881.

Lectures on the Surgical Disorders of the Urinary Organs, delivered at the Liverpool Royal Infirmary. By Reginald Harrison, F. R. C. S. Second Edition, considerably enlarged. New York: William Wood & Co., Publishers, 27 Great Jones Street. 1881.

The Opium Habit. A Clinical Lecture. By Charles Warrenton Earle, M. D. (Reprint.)

The Springfield City Hospital. Annual Report for 1880.

Transactions of the State Medical Society of Wisconsin for the Year 1880.

The Harrowgate Waters: Data, Chemical and Therapeutical, with Notes on the Climate of Harrowgate. By George Olliver, M. D. Lond. London: H. K. Lewis, 136 Gower Street, W. C. 1881. (Presley Blakiston, Philadelphia.)

Lectures on the Diagnosis and Treatment of Diseases of the Chest, Throat, and Nasal Cavities. By E. Fletcher Ingals, M. D. With one hundred and thirty-five Illustrations. New York. 1881. 8vo, pp. 437. (A. Williams & Co.)

Landmarks, Medical and Surgical. By Luther Holden, assisted by James Shuter, F. R. C. S. From the Third English Edition, with Additions, by William W. Keen, M. D. Philadelphia: Henry C. Lea's Son & Co. 1881.

Chemical Analysis of the Urine, based in part on Casselmann's Analyse des Harns. By Edgar F. Smith, Ph. D., and John Marshall, M. D. With Illustrations. Philadelphia: Presley Blakiston. 1881. (A. Williams & Co.)

Majority Report of the Committee on the Subject of Lunacy Commissions in the United States and Foreign Countries, their History, Aims, and Results. From the Proceedings of the Connecticut Medical Society, 1881.

Lectures.

CLINICAL LECTURE ON THE DISEASES OF THE NERVOUS SYSTEM.¹

BY PROFESSOR ERB, LEIPZIG. REPORTED BY GEORGE L. WALTON, M. D.

SYPHILITIC TABES DORSALIS. — TRAUMATIC INJURY TO NERVES ACCOMPANIED BY DEGENERATIVE REACTION. — RADIAL PARALYSIS FOLLOWING FRACTURE OF THE HUMERUS. — APOPLEXY FOLLOWED BY HEMIPLEGIA.

GENTLEMEN, — The first patient is a man, thirty-one years old. The subjective history consists of numbness in the feet and easy tiring on exertion, together with pains in the joints. Twelve years ago he had a syphilitic sore.

On testing the sensations of his feet and legs we find his perception of a touch by the finger or pin lessened and retarded. His appreciation of differences of pressure and temperature over this region is very poor, and he does not feel so weak a Faradic current here as in other parts. On pinching the skin, however, the sense of pain is found to be acute and rapid. With the eyes closed the patient is unable to tell in which direction we bend his toes. He has then diminished tactile pressure, temperature, and electrical sensibility, but no analgesia. The plantar and cremaster reflexes are absent as well as the tendon reflexes in the lower extremities. The abdominal and pupil reflexes are normal. On the patient's crossing his foot over his knee we see a slight loss of coördination. He cannot stand on his toes with his feet together, and he cannot keep his balance with his eyes shut. His gait is ataxic, but when we test the separate muscles of his leg we find them quite strong. There is nothing abnormal to be found about the head, trunk, or upper extremities. His sight is good, and the eye movements, including accommodation, are normal. He sleeps well, and there are no irregularities in the function of bladder, rectum, or genital apparatus.

This is a typical picture of tabes dorsalis, and there is nothing else with which to confound it. Sensations of lower extremities (excepting that to pain) diminished, loss of coördination without special loss of power, muscle sense lessened, and tendon-reflexes wanting. A subjective history of paræsthesia, weakness, and "rheumatic" pains.

The cause, especially as we can elicit no history of excesses of any sort, must be considered syphilis, which is the fact in about ninety per cent. of the cases.

The next patient, a man twenty-two years old, received, about five weeks ago, a wound in the right wrist, and since that time has complained of motor and sensory disturbances in the hand. The wound was sewed up, and the surgeon stated that he had sewed the ends of the nerves together. The scar extends from the posterior ulnar surface of the forearm, about three inches above the wrist, obliquely over the front of the arm, ending inside of the line of the radial artery.

The radial nerve is not affected, but the functions of the median and ulnar nerves are seriously interfered with. Sensations of touch, pressure, temperature, and pain are entirely wanting on the palmar surface of the hand and fingers. On the back of the hand these sensations only remain over the radial half of the hand, the thumb, index, and half of the middle finger. The

last phalanges of these fingers are also anæsthetic posteriorly, being furnished by the median nerve. All the thenar and hypothenar muscles are paralyzed and atrophied. The flexion of the fingers is greatly impaired, but as the flexor muscles receive their nerve supply above the point of injury, the loss of flexion must be due, not to paralysis, but to the flexor tendons being involved in the cicatrix. The only movement possible in the thumb is flexion of the last phalanx, which is done by the flexor longus pollicis.

Electrical examination shows complete degenerative reaction in the track of the median and ulnar nerves, that is, the nerves react neither to the Faradic nor galvanic current, while the muscles fail to react to the Faradic, but to the galvanic react more strongly than normal, especially to the anode closure. On kathode closure a slow tonic contraction is seen, and on anode closure a similar but far stronger one. We see, on testing the corresponding muscles of the other arm, a much stronger contraction on kathode closure than on anode.

Trophic disturbances are marked, the skin is thin, the fingers pointed, and peculiar blisters appear on the backs of the fingers, which the patient attributes to hot water, but which are probably due really to injury to the trophic nerve fibres, such alterations in the epidermis often resulting, after injury to nerves, from an amount of heat or violence which in health would produce no appreciable results. This view is strengthened by the fact that the water did not feel particularly warm to the patient's other hand, in which there is no loss of sensation. Sometimes these trophic disturbances appear without any apparent exciting cause.

The electrical examination shows us exactly the pathological condition of the nerves and muscles. If we could examine them at this stage we should find the following conditions: In the nerves the myeline escaping from the nerve sheath in drops of fat, a multiplication of cells in the sheath itself, an atrophy of axis cylinders, and a thickening of the neurilemma. In the muscles we should find atrophy of the fibres with multiplication of cells and nuclei, indistinctness of cross lines, and increase of connective tissue.

As to prognosis, if the nerves were really properly sewed together the case should recover, though slowly. Traumatic injuries to nerves accompanied by degenerative reaction requiring months, say three, four, six, or longer for return of function. The difficulty in flexion will probably be permanent, owing to the restriction of the tendons.

The next case is one of radial paralysis. The patient, a man fifty-two years old, broke his humerus about four months ago, and the radial nerve was involved in the callus, and its functions completely lost. The callus has now been laid open and the nerve freed. The extensors of the hand and wrist and both the supinators are paralyzed. When the arm is extended supination is impossible, though in the semi-flexed position supination is perfectly performed by the biceps, which is the real supinator in this position together with the supinator brevis when intact. On telling the patient to flex the arm while we resist the movement at the wrist, a slight trace of contraction is seen in the supinator longus. At the last examination this was not present, and is a very favorable sign, probably indicating a regeneration in the nerve, exhibited first by restoration of the function of the nearest muscle supplied by it. The muscles affected are flabby

and atrophied to a greater degree than can be explained by the long use of splints.

The Faradic current produces no contraction either when applied directly on the muscles, or indirectly on the nerve. The galvanic current has no effect on the nerve, but applied to the muscle produces a strong slow contraction, more marked and longer on anode closure than on kathode, that is, degenerative reaction is present. The sensation, curiously enough, remains intact over the surface of the hand supplied by the radial, though more or less anesthesia exists over the surface of the arm supplied by the external cutaneous.

The persistence of sensation in this part of the hand may be explained in one of two ways; either the sensory fibres of the radial nerve have escaped injury, which is highly improbable, or this is a case of vicarious function, and sensory fibres from other nerves in this region have developed their functions to an unusual degree, to atone for the loss of the radial fibres proper.

The nerve and muscles in this case are in a similar state of degeneration to that described in the last case, as shown by the electrical reactions, but probably regeneration has begun to take place, and new young fibres are appearing in the degenerated nerve. These young fibres always respond to the stimulus of the will before they are electrically excitable from the periphery. This is illustrated by the fact that this patient can contract his supinator longus although we cannot cause it to react to the Faradic current.

This case will, like the last, prove very tedious, but will probably recover, as the nerve has been laid free, and signs of regeneration have already appeared.

This woman, aged thirty-nine, had an attack of unconsciousness about nine months ago, lasting three days, after which her left side, including her face, were paralyzed. There was loss of sensation on that side which only lasted a few days. There were no cramps, no trouble in speech or swallowing after the attack, and no loss of mental power as far as can be learned. She has, however, since that time been rather deaf, the other special senses remaining intact. In common terms, the patient has had an attack of apoplexy followed by hemiplegia.

Proceeding to examine her systematically we find she can open and shut her eyes, protrude her lips, and laugh quite normally. She extends her tongue in a straight line, and the uvula is not deviated. She chews and swallows perfectly and has no disorders of sensation about the face. The left arm hangs flaccid with entire loss of motion. The fingers are pointed, the skin glossy, and the nails distorted. The tendon reflexes in the arm are much exaggerated, a contraction of the muscles following the stroke of the percussion hammer on almost any point of the wrist, hand, in fact over the clavicle and the spine of the scapula. The sensations are intact.

The sensations on the left leg are unaffected. The patient has a spastic gait, and the movements of the left foot are limited, the muscles are somewhat contracted. The tendon reflexes are increased, though to a less degree than in the arm. The plantar reflex is diminished. This relation of tendon and skin reflexes is the common one in such cases. The right arm and leg are normal in sensation, motion, and reflexes. Electrical reactions are everywhere normal.

This is a typical picture of an apoplectic attack; a period of unconsciousness followed by paralysis, improvement in all paralyzed parts excepting the arm, sensations normal, no atrophy, electrical reactions normal, increased tendon, and decreased skin reflexes.

As to the origin and seat of the lesion. It is either an embolus or a hæmorrhage in the right hemisphere. Examination of the heart reveals nothing abnormal, and there are no signs of aneurism anywhere. These facts speak against embolism, as well as the three days' coma, and the probable diagnosis is that of hæmorrhage.

The seat of the hæmorrhage is certainly in the centre of the brain in the region of the great nuclei. That it is not at the surface is shown by the completeness of the hemiplegia, the lack of cramps and convulsions, the improvement of the symptoms, and the non-existence of psychical or special sense disturbances beyond the deafness.

The contractions and increased tendon reflexes show a degeneration in the pyramidal column of the cord secondary to the lesion of the brain. The completeness of the hemiplegia shows that the lesion must be seated at the convergence of the fibres from the various parts of the brain, that is, in the capsula interna. As there are no disturbances of sensation the anterior portion only of the capsule is now affected, though the deafness indicates, perhaps, that some fibres posteriorly are injured. And of course the temporary loss of sensation shows that at the time of attack the posterior third of the capsule was not entirely unaffected by the hæmorrhage, though it speedily resumed its function of conveying sensation. Laterally the seat of the lesion cannot be so closely defined.

Aphasia rarely occurs after injury of the right hemisphere, though two autopsies have been made establishing the fact that it can take place. In both these cases the patients were left-handed. Our patient is right-handed. The prognosis is unfavorable.

Original Articles.

THE MANAGEMENT OF THE INSANE.¹

BY CHARLES F. FOLSOM, M. D.,

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So recently as the time when I went to an insane asylum as an assistant physician, I was strongly advised that in order to maintain my own sanity I must keep out of the wards and away from the patients as much as I could; and yet I was assured that to persons already insane the constant association with diseased minds and the removal from healthy influences were the most potent means of restoring unsound brains to their former equilibrium. The part of the hospital in which the officers lived was alone provided with the amenities and associations of ordinary life, the absence of which in the patients' portion was actually supposed to constitute some obscure mental tonic conducive to recovery.

There was not an insane asylum in our State where the visitor was not oppressed in almost every ward with the dreariness of excluded sunshine, the gloom of almost prison seclusion, the weariness and despair of monotonous idleness, or the aggravated excitement arising from excessive confinement and restraint. This cannot be said to the same extent at the present time, and such vast improvements have taken place in the treatment of insanity in the last ten years, in our State at least, that many of the popular complaints against the institutions with whose care we are charged apply

¹ A paper read before the Hospital Trustees Association, at the Northampton Hospital for the Insane, July 12, 1881, and printed by vote of the Association.

to a condition of things which obtained in the past but does not form part of our asylum management at the present time, if it ever existed; and yet if there were no hospitals for the treatment of mental disease in existence, and if we had not the traditions of the last four centuries' humiliating record of superstitious fear and consequent neglect or abuse or unwise treatment of the insane to mislead us, probably no one would think of constructing — unless possibly for a few very violent inmates — one of our modern insane asylums, either for the care of the curable insane or for the safe keeping of those that may have become more or less permanently dependent upon the bounty of the State or the kind care of relatives and friends. I do not wish to undervalue the devoted labors which have so enormously advanced the comfort, if not the cure, of the insane in recent years. I simply desire to state the well-known fact that the light of modern research has not yet penetrated the walls of our hospitals for the insane to the same extent that it has pervaded every other branch of medical science.

From a purely medical point of view the accumulation of large numbers of the insane in a single building is most certainly a mistake, to such an extent that it is at least doubtful whether cures are not thereby sacrificed. As a question in social economy, institution-life is to a considerable degree demoralizing, both as regards its effect in making people shirk the responsibility of taking care of their helpless or troublesome relatives, and in diminishing the disposition to self-help on the part of the inmates. Still, the demands of the community will increase rather than diminish for protection by the State from its dangerous and irresponsible members, who again need special care to prevent their being neglected or abused in their helplessness.

The huge modern insane asylum is the inevitable outcome of the demand of the rate-payers for low taxes, and of the necessity of providing accommodation for a class whose numbers in all States far exceed the capacity of the buildings designed for them. The insane asylum is a necessary evil, too large to secure the best results from medical treatment, and in the construction of which "economy" — a mistaken economy, I think — is too generally considered, although in certain directions there is also wasteful extravagance. Some of the newest in England are far worse than our own in this respect. In my own opinion the asylums of Germany and France are vastly superior to those of Great Britain and this country in the matter of scientific study of mental disease. As a general rule, with individual exceptions, England, and, to a much greater extent, Scotland, are far in advance of the rest of the world as regards the naturalness and freedom from unnecessary restraint in the asylum life of their insane, so much so that it is still doubtful whether some of their extreme experiments in that direction, their open-door system, for instance, should be, or ever will become, general. In Massachusetts, although we are, like England and Scotland, doing very little for the scientific study of insanity, and perhaps exceed Germany, if not France, in our lack of employment and adherence to old methods of treatment, yet we work harder for the personal comfort and gratification of the individual tastes of our insane patients than any other country.

It is not the time now, however, nor the place, to discuss the comparative treatment of the insane in various lands, nor to consider in detail differences in race,

in customs, and in the disease itself, which will always give to this perplexing question of the care and cure of insanity, that so many uninformed and inexperienced persons feel competent to treat exhaustively, almost as many solutions as there are countries in the world. We cannot expect the New England mechanic to submit to the bullying that the Scotch or English pauper lunatic thinks is the natural order of things, nor to consent to be hired out, like the Belgian at Gheel, to work for a peasant at a dozen or two dollars a year, nor to accept, like the German, the repose of tobacco and beer as a substitute for that restlessness and impatience of restraint which the American thinks indispensable to a free citizen of the republic. At present I would like to bring before you a few practical points which I hope may serve as a framework upon which shall be raised some far better plans than those which I suggest.

Our surgeons and physicians would not for a moment tolerate a fever ward, a lying-in room, and an operating theatre in a building which served at the same time for an almshouse, an idiot school, an asylum for paralytics and epileptics, and a refuge for the chronic insane. We have in our insane asylums precisely this great incongruity, in regard to which Dr. Baneroff, of Concord, in his last report, has so well stated the best opinions of the present day, that I cannot do better than quote him at some length, as follows: —

"Insanity does not transfer its subjects into a new category of human beings with identical wants. It is one of the mistakes of the uninformed to assume this, and this assumption was carried into the plans of most of the asylums of earlier date. In these some features, such as liability to violent impulse, failure of self-control, and consequent need of safeguards, were sufficiently recognized. These features were emphasized out of due proportion to the number of cases demanding an exceptional architecture. This fact accounts for the rigid monotony of most of these buildings. It has too much limited the range of classifications, both as to number and character, and tended to reduce all to a dead level, with insufficient regard to individual peculiarities. The effect of this has been to render very difficult the attempt to vary the influences and adapt them to the indications growing out of individual constitution, habits of life, and form of disease, in a satisfactory degree. With resources thus limited, it is not rare to find any possible classification of a patient beset with grave objections, or lacking in some important demand in the case. That objection will sometimes consist in the necessity of subjecting the patient to the society of incompatible associates, sometimes in the imposition of limitations of personal freedom, demanded, indeed, for the safety and welfare of others, but unnecessary and irksome to the one in question. Again, it may consist in the necessity of exposing the patient to the constant presence of morbid manifestations in others, tending to counteract the best-planned remedial measures.

"The list of difficulties might be greatly extended, but this is sufficient to suggest that the relative association of the insane in an institution bears a very grave relation, not only to the final results of treatment, but to their peace, comfort, and contentment while under care. It is no less an object to protect the morbidly sensitive mind from all adverse influences than to provide the best direct remedial measures.

"Much thought has been bestowed and diverse opinions held upon the subject of classification in asylums,

but the fact will remain that a given environment will impress the sane and the insane of the same class in much the same manner; and this fact is a strong reason why classification should grow out of individual conditions rather than an arbitrary principle. Large wards composed of persons in advanced stages of disease are practicable, and the contacts mutually harmless, but it is otherwise with recent attacks, in which many of the faculties are in healthy operation, and the sensibilities morbidly alive. With such a single adverse influence, whether it be a thing seen or heard, or an inference from the report of the senses, is liable to become important in the final issue. For example, it cannot be harmless for one in acute melancholia to be associated with those who represent mental disease in its last stages unrelieved. The mind, already leaning towards despair, will be sure to see its own end pictured in the fellow-patient. This I have often observed. The same may be said with regard to the convalescent classes. Here, too, the nervous sensibilities are impressible, and the condition calls for hope-inspiring surroundings. . . .

"Two persons may agree in a single symptom, such as being maniacal, and so far as that symptom goes they are in the same class; but they have *other* traits demanding consideration. One may be offensively vulgar, profane, or obscene, while the other may be strictly observant of purity of thought and propriety of speech. . . . So of two other persons, one may have been bred in gross and repulsive habits, while the other shares the refinements of the home from which he comes; still, they may agree in some circumstance, which, on this broad plan of classification, compels their association. Disease or previous character may render one treacherous and untrustworthy, while another may be normally responsible. In any considerable numbers there is great diversity in the need of personal restrictions. Safety demands them for *some*; others need little or none, but are annoyed and humiliated by them. Again, the previous manner of life makes a great difference in the legitimate *necessities* of different persons; as in general society one of liberal antecedents justly needs some things which others would not enjoy or even use, if they had them furnished. The fact of disease offers to my mind no good reason for reducing the two to identical surroundings, especially when the class with the greater wants may be able and willing to bear any burden which the supply of such wants entails. . . .

"The resources depended on to meet so great a diversity of individual conditions ought, in justice, to possess great flexibility, and embrace a great range of possible changes. While this principle applies to all agencies entering into care and treatment, it has special force as applied to the question of building. A mistake or a deficiency in this direction is important in proportion to the difficulty of its correction. . . . Even though the exceptions are many, much is gained by adherence, as far as possible, to the ordinary forms and methods of living followed in the society of the sane. In proportion as this can be done, will residence at an asylum, for treatment or needed care, be relieved of the unjust prejudices which have existed against it. . . . More and more, each year, general routine methods are giving place to individual care and treatment, those more reliable have larger latitude, and self-dependence is trusted to the outer limit consistent with safety and a prudent regard to the liabilities in the case. It is easy to see how much more readily and effectively such a

principle can be carried into practice with the help of properly adjusted buildings than in those so monotonous in construction as to enforce a disregard of the nicer differences in personal character and symptoms which any considerable number of cases is sure to present."

Considering the large sums of money that have recently been spent in insane asylums and the fact that popular governments are apt to oscillate between periods of extravagance and of parsimony, especially with the aspect more or less of political expediency which the matter assumes, we cannot expect, and indeed we could hardly be justified in advising, such an entire reversal of our hospital system at once as would involve great expense. At the same time, the State of Massachusetts is liberal and intelligent and will, I think, in time, stand abreast, if not in advance, of other countries, in the humane care of the chronic insane and in the skillful treatment of those who are susceptible of cure or marked improvement. We should at least direct our efforts now to such an ultimate result.

It seems to me that in the not far future some of the harmless insane and of the acutely ill who are now sent to asylums will be otherwise cared for, and that a certain number will remain in the hospital a shorter time than is now the custom. I doubt whether custody in an almshouse will prove satisfactory to our people for a very considerable portion of the insane; and I am quite sure that we shall never find in Massachusetts many responsible families who will take care of the harmless insane in their own homes at a low enough rate to make the plan a prominent feature in our methods, as it is in Scotland and Belgium. Still, the question of responsibility of criminals will be more carefully considered as insanity is better known; and more of the dangerous insane, the vast majority of whom have been considered by the community sane or at least harmless until the committal of their crime, will be recognized to be such early enough to prevent their horrible deeds. There is also no reason to suppose that there will not be an actual increase, from year to year, in the number of our insane; and insanity is sure to be more and more held to be purely a disease, needing treatment constantly, occasionally, or rarely, but always supervision by medical men. As it will not be long, therefore, before we shall be compelled to enlarge our present hospitals or to build others, it is in the highest degree important that the State should proceed wisely, so as to secure, as of prime necessity, a better classification of our patients than we can now attempt.

First of all, provision is needed for such of the criminal insane as cannot properly be kept in prisons without manifest injustice, or retained in the asylums without seriously interfering with the management that is best suited to such institutions. They do not by any means include all the insane who have committed or attempted crimes, and could, for many years at least, be suitably cared for in the Essex County Asylum, which is discreditable to us as a place of retention for the ordinary insane, and which might be easily adapted to the wants of as many irresponsible criminals as should be kept in custody by themselves. It is unwise to place them all in one of our present hospitals for the insane, and our practice of scattering them about in several institutions seriously disorders the organization and management of them all; for the treatment in any particular ward is chiefly governed by its worst cases; and the attempt to care for dangerous criminals and others upon one method almost always results both in unnee-

essary and harmful restrictions for the one class and in a hazardous amount of liberty to the other. By getting rid of those for whom we are responsible to the courts and the community for safe keeping alone, we shall be immensely better off in our opportunities for intelligent classification of those that are left. The lunatics of the criminal class, as distinguished from those of previously good character who have committed crime by virtue of their insanity, should remain for the most part in special wards or cells in the prisons, at least until the expiration of their sentence. At the present time there are fifteen criminal insane in the Northampton Hospital; four at the asylum and sixty at the hospital in Worcester; twenty-eight at Taunton, and fifteen at Danvers, one hundred and twenty-two in all, of whom perhaps one half properly belong elsewhere, either for safer keeping or for reasons of better classification and management.

The next step should be to remove idiots to places better suited to their needs. After that, one of the hospitals might be set apart for epileptics, paralytics, and demented, while the others became gradually abodes for the chronic insane, who could at last be classified in a way to give much better results than we now get; for under our present arrangements no one of our existing hospitals can be readily adapted to the cure of acute insanity. For that purpose a new institution should be built with all the appliances of a hospital proper, embodying all the latest improvements in form and construction, to accommodate not more than two hundred patients. This need not cost over \$400,000, and should be self-supporting. Another would soon be required, which might be twice as expensive, but where the cost per patient would not exceed eight to ten dollars per week, for those who choose to pay for better accommodations.

I fully believe that some such changes as these are demanded by our most intelligent people, and that they will sooner or later come about. The proper treatment of mental disease is expensive and requires a liberal staff of physicians and attendants, as well as a full diet and ample resources of various kinds. The custody of the chronic insane is not nearly so costly and does not involve the necessity of so many and so skilled attendants. The two functions can never be fitly performed together. Even the constant presence of several hundred incurables in the various stages of loss of mental capacity is enough to take away from most of the curable cases very many of their chances of recovery. If we meet in our wards hopeless wrecks of once fine minds, if we find there the extremity of human wretchedness and the deepest depth of filth in mind and body, the supreme control of all that is evil in our nature, the worst antitypes of all the virtues, on the other hand nowhere else do we see such desperate struggles for the mastery of the worst passions or the better impulses, nowhere else such fearful efforts against such tremendous odds to hold back the mind which is felt to be slowly yielding in the unequal fight. Nowhere else, too, are developed finer sympathy, more beautiful unselfishness, sweeter charity, or more heroic resignation where no hope in life remains but for death.

The State has undertaken the charge of these three thousand people, shut up behind these locks and barred windows; it cannot evade the duty of seeing that their confinement is made the least rigorous possible, and that each one has not his chances of cure lessened by the fact that he has lost the power of directing his own treatment. It will take a long time to bring about such

changes as I have suggested; perhaps they will not come within our lives. In the mean time there are other things which we can do.

As soon as Harvard has the courage to add a fourth year to its medical course and the other colleges reach the position which Harvard will then have left behind, the general standard of the medical profession will be raised; and with that upward step the medical staff of our insane asylums will go forward also. This movement we can assist by appointing clinical clerks or medical house officers from the third and fourth year students,—more each year as there are more desirable applicants for the position,—and by giving after a few years the vacant situations in our medical staff only to those who have had such experience. Our assistant physicians and superintendents should be chosen with great care and then must possess our confidence. If they should fail in their duty let us turn them out at once, and let us hope that the governor will do the same to us when he feels that we do not accomplish all that we ought. Above all things, whatever may be said by the faultfinders that we shall always have with us, let there be no distrust of our officers on our part and none of us on the part of the State, as we mean that there shall be no grounds of that distrust which is so fatal to the best work.

The privilege of seeing proper friends or relatives and of writing must be subject to some restriction of course, but our difficulty is to get the friends to visit and send letters often enough, and to stimulate the patients to communicate with them. Each patient should have an opportunity to see at least one trustee as often as once a week. An expert lunacy commission, or commissioner, is also needed to represent the State, assist the hospitals in their work, and give confidence to the public. A board of consulting physicians can be of great service in bringing to bear upon us their judgment and criticisms from an entirely impartial point of view, in suggesting general methods of treatment, and in giving advice in those special branches of practice in which they are skilled. When the first insane asylum in New England was opened for patients there arose a question as to the organization of the medical staff, whether the physician should be a visitor, as at Philadelphia and in general hospitals, or a resident superintendent. The latter method was wisely chosen. Visiting physicians have been tried in England and Germany without success, and after Rush's death a resident medical superintendent was appointed in his place in Philadelphia. It would be impracticable for a visiting staff to follow the condition of insane patients from day to day so closely as to be able to direct their treatment if our hospitals were near large cities, while with their present situations it would be simply impossible.

For efficient service we should have, beside the medical superintendent, at least one physician to every two hundred patients, and one medical house officer to every three hundred, but not less than two assistant physicians and two house officers in each hospital. The fallacy has often been published that if a superintendent gave ten hours each day to visiting patients each one would have from one to two minutes of his time. The absurdity of the calculation lies in the fact that a very large proportion of the insane in asylums need only a safe boarding-house, with as much amusement and employment and as little restraint as is possible, and that each day comparatively few require any more from the doctors in charge than the task of know-

ing that assistant physicians and attendants do their duty.

The attendants are not less important than the physicians to the successful administration of an insane asylum. They require firmness, patience, kindness, tact, experience, and very exceptional self-control. They have every variety of duty to perform from being companions to ladies to acting as scrub-women for menials. They must be nurses, housekeepers, companions, and servants. They are expected to practice all the Christian virtues under circumstances that have sorely tried the tempers or ruined the happiness of a hundred families. That there is occasional harshness towards patients under exceptional provocation we all know, but as a rule much less, I feel sure, in our hospitals than in their own homes at the hands of their own relatives, who often insist that they are simply "ugly." If anything, we are unjust rather to our attendants than to the insane in carefully hearing complaints and in discharging those that do not under exasperating trials show even much more forbearance than perhaps most of us could exhibit. Indeed, careful investigation too often shows that the self-willed, bad-tempered patients, from whom most of the charges of harshness come, are the most abusive of attendants, and only carry out to a less degree in the hospital the same systematic brutality that they practiced upon their wives or husbands or mothers or sisters when at home with all their evil passions let loose. We and the doctors are comparatively a short time in direct contact with the insane; the attendants are their constant companions, pounded and abused by day, kept awake at night, and lied about all the time. I am amazed that we can secure as excellent service as we do. While we should aim at the highest possible standard of excellence, we should remember that we have our duties towards our attendants. For their good and for our patients' sake we must have at least a third more than our present staff wherever many acute cases are treated. We ought to give them more recreation and amusement, especially frequent opportunities for entire relaxation away from their cares. Each should have one day a week off duty in the worst wards, and all would be benefited by giving up to them, every four or five days, the amusement hall for themselves and their friends, to dance and have a good time generally. The more human we make their life in the hospital the better attendants we shall get and the longer we shall keep them. If we are to materially improve the treatment of the insane this must be where we are to begin.

For reasons which I hope to be able to discuss in another place, I do not believe that we can ever adopt to its full extent the system of so little restraint and so much employment as is at present the practice in Scotland. Notwithstanding the rather hasty generalizations of some of our critics, the result of my studies in this country and of five visits in different years to Great Britain is that the average mad American, like the "nervous" American, is more difficult to manage than the European similarly diseased,—an opinion which I find pretty generally supported by competent observers. For all that, I am confident that we can very much diminish the prison appearance of our asylums, give much more liberty to our patients, remove many restrictions from their life, give them more employment and amusement, use less mechanical restraint, and bring more healthy influences to bear upon them generally. We must hasten slowly, however, in this mat-

ter, as there are many points regarding it which can be decided only by experience, and where theories and speculations are of little avail. I think that we might, and should at once, though, abandon the use of the most objectionable forms of mechanical restraint; for instance, hand cuffs, the crib, and the mulf, the former two of which are already seldom used in most of our hospitals now, and in some never. There are most serious objections, however, to the dogmatic application of the "non-restraint system;" and the extent to which it shall be adopted, like other medical prescriptions, must depend chiefly upon the resources of each hospital and the judgment of its medical superintendent.

It is unfortunate that so many of our patients are admitted under so much deception and so hurriedly that they regard the asylum as a trap in which they are caught, and from which they take every opportunity to escape, rather than as a hospital where they are sent after mature deliberation because it is a necessity that they should be taken care of. They are sometimes committed with carelessness or haste, or upon very incomplete evidence of insanity, and are declared dangerous and sent to the most excited wards, which certainly does not improve their condition when they are quiet and harmless. I sometimes think it would be well for us to pass an order that every new patient should be placed in one of the quiet wards long enough for his condition to be thoroughly understood, and never to be sent to any ward until after a careful medical examination at the hospital.

With all the theoretical objections to our hospitals they must be used as safer places, and for the majority of cases as better places, for treatment than any others attainable. We can diminish their objectionable features, add to their advantages, and possibly increase the chances for recovery in them. If there were to be one rule of the thumb it should be, *multiply healthy influences to the last degree possible; remove, separate, destroy from each and all, as far as may be, all that is morbid, by better classification and every other means practicable.* The most we can do each year in these respects may seem very little, but it is a little to us which is great to the inmates of our hospitals, and which in the course of time will appear great to everybody.

There are many matters of strictly medical treatment which we have not time to consider to-day. There, too, I think there can be an improvement, for which we must look chiefly to the medical officers. The chief thing for us to do is to look at the matter from a broad point of view; to remember that our duty is not simply to preserve life, but something higher, to make life, if possible, worth living; to remember that just in proportion as we take away all opportunities of self-control, self-guidance, and self-help, and remove all that is natural, cheerful, and hopeful, just so far do we stimulate the desire for self-destruction and diminish the effort and chance for improvement and recovery.

Our task is no light one; much of it, I think, can never be done to the fullest extent possible without the assistance and support of a competent, skilled lunacy commission, or commissioner, appointed by the State, for which, perhaps, we need hardly hope. We must expect misrepresentation and abuse, we must look for disappointment in many of our plans, we must make many mistakes, we must be weary waiting for the results of our labor; but the sensible part of the community will fairly appreciate our efforts, and we are not fit for our work unless our shoulders are broad

enough to bear unjust suspicion, distrust, and blame even from sources where we have a right to expect something different.

MOVABLE KIDNEYS.¹

BY D. H. HAYDEN, M. D.

ABNORMAL mobility of one or both kidneys is now generally admitted to be a not rare occurrence. The first article upon the subject that can be said to have produced any effect upon the medical profession was that by Rayer in his work on Diseases of the Kidneys, 1841. Oppolzer gave a very clear account of this anomaly in the *Wiener Medicinische Wochenschrift*, No. 43, 1856. Dr. Charles J. Hare followed with a much more exhaustive article on the subject, which appeared in the *London Medical Times and Gazette* of January 2, 1858. Numerous other authors have contributed papers and clinical lectures upon this affection (notably Rollet, Hensch, Trousseau, Ebstein), and a large number of cases have been reported in various journals and in the records of medical societies. Many prominent members of the medical profession in England, however, had continued to be skeptical as to the existence of such an affection; and as recently as 1876 the Pathological Society of London, in view of the numerous clinical facts and autopsies that were collecting in the various medical journals, appointed a committee "to inquire into the subject of movable and displaced kidneys." The committee consisted of Drs. Hare, Bristowe, Wilks, John Williams, and J. Wickham Legg. In their report they stated that the evidence showed mobility of the kidneys to be by no means infrequently met with. From the numerous post-mortem observations collected one of two conditions was shown to prevail: either the kidney lies loose from attachment to the peritonæum so as to admit of being moved a certain extent in any direction, or else it is completely invested by peritonæum which passes over it to form a meso-nephron of greater or less length. According to Oppolzer the affection is usually congenital, as shown by the lengthened condition of the vessels; and rapid emaciation occurring in persons usually fat, concussion of the body, as in rough traveling, constipation, etc., probably contribute to its production. In nearly all cases where there has been an autopsy the kidney has been found healthy, but with a deficiency in the cushion of fat and a lengthening of the renal vessels, thus verifying the statements of Oppolzer in this regard. The united experience of all observers shows also that (1) this affection is much more common among females, and that (2) the right kidney is much oftener affected than the left. According to Professor Bartels, of Kiel, movable kidneys among the working women classes are often due to their habit of wearing tight waist strings to hold up their heavy skirts. He has also met with cases amongst persons in the military service and amongst workmen, due to a similar constriction of the waist, among the former by tight sword belts, and by the too tight straps worn by the latter to hold up the pantaloons. Ebstein² and Hertzka³ attribute the most frequent cause to repeated pregnancies. The following objections have been offered to this latter theory:—

(1.) Why a so minimum number of women who have borne children suffer with this affection.

(2.) Why, on the other hand, it is so often found in women who have never borne children.

(3.) Why the left kidney so generally as a rule escapes.

(4.) Why other heavier abdominal organs, whose attachments would more easily allow mobility, should not become dislocated rather than the kidneys.

In a large proportion of cases movable kidneys cause no symptoms, and the tumor is accidentally discovered, often by the patient. According to Oppolzer, in addition to sensitiveness caused by firm pressure upon the kidney in any direction, the patients complain spontaneously of a sense of pressure and a dragging, especially when standing, performing active movements, during defecation, etc. In all the cases seen by him the urine has been normal. When pains are present they are almost always relieved, and not infrequently removed, by the recumbent position.

The tumor is generally felt in the right abdomen deep under the liver, having a more or less ovoid form, is smooth and of the consistency of a kidney. It is extremely rare that the hilus can be made out and only in the thinnest subjects. The tumor can be moved within certain limits, sometimes as far as the navel, and even into the iliac fossa; and can be made to disappear upwards and backwards into the renal region. A flattening or depression can sometimes be made out in the posterior lumbar region when the kidney is displaced downwards. Rayer mentions one or two such cases. Trousseau states that by skillful palpation it is discoverable that the renal region on that side does not contain a kidney; and percussion is sometimes found to be more resonant than on the opposite side, giving place to the normal dullness when the kidney is replaced.

The degree of mobility of the kidney varies very much, amounting at times to but a slight departure from the usual tolerably fixed condition. For the examination of these cases Dr. Hare recommends the following method:—

The patient to be placed on the back, inclining slightly towards the side in which the tumor lies (generally the right), with head and shoulders raised, and legs slightly elevated, the observer standing or sitting upon that side of the patient, but somewhat facing the patient. The fingers of the left hand should be placed on the posterior lumbar region, immediately under the last rib, at the same time gently pressing or pushing forward that part. The ends of the fingers of the right hand should then be placed in front just below the costal cartilages and there also slight pressure should be exerted. The lower end of kidney will then be probably felt between the hands. The patient should then be told to take a long inspiration, and then to expire slowly. The observer should in the meanwhile keep his hands in the same position as before, but just at the commencement of expiration should pass the fingers of right hand rather sharply down towards the renal region and he will probably detect a much larger portion of the kidney between the hands than previously. It has been detruded downwards by action of the diaphragm.

The diagnosis of movable kidney, when accessible to palpation, is, as a rule, not difficult. In very stout people it would be often impossible, but in such persons it is said almost never to occur. Errors in diag-

¹ Read before the Boston Society for Medical Observation, May 2, 1881.

² Ziemssen's Cyclopaedia, Diseases of the Kidneys.

³ Wiener Med Presse, 1880, No. 48, Dislocated Kidneys.

nosis, however, have not been uncommon, and patients have been subjected to active and unavailing treatment from ignorance of the true nature of the affection. Trousseau reports cases where the abdomen has been found covered with leech bites, or the cicatrices resulting from the application of tartar emetic ointment, on the supposition that there existed peritonitis. In one case the patient had been taking for a long time iodide of potassium with the object, "fortunately unsuccessful," of producing absorption of the tumor. Dr. Rayer in his work, says: "The pains which sometimes accompany mobility of the kidney have been mistaken for nervous colic, for the phenomena of hypochondriasis, and sometimes for lumbar and sciatic neuralgia." Cruveilhier writes: "I have seen the tumor formed by displaced right kidney treated for obstruction of the liver or a morbid growth." Errors in diagnosis have been known to lead to dangerous mistakes. One case is reported in the *Lancet*, March 18, 1865, which was mistaken for an ovarian tumor, and the operation begun for its removal.

The tumors most likely to be confounded with a movable kidney are cancerous or tubercular masses of the omentum and mesentery or floating tumors in the peritoneal cavity. It would be extremely rare for these masses to have the size, shape, and smoothness of a kidney. Cachexia, too, would be present without other cause to explain it, and if the tumor had lasted any length of time any change which had taken place in its size would be a valuable diagnostic point. A movable spleen lies immediately against the parietes, and gives rise to dullness, whereas the kidney, if of normal size, would be covered by intestine unless detrued downwards and brought to the front. The spleen if found in this situation would be much larger than the kidney and less movable. The liver is never movable, and if a movable kidney were associated with an enlarged liver the margin of latter could generally be made out and the kidney found to slip beneath. An enlarged gall-bladder is sometimes very movable, but lies generally in a more oblique direction towards the left iliac fossa, its lower end is more globular and less hard on pressure, and sometimes fluctuation can be detected. It is only the distal end of the gall-bladder that is movable, the other end being attached to the liver. A tumor of the intestines would be accompanied by characteristic symptoms. A collection of feces would have a different feel and shape, and would not slip into the hypochondriac region like a movable kidney. An ovarian tumor to extend high up into the abdomen would always have a considerable transverse diameter. A mistaken diagnosis has been mostly due to the physician not bearing in mind the possibility of the existence of a movable kidney.

In an article by Dr. Mueller-Warnek,¹ assistant physician to the medical clinic of Kiel, the author states that so relatively large a number of women came for treatment to the hospital with well-marked symptoms of dilatation of the stomach, where examination showed an abnormal mobility of the right kidney, that one was forced to regard the complication as not accidental, and to admit the dependence of the one affection on the other. Professor Bartels was the first to show a causal connection between the pressure of tight waist strings upon the kidney and its mobility on the

one hand, and between the mobility of the kidney and dilatation of the stomach on the other. In confirmation of this theory the writer claims to be able to demonstrate both by cases and experiments on the dead body that the pressure exerted by these waist strings is sufficient to cause this result, all other causes having been excluded, and in two or three cases the symptoms being found to gradually develop. From a study of the topographical anatomy of this region he shows how the right kidney and the descending part of the duodenum are wedged in on all sides between solid parts save in front and below. By numerous experiments on the cadaver the furrow resulting from the constriction by tight waist strings was found to fall on the middle of the right kidney, or somewhat below the middle, whilst the thorax is in position of expiration or at rest. The effect of inspiration and of the consequent pressure upon the intra-abdominal organs under these favoring conditions is to displace the kidney, which has become or is already movable, forwards and inwards. Where the respiration is often subjected to long-continued increased action, as in many kinds of heavy work, a loosening of the kidney in its normal site is first produced, and later a dislocation takes place in the above mentioned direction. When the kidney has once become movable the pressure alone suffices to cause a compression of the duodenum against the vertebral column, which, from the absence of any mesentery, is not able to escape out of the way. The left kidney is not subjected to the same causes owing to its different anatomical relations, and thus escapes. The writer explains the fact of the greater frequency of movable kidneys among the working classes and the comparative exemption of the upper classes by the different action of the tight waist strings worn by the former from that exercised by corsets worn exclusively by the latter, the pressure of the corsets being more uniform over a large surface. The normal situation of the right kidney is not a constant one, and the furrow caused by these strings would not therefore always act upon it in the same way. Predisposing causes are also at work in certain persons, and movable kidney is often congenital. The author advances these as the reasons why some are affected and others not of those subjected to this cause, and a combination of circumstances is generally necessary. If the author's views are correct a prophylactic treatment is of great importance, and suggests itself.

Edema of the lower extremities has been said to have been caused by a movable kidney, and Rayer, in his work, reports one case where obliteration of the vena cava was due to it. In all the six cases reported by Dr. Hare there was noted an unusually strong abdominal pulsation.

Now and then severe inflammatory attacks, ushered in by chilliness and accompanied by intense pain, lasting a week or so, have been observed to occur in connection with movable kidney, palpation revealing a smooth and very sensitive tumor, which rapidly becomes too tender to admit of any pressure, the abdomen becoming tense and hard with often an increased area of dullness, due to the considerable exudation which has taken place. Dietl has described these paroxysms as "evidences of incarceration." The most probable cause is an irritation of the surrounding connective tissue and peritonæum consequent upon some sudden change of position of the kidney. The explanation by Gilewsky that acute hydronephrosis and pye-

¹ Unnatural Mobility of the Right Kidney and its Connection with Dilatation of the Stomach, *Berliner Klinische Wochenschrift*, No. 40, 1877.

litis have been produced in these cases by a twisting of the kidney on its own axis and a consequent compression of the ureter is not correct, as some autopsies have shown no such state of things. Pyelitis, too, is not always found where the signs of incarceration have been present, and often exists where these signs are absent.

With regard to the proper treatment of movable kidney but little requires to be said. Confinement of the bowels and the consequent straining at stools are to be avoided. Pain will generally be relieved by the horizontal posture. Elastic abdominal bands are recommended by some, though according to Oppolzer they do no good. A correct diagnosis is of chief importance, "which," as Ebstein truly remarks, "often acts as a complete remedy."

The following cases were met with in the out-patient department of the Massachusetts General Hospital. The patients were all women. They had all discovered the tumor themselves. In all but one of the cases tumor was in the right side. The notes, which were taken at the time, are very imperfect, and the patients were seen but once.

CASE I. December 29, 1876. L. F., aged thirty-seven, married, born in Maine, resides in Cambridge. Eight months' duration. There is a solid body, size of a kidney, felt, when patient sits up, to the right of umbilicus, movable in different directions, particularly upwards. Micturition frequent and painful.

CASE II. June 8, 1876. M. L., aged forty, born in Ireland, resides in Gloucester. There is a solid and movable body, below border of left ribs, apparently unconnected with the spleen, about the size of a fist. Patient has been aware of its existence five months. At times it is painful and sore on pressure.

CASE III. December, 1876. A. P., aged forty-three, born in Ireland, resident of Lawrence. Four years' duration. Patient is subject to renal colic. In right abdomen, below the border of the ribs, there is a movable body suggestive of a kidney. Patient is obliged to pass her water every half hour day and night. There is constant uneasiness in hypogastrium and back. When patient lies on her left side the tumor presents, and can be grasped through the parietes. Percussion is found to be resonant over renal region of this side when compared with opposite side. If the patient is then held in the horizontal position the tumor disappears and can no longer be felt, and percussion in the right renal region becomes completely dull. This change in percussion with change of position was unvarying as often as the experiment was repeated, and was easily demonstrable to others who saw the case.

CASE IV. July 21, 1875. E. McC., aged thirty-two, married, born in Ireland, resident of Hopkinton, Massachusetts. On deep inspiration a solid body about the size of a kidney is made to appear, and can be grasped in right abdomen. The tumor can be moved in a downward direction, and then easily pushed upwards and made to disappear behind. Patient has had this tumor as long as she can remember, and there has never been any pain, soreness, or other symptoms connected with it.

CASE V. March 24, 1875. A. B., aged forty-four, married, born in Maine, resides in Gloucester. There is a tumor felt to the right of umbilicus, movable, which can be pushed upwards and made to disappear posteriorly. Tumor disappears and can no longer be

felt when patient lies on her back. Patient describes symptoms as of something "dragging" in right renal region, and complains of an occasional pain to right of navel.

CASE VI. April 18, 1881. The following case has come under observation since the above paper was written. H. A., aged thirty-seven, married, and has had three children, last confinement being three years ago. Five years ago patient had an attack of what she describes as not being a real pain, but the sensations being like a "burning sore" and "pressing" in right hypochondrium, with some swelling, requiring medical relief. Two years ago she had a similar attack, and between then and the following August (1879), perhaps as often as ten times, similar attacks. She has had none since then, and has been perfectly well, save that three months ago she had a miscarriage. Five months ago she discovered the presence of a tumor, which frightened her greatly, and on account of which she consulted a physician, "who," she says, "told her that it was a lump which had fallen down from the liver." A second physician consulted thought the tumor to be a growth from the walls of the stomach, and prescribed a course of internal treatment and the application externally of some form of iodine, as the character of the stains upon the skin showed.

Examination, April 18, 1881. Patient's general condition appears good. Is moderately stout. Abdominal walls considerably relaxed and flaccid. While lying on her back, inclined towards the right, on deep inspiration a movable, smooth, solid body of ovoid shape, size of a kidney, can be felt to the right of and a little above the level of the navel. It can be grasped and pushed upwards and backwards out of reach, its rounded end slipping through the fingers like a "greased egg," as Mr. Taylor, one of my assistants, aptly described it. There is quite a depression formed when the plessimeter is applied to the renal region of this side, and the percussion sound here is fuller and more resonant than on opposite side. When patient lies on her back, inclined towards the left, the tumor can no longer be felt in front as before, the resonance disappears posteriorly, and percussion gives an equally dull sound with that of the opposite side. There is some sensitiveness on firm pressure. With the exception of a pain in the back, which she has had for the past two weeks, now about gone, patient has had no symptoms of any kind. This case illustrates very well the importance of a correct diagnosis, both from thus being able to relieve the patient's anxiety and mental suffering, as well as to prevent useless and unnecessary treatment.

A CASE OF PROLONGED INTESTINAL OBSTRUCTION.¹

BY F. W. DRAPER, M. D.

THE patient was a man, aged thirty-three years. His occupation as a teacher led him into sedentary and rather indolent habits of life. For many years constipation had been the rule with him. In 1875 he had an attack which confined him to his bed for several weeks, and which he describes as "inflammation of the bowels." After this illness he was the subject of recurrent attacks of more or less prolonged

¹ Read before the Boston Society for Medical Observation, May 2, 1881.

and obstinate constipation, attended with a distressing accumulation of flatus; this latter condition of flatulence became especially annoying to him, and was the source of the greatest discomfort and anxiety. On one occasion, in 1876, he went ten days without a fecal dejection; this was the longest period of intestinal inaction till the present attack.

During the years 1878 and 1879 I saw him at irregular intervals, and prescribed for the relief of his abdominal symptoms. Suspecting that in some way, not clear on physical examination, the recurrent attacks might be due to the presence of inflammatory products, the consequence of his illness in 1875, I withheld active cathartics, and used in the treatment the milder laxatives (podophyllin, compound extract of colocynth, and the like) in combination with belladonna and nuxvomica. After the use of these remedies, with turpentine stupes and other counter-irritants to the abdomen, the bowels would presently resume their natural function, and an interval of entire comfort would follow.

In the spring of 1879 a somewhat prolonged period of constipation and flatulency, attended with occasional vomiting and some pain, though yielding to the treatment previously effectual, left the patient in an unusually prostrate condition. He went into the country and spent the summer, returning to his post in the autumn in excellent health. Through the winter and until the beginning of the present, his last, attack, he was comparatively free from discomfort, and if he had any trouble with his intestines it was not severe enough to require special treatment.

June 28, 1880, after indulgence in iced water, he was attacked with slight vomiting, distention of the abdomen, and moderate pain. The matter vomited was of a bilious character.

I saw him for the first time on the first day of July. He was then much distressed by the great accumulation of gas in his intestines; the abdomen was uniformly distended and tympanitic, and careful palpation and percussion detected no region presenting exceptional signs with relation to the rest. Vomiting had ceased spontaneously. There was the customary constipation; there had been no dejection for three days. There was no tenderness of the abdomen. In all respects except as regards the constipation and tympanites, the patient was comfortable. There was no fever; the pulse was normal in strength, ranging from 80 to 90, the tongue was moist and clean. The appetite was lessened but the stomach retained and digested liquid diet satisfactorily.

Without following the course of the attack from day to day, the general remark may be made that there was no material change in the condition during *twenty-one days*, for which period the intestines were continuously obstructed, and the gaseous distention persisted. In the afternoon of the twenty-first day flatus escaped by the anus, and presently a dejection of scybalous feces followed. The next morning a normal stool was voided, and thereafter for nine days the patient, though weak, appeared to be in good health and spirits; his greatly-distended abdomen resumed its natural appearance, and there was a daily defecation. He rode out twice during the nine days, and appeared fully convalescent.

During this prolonged period of twenty-one days of intestinal inaction the patient took nourishment by the mouth in small amount at short intervals; he was

afraid to take liquids freely lest they should increase the gaseous accumulation; there was no nausea or vomiting.

The subject of the treatment can be dismissed in a few words. At the outset the remedies previously found effective were employed, namely, laxatives, turpentine to the abdomen, and stimulating enemata. On the ninth day half an ounce of sulphate of magnesia was given in a dilute solution; it produced no effect beyond slightly increasing the patient's misery. Belladonna was now tried till the physiological effects gave warning to desist.

On the fourteenth day, with the concurrence of Dr. O. W. Doe, who saw the patient in consultation, the aspirator was used to withdraw the gas; four punctures were made into the most prominent points of the abdomen; three of the operations (performed as aspiration of fluids is performed) were successful in withdrawing a large quantity of fetid gas; in the fourth puncture the needle passed between two folds of intestines. The smallest needle was used. There was no ill-effect in consequence of this operation. The abdominal distention was greatly relieved, and only a little local tenderness marked the places of puncture.

On the fifteenth and sixteenth days Dr. W. C. B. Fitch saw the patient with me. In accordance with his advice the use of belladonna was resumed. The drug was given in the form of the extract in half-grain doses every hour till delusions of vision and other marked physiological effects were developed; three grains were thus taken daily for six days.

Meanwhile large enemata of simple warm water were administered with the fountain syringe, the patient being in the knee-and-elbow position; he repeatedly took three pints of the enema, and on several occasions received as much as two quarts, the direction being that he should have as much as he could bear. These enemata were given once in six hours for four days; their use being attended with some irritation of the anus at the end of that time they were given once a day only till the twenty-first day, when the obstruction was relieved and all treatment was remitted.

The conclusion of the case remains to be told. As has been remarked, upon the relief of the obstruction, all the functions were restored and the patient enjoyed a comfortable convalescence during nine days; the appetite returned, the vigor of mind and body were revived and although the patient was cautioned to take advantage of continued rest, and to regulate his diet with some care, he was ambitious to return to his usual duties. In the afternoon of the ninth day he was attacked with moderate pain in the abdomen, attended with vomiting of a bilious, viscid fluid; there had been a dejection earlier in the day.

Next morning the pain continued though the vomiting was relieved; there was a natural dejection in the morning of this day. Accumulation of flatus developed in the usual way. The patient noticed that in this attack the pain was much more severe than in former seizures and there was more tenderness than before; he did not localize these in one part of the abdomen more than in another.

At the end of the second day it was evident that the patient was sinking under the persistent and severe pain; morphia had been used freely and with benefit, mitigating the abdominal distress, but not producing narcosis. Hot fomentations were also employed. Stimulants were now added to the treatment. There

was a small defecation after an enema in the morning of this day.

During the third day, the symptoms increased in severity; the abdomen was fully distended; the pain persisted; the skin was cold; the pulse was 160 and thready. The aspirator was used again with but slight temporary effect. The respiration was compromised but slightly. Death occurred seventy-two hours after the onset of the attack.

An autopsy, confined by request to the abdomen, was made thirty-two hours after death. The abdominal walls were distended to their utmost; when the usual longitudinal section was made the intestines escaped through the incision in huge convolutions. The entire length of the small intestine and the ascending and transverse portions of the colon were fully loaded with mingled liquid and gaseous contents. The peritoneum was everywhere injected, and the vessels of the omentum were especially engorged. In the dependent portions of the abdomen there was an effusion of dark-red, thin fluid, amounting, by estimate, to eight fluid ounces. The color of the small intestine was a dark purple; its diameter was that of a large orange; its contents consisted of dark brown, fetid liquid feces. The distended large intestine was of a pale color; its diameter was six inches and its contents semi-solid feces. Search was made for the points of puncture by the aspirator needle, but no remnant of that operation was found. There was no agglutination of the intestinal folds or other indication of peritonitis, beyond the intense general hyperemia and the fluid exudation.

At the junction of the transverse and descending portions of the colon (splenic flexure) there was a cicatricial constriction. In the concavity of this flexure the three coats of the intestine were drawn into a firm, dense mass of tissue, the puckered folds of which contraction had reduced the calibre of the gut so as scarcely to admit the tip of the little finger. Above this stenosis the intestine was dilated into a great bag or reservoir filled with semi-solid feces; below it the gut was contracted to its normal dimensions. Seen from within the intestine showed nothing remarkable at the constriction beyond the puckering of the mucous lining; on the outside (peritoneal surface), however, the stenosis was marked by a roughened, elevated ulceration of the size of a silver quarter-dollar. A fold of the jejunum was attached by loose adhesion of its free border to this ulcer, and its peritoneal coat presented a corresponding, though more superficial, loss of tissue. The situation and relations of the constriction were such that it could easily be plugged by a fecal mass of slight consistency.

Upon the surface of the large intestine, just above the ulceration, was a minute perforation which hardly admitted the head of a probe, and through this small opening enough fecal matter had probably escaped to develop the peritonitis which destroyed the patient.

—The medical faculty of the University of Berlin proposes the following subjects for prizes in 1882: (1.) An experimental examination of the action of nerve-stretching on the peripheral nerves and on the central organs of the nervous system, with reference to the researches of Brown-Séquard. (2.) A historical and experimental criticism of the different methods of suture of the intestines.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

THE STRIATION OF MUSCULAR FIBRE.

Two papers worthy of mention have recently been added to the literature of this vexed question. One by Wagener¹ describes some curious appearances which may be observed on the muscles of the thorax of a fly. It is to be remembered that the fibres of these muscles are very much smaller than those of the legs, and that perhaps each of the former represents a "muscle column" by the union of several of which the larger muscles are composed. First catch the fly, then divide it longitudinally with a pair of scissors, and take a little muscle from the thorax. Put it quickly into a drop of water on the slide, spread it out a little, and cover it in. A power of three hundred diameters will show cross stripes on some fibres and none on others. Place one of the latter in the field so as not to mistake it, and, according to Wagener, in a short time bright cross lines will appear at once throughout the fibre. They presently become clearer, and while the observer is wondering whether he has not mistaken the fibre the same phenomenon will recur by the appearance of a new set of lines, each of which will be midway between two of the former ones. The latter set will gradually become as clear as those that appeared first. The writer of this report has verified the main points of these observations. He would not dare to assert that he has ever seen the stripes suddenly appear, but he is sure that he has seen them in fibres in which he had not seen them a few minutes before, and also that the stripes became more numerous as the observation was prolonged.

Wagener believes, however, that before this other changes had taken place which require very high powers. With these he sees a very fine cross striping appear very soon after the preparation is made. This is soon followed by a coarser one, and then occur the changes described above. The writer, at the time of preparing this report, did not have access to a lens capable of showing these appearances. He would state, however, the very important fact with regard to the stripes which he could see, and which Wagener calls light ones, namely, that their lightness or darkness is entirely a matter depending on the arrangement of the light and on the focus. It is to be regretted that Wagener attaches much importance to polarization, and uses the terms "isotropic" and "anisotropic." We cannot doubt that the polariscope has cut off a great deal more light from this question than it has thrown upon it. The most diverse views are held as to the optical qualities of different parts of the fibre, so that we are often more than a little puzzled to know which disk a writer means when he alludes to the double or single refracting substance. Ranvier, indeed, maintains that the optical qualities of a given part of the fibre vary with the tension to which it is subjected.

According to Wagener, the anisotropic (light) stripes have the property of expanding and contracting, which Engelmann believes is due to the absorption and rejection of water respectively. Moreover, these light bands can join one another to form larger ones, the

¹ Ueber die Entstehung der Querstreifen auf den Muskeln, etc. Archiv für Anatomie und Entwicklungsgeschichte, 1880, Heft 4 and 5.

intervening black bands of course disappearing, and this process may be repeated. He believes firmly in the fibrillar structure of muscle.

The following application of Wagener's theory deserves notice, though it is our purpose to confine ourselves pretty closely to the cause of the striation. "The appearance of the borders of the so-called heart cells depends on the existence of smallest anisotropic bands, and on their property of uniting with their neighbors; for these borders consist only of rows of enlarged anisotropic bands which may appear and vanish under the observer's eye."

Though ready to admit the correctness of many of Wagener's observations, we feel confused rather than enlightened by his paper. If we did not know that stripes exist in the living fibre we should infer from this method of demonstration that they are post-mortem changes. We would ask, moreover, what becomes of the fine, dark (isotropic) stripes between neighboring light ones when the latter unite.

A very interesting paper by Mr. Hayercraft¹ presents a new theory of the cause of the stripes. We are not convinced that the explanation is complete, or rather we are very sure it is not, but we believe, as we have for a long time taught, that many of the appearances and changes of voluntary muscular fibre are simply optical effects. Mr. Hayercraft points out some of the changes due to alteration of the focus, of the direction of the light, etc., and comes to the conclusion that the stripes depend on the shape of the fibre. This he believes resembles the legs of some old-fashioned chairs that appear to consist of a series of balls placed one above another. Supposing this to be the shape of a fibre composed of a homogeneous transparent substance, it is evident, first, that very different appearances will occur on changing the focus of the microscope (from, for instance, that of the top of the ridges to that of the bottom of the depressions), and, second, that there can be no focus which can be called the correct one *par excellence*. Mr. Hayercraft has made a model by dropping a drop or thread of Canada balsam on a slide and indenting it with the milled head of a fine screw. A low power shows stripes which correspond with the surface impressions, and, moreover, are reversed by a change of focus. Another experiment is best given in the author's own words: "The most beautiful and convincing object to study in this connection is a scale of the *Lepisma*. They are oval in shape, transparent, and single refractile throughout, and beautifully ribbed in their length, these ribbings or groovings being indeed so fine that a power of at least five hundred diameters will be required to make out those points to be here described. You would think on looking at one of these scales that a piece of muscle was flattened out before you on the field; no rough balsam model, but a perfect illustration taken from the back of a tiny insect.

"The appearances it is needless to describe, for they are, almost to the minutest detail, those of muscular fibre. The bright and dark stripe interchanging with every alteration of focus, Hensen's stripe and Dobie's line (Krause's membrane) are all to be seen."

The fact that some staining agents appear to act on certain stripes more than on others may be brought forward as an argument that the fibre is composed of dif-

ferent substances; but Mr. Hayercraft replies that in such stained specimens the effect is changed by changing the focus, and, moreover, that a similar effect is produced by placing a piece of colored glass between the stage and the mirror.

It should be stated that Mr. Hayercraft also believes in the fibrillar structure of muscle, and holds that each fibril is shaped in the same way as the fibre. These are held together by a cementing substance, and, moreover, there possibly may be very delicate transverse membranes at the narrow black lines which run to the depressions between the scallops. Now, as the author recognizes, it is essential to the validity of his theory that voluntary muscular fibre when striped should have a scalloped edge, and that when the edge is smooth there should be no stripes. Some specimens of the latter kind which he has seen strengthen his confidence. In an *addendum* he says: "An assertion has been lately made which if true would be entirely fatal to my views. It was that in the fresh condition the fibres are cross striped, but at the same time their borders are quite smooth. That this is erroneous is easy of demonstration with any fresh fibre, but especially with that of an insect. It is true that often from the manipulation, or their own contraction, they are twisted, when the convex border will on a careless inspection appear as a distinct line. The stripes at this point are not at all distinctly seen, but yet can always be made out, as well as the crenulated border."

This undoubtedly is the question. The writer in verifying Wagener's observations, mentioned above, on the small fibres from the fly's thorax (very different from those of the legs) paid particular attention to this point, and was unable to see the scallops with a Harnack 9 immersion with either central or oblique light. They are not to be seen in Wagener's drawings. The writer's former observations on the muscles of the leg of the small water beetle (*Gyrinus*) convinced him that stripes could be seen in fibres with straight edges, though they undoubtedly become much more marked as the scallops appear in the edges of the contracting muscle. In short, though Mr. Hayercraft's theory may account for many of the appearances of muscular fibre, it will not do to believe that striation depends solely on its form till it is proved beyond question that the edge of a striped fibre always presents a series of bulgings.

THE CIRCULATION IN THE HEART.²

While making a series of injections of the vessels of the heart, Dr. Langer was struck by the regularity with which the injection was found in the ventricles. He satisfied himself by compressing the larger veins opening into the right auricle, by plugging both auricles, and by attending to the position of the heart during injection, that the fluid did not run down from the auricles, and he also assured himself that no extravasations occurred. Consequently it was only through the openings of minute veins that the fluid could have reached the ventricles. These are perfectly analogous to the *foramina Thebesii* which exist in both auricles, though they are, I think, usually described only in the right one. It would be more correct to say that these openings are analogous to some of these foramina, as others are merely blind pouches. Indeed, Cruveilhier,

¹ Upon the Cause of the Striation of Voluntary Muscular Tissue. By J. H. Hayercraft, M. B., A. R. S. E. Quarterly Journal of Microscopical Science, April, 1881.

² Die Foramina Thebesii im Herzen des Menschen. Dr. Ludwig Langer, Sitzungsberichte der Akademie der Wissenschaften, Wien, 1880, Band LXXXII. Heft 1 and 2.

Theile, and Luschka held that the latter form is the only one. There is no mention in modern literature of such openings into the ventricles, but Langer made the discovery, a more curious one than that of the openings themselves, that there had been a lively discussion concerning them in the early part of the eighteenth century. They were described by Thebesius in an inaugural dissertation in 1708, and also by Viensens in 1715. The observations were confirmed by Winslow and others. Laucisius wrote, in 1739, "*Mihi non amplius fuerit dubitandum, quin lateat intimum commercium venarum coronarium cum utroque cordis ventriculo.*" Other anatomists, among whom was Haller, disputed the matter, and it would seem that the latter side carried the day, for these openings into the ventricles have been forgotten.

Dr. Langer demonstrated these openings in various ways. Air or fluid injected into a cardiac vein appeared on the inside of the ventricles. This method was reversed by placing a tube over one of the pits in the ventricle, and throwing the injection in the other direction. It is to be remembered that there are a great many little blind pouches, which perhaps accounts for the diversity of the views. The minute venous openings, *foramina Thebesii*, are found in all the four cavities. In the left ventricle they are most numerous in the large papillary muscles, in the right ventricle near the conus arteriosus. These little veins have no direct communication with the larger veins of the heart, but may be compared to the intra-lobular veins of the liver, that is to say, each carries off the blood from a small district. They can, therefore, be demonstrated only by a good capillary injection.

THE UPPER AND LOWER BOUNDARIES OF THE PLEURA.¹

Dr. Ad. Pansch publishes the results of many observations on this question. There is a good deal of diversity and vagueness in the statements of authors on the first point. We, however, will skip these and come directly to the views of our author, namely, that the upper border of the pleura, which closely covers the top of the lung, usually corresponds with the anterior edge of the neck of the first rib. This has the merit of giving us a fixed point for a guide, which none of those in the front of the chest can be called. The anterior end of the first rib may vary decidedly in its relation to the vertebral column and the clavicle may vary still more. The great objection to this guide is the difficulty or impossibility of finding it in the living. Pansch gives the vertical height of the top of the pleura above the anterior end of the first rib as 3.5 cm. It varies from 2.5 to 5.5 cm. He does not find any regular difference between the right and the left sides. It is more common for the lungs to pass the usual point than not to reach it. The author implies that the clinical statements that the lung rises from three to five cm. above the sternal end of the clavicle cannot be strictly correct. It may be possible to obtain pulmonary resonance on percussion for this distance from the clavicle, but it must be remembered that this line slants upwards and backwards instead of being vertical.

The lower border of the pleural sac, unlike the upper, is in no definite relation to the lower border of the lung, and indeed is always beneath it. According to Pansch the lower border of the pleura usually is op-

posite the middle of the vertebral border of the twelfth rib and extends outwards at first horizontally and then gradually rising till it passed upwards at the front of the thorax opposite the junction of the seventh rib with its cartilage. The pleura is sometimes found to extend much lower, even as far as the transverse process of the first lumbar vertebra. This of course may be of considerable surgical importance.

THE FISSURES OF THE LUNG.²

Dr. J. L. Cilley, of Cincinnati, points out that the main fissure of the lungs is incorrectly described in English works on anatomy. In the last edition of Quain it is said to extend downwards and forwards to the anterior edge. Dr. Cilley continues: "The forty-four cases of the writer did not furnish a single case where the anterior edge was reached. In every case did the so-called upper lobe enter into the formation of the inferior border of the lungs. In only one instance did the fissure approach nearer than three inches to the anterior edge, and then it came within one inch." This point is correctly described in Henle's great work, but, as far as we are aware, in no work which has yet appeared in English.

Hospital Practice and Clinical Memoranda.

A CASE OF DIABETES MELLITUS; RECOVERY UNDER MORPHIA TREATMENT.

BY S. G. WEBBER, M. D., BOSTON.

THE following case, treated at the City Hospital, is of interest because of the presence of cerebral symptoms, showing the gravity of the patient's condition; also because of the speedy relief which followed the strict adherence to a diabetic diet, and the results obtained by morphia.

John C., aged forty years, painter, entered City Hospital December 11, 1880. The history he gave was that during the previous August he suddenly ceased to sweat, and the amount of urine he passed steadily increased up to five to sixteen pints daily. His skin was very dry, but not harsh. During the summer he had been several times greatly overheated. He had slight headache, with considerable dizziness; his eyesight had failed much during the previous six months. His appetite was fair; there was a sensation of heat in the stomach two or three hours after eating, frequently followed by vomiting. He had lost strength and flesh, about fifty pounds in weight. His bowels were constipated, passed urine about every one and a half hours during day and night, and was very thirsty. There was no swelling of the extremities, no cough, no cardiac symptoms.

The urine was pale, acid, 1031 specific gravity. No albumen. Much sugar. Nothing abnormal in sediment.

December 15th he had an attack of dizziness, beginning with discomfort in his stomach, then tinnitus and vertigo, followed by nausea and vomiting. He said he had had six such spells in the last six months. He had another similar attack of much less severity on the 25th.

He was put upon partial diabetic diet, and December 16th upon full diabetic diet. Being a painter, he was

¹ Archiv für Anatomie und Entwicklungsgeschichte, 1881, Heft 2 and 3.

² Contributions to Gross Anatomy, together with some Observations on Abnormalities. The Cincinnati Lancet and Clinic. February 25, 1881.

given iodide of potassium five grains three times daily, upon the possibility that there might be some affection of the floor of the fourth ventricle. If the overheating of the last summer had any aetiological effect the iodide would also have been indicated.

There were no further attacks of vertigo, and on December 28th the patient made the following statement of the improvement he had noticed: Increased appetite. Mouth much less parched and furrowed. Decrease of thirst. Great decrease of urine. Less pain in back. Some increase of strength. Better eyesight, and a clearing up of the head from the dull, dizzy, and oppressed feeling. Bowels more regular.

During the progress towards recovery he had a few periods in which disturbance of the stomach or bowels, or catching cold, caused an increase in the amount of urine.

January 22d he was given a quarter of a grain of sulphate of morphia twice a day, which was increased to three times a day on the 26th, but was reduced to a quarter again on the 28th, as the larger dose caused pain in the stomach. By mistake the urine was not examined for sugar until six days after beginning the morphia treatment.

The iodide of potassium was omitted February 14th. The morphia was continued until after he left the hospital, was gradually diminished, and finally discontinued without difficulty and without any disagreeable results. After the urine had shown no sugar for some weeks he began to take milk, and when last seen was eating Graham bread, but had not returned to a full diet of starchy and saccharine food. He was seen at intervals for three months after leaving the hospital; the last time he said his urine had not increased above the normal amount, that his appetite was good, his food occasioned no distress; he had also gained very much in weight, was very fleshy, and had the appearance of health.

The following table will show the amount of urine voided, the per cent. of sugar, and some other items of interest:—

Date.	Amount of urine.	Remarks.
Dec. 13	6390 + cc.	7.5 per cent. sugar. Sp. gr. 1030.5
11	4205	
15	3965	
16-19	3000-3450	
20	5250	Had a bad cold. 6.25 per cent. sugar. Sp. gr. 1030.
21	6165	Iodide potassium commenced.
22	3355	
23	2890	Saponis gr. viii. three times a day.
21-26	2475-2000 +	
27	3100	Stomach disturbance. Sol. morphi. 3i. one dose.
28-31	2240-2610	
Jan. 1	5895	A cold.
2	2210	
3	2300	2.25 per cent. sugar. Sp. gr. 1026.5.
4-11	22.5-2700	
12	2000	
13	3165	Stomach disturbance.
14-16	2340-2495	
17	2045	2.77 per cent. sugar. Sp. gr. 1027.5.
18	2420	
19	2525	Sol. morphiæ. ʒss. Tr. capsici ʒiʒss.
20	2610	
21	2445	
22	3000	Pil. morphiæ gr. ʒ two times a day.
23	1575	
24	1645	
25	1440	Sulph. morphi. gr. ʒ three times a day.
26-27	1500-1695	
28	1745	No sugar. Sulph. morphia gr. ʒ three times a day.
29-1.3.81	1580-2225	
Fe. 1.8.81		No sugar on either date.
12.28.81		

The effect of disturbance of the stomach in increasing the amount of urine, and the similar effect of "taking cold," is clearly seen on several dates, the rise being from 600 cc. to 2000 cc.

It may be doubted whether the iodide of potassium was of real benefit; the urine diminished in quantity while he took it, but he was also on full diabetic diet, was confined a part of the time to bed, and had warm sponge baths. The iodide, as stated above, was given because he was a painter, and it was thought the diabetes might be due to lead poisoning; but after taking the iodide no lead was found in the urine.

Dr. Fitz has so lately published his paper on diabetic coma and acetonæmia in this Journal (February 10, 1881) that it is not necessary to refer farther to the cerebral symptoms which were manifested during the earlier days of the patient's stay in the hospital.

The benefit of the morphia treatment, commenced January 22d, was immediately apparent. It is unfortunate that no examination for sugar was made on the 23d. The only inconvenience from the morphia was the production of pain if the dose was taken too soon after eating. The patient was allowed to take it between meals at such a time as should best guard against this discomfort, and doing so no unfavorable symptoms followed. Although for several days he took one third of a grain of morphia three times a day it did not cause sleep nor give rise to unnatural drowsiness, thus illustrating the toleration of diabetic patients for that drug.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. H. RICHARDSON, M. D., SECRETARY.

MEETING of May 2, 1881.

Dr. D. H. HAYDEN read a paper on

MOVABLE KIDNEY.

which will be found on page 271 of the present number of the JOURNAL.

Dr. WEBBER said that eleven years ago he saw at the City Hospital a woman with movable kidney. The right was the one affected, and its mobility was considerable. This last winter he had been greatly puzzled by the case of a man in whom there was a tumor situated just below the liver, and so close to it that it was difficult to say whether it was a diseased kidney or a growth from the liver itself. On further examination a sulcus was found between the tumor and the liver. Though the mass could be moved its mobility was not as great as that of a movable kidney. The urine contained a large amount of blood. The patient recovered from this attack, but three weeks later he had a similar one. He then noticed that the tumor in the right side was larger than before, and somewhat tender. As before, the urine contained blood. Between these attacks of hæmaturia there was nothing abnormal in the urine, neither blood, casts, nor albumen. The man improved in flesh and strength, and went home. Dr. Webber had not been able to make up his mind whether it was a diseased kidney, or one which, from some abnormal position, was subject to periodical attacks of congestion.

Dr. MIXOT said that movable kidney is not rare.

He had seen a good many at the hospital. There was one case which was quite remarkable. The abdominal walls were so thin that the displacement of the kidney could be demonstrated with the greatest ease. A very convenient way to examine the kidney, which he had tried many times, was first to place the patient in a sitting posture on the bed, with legs out straight. Then put the thumb of the right hand behind the back under the ribs, with the other fingers in front. The tumor can thus be pressed out and made to fall into the palm of the hand and fingers in front. Some years ago he had been asked to give an opinion whether a certain case was suitable for operation. The case was that of a nervous dyspeptic woman with a fissure of the cervix uteri. On exploring the abdomen a movable tumor was found beneath the ribs of the right side. When the patient sat up it could be made to move in all directions with ease.

Another case which he had just seen was that of a woman in whom he had discovered a movable kidney two months ago. She had never had any symptoms referable to the urinary apparatus. The tumor was kidney-shaped, and was easily displaced.

DR. DRAPER thought the diagnosis of this condition of the kidney not easily mistaken, and referred to the case of a woman who found it in herself. She could displace her kidney at will, the tumor slipping downwards and forwards or out of reach. The right kidney was affected. The abdominal walls were very thin, so that the tumor could easily be perceived.

DR. GEORGE STEADMAN spoke of the case of a woman in whose abdominal cavity a movable tumor was found. Nothing had been observed till some months after the birth of her last child. After several examinations he had come to the conclusion that she had a movable kidney. There were no uncomfortable symptoms and no treatment.

DR. DRAPER reported a case of

PROLONGED INTESTINAL OBSTRUCTION,

which will be found on page 273.

DR. J. G. BLAKE spoke of the benefit derived from aspiration in cases of excessive accumulation of intestinal gases. The first patient whom he aspirated in this condition was kept alive five months, the aspirator having been used one hundred to one hundred and fifty times. He recently sent to the hospital a case of intestinal obstruction, with much flatus, which was aspirated four or five times with great relief. After two or three weeks his bowels moved naturally, but he died finally with inflammation of the parotid gland. In the case of a woman the aspirator was used with good results after a constipation of thirty-five days. By the timely use of a small aspirating needle we can relieve the distention which is the great source of danger.

DR. BOWDITCH asked whether Dr. Blake had any knowledge of the character of the obstruction in these cases, and whether it would not have been possible, in the light of modern surgery, with comparative safety to lay open the abdomen and remove the obstruction.

DR. BLAKE said in reply that a good deal depends on the history of the case. If the trouble was probably a stricture of the intestine there would be very little use in operating. In a case where there was no history of previous inflammatory action and absence of symptoms of inflammation, the physician does not do his whole duty to his patient unless he urges the advisability of exploratory incision. In the case spoken of

by him he did not think the patient had every chance given. Under similar circumstances, in the probable absence of stricture, tumor, or some cause that could not be removed, he should advise operating.

DR. BOWDITCH spoke of a case which he saw many years ago where he thought the man's life might have been saved by gastrotomy. The obstruction was caused by a band of cicatricial tissue which might easily have been cut. At that time no one thought of opening the abdominal cavity for any reason. Dr. Bowditch spoke also of a case which was supposed to be ovarian disease, and which proved to be a cyst of the broad ligament. This was relieved by tapping. A tumor then appeared on the other side, which occupied one half the space between the ribs and the groin. Fluctuation could be felt from front to back. A large amount of pus was removed by operation. Abscesses and openings appeared in the groin and thigh, which seemed to be connected with the primary trouble. Two years ago small sinuses appeared in the abdominal wall, which discharged fecal matter. It was suggested that the whole trouble might have originated in the kidney, and the advisability of removing it was considered. It was decided against the operation. Now that the patient must otherwise die, the question is whether something cannot be done by opening the abdomen.

DR. PARKS referred to the case of a friend in whom some obscure intestinal obstruction existed. So good an authority as Dr. Agnew did not hesitate to suggest operative interference should other means fail. Fortunately, relief came without resorting to abdominal section.

Recent Literature.

A Treatise on Diseases of the Joints. By RICHARD BARWELL. Second edition. New York: Wm. Wood & Co.

The publishers have done wisely in including this in the new "Library of Standard Medical Authors." It is, without doubt, the best manual on the subject in the English language, and in some respects is to be preferred to Hueter's *Klinik der Gelenkrankheiten*, a recognized German authority.

Mr. Barwell has added largely to the matter in the first edition. He still shows a commendable independence of tradition and a readiness to think for himself, which adds to the value of the book. There is also a fuller quotation of foreign authorities than is the rule in English medical literature.

The writer has, however, attempted to cover too much ground with the outlay of knowledge at his disposal, and occasional superficiality results.

In general it may be said that the portion devoted to pathology, symptoms, and the relation of cases is more satisfactory than that on treatment. The writer apparently belongs to that class of surgeons who treat tumor albus by absolute rest, "to a considerable extent" (to use newspaper slang), cod-liver oil, "steel," excision or amputation — rather than by meeting the various indications incident to the chronic course of the disease by absolute fixation, extension with limited motion, motion with protection from jar or operative interference, as may be demanded. The definite rules for excision or for expectant treatment are not stated as fully as could at present be done, and the author's acquaintance with surgical appliances appears to be

limited. On purely scientific subjects, Mr. Barwell has not done justice to the question, now an important one, of tuberculosis in fungous arthritis. In the matter of "distraction" he contents himself with quoting Reyher, but has overlooked Schüller's later experiments. The coincidence mentioned of phymosis and hip disease in one hundred cases would be of more value if a thorough consideration of the frequency of phymosis in health were added.

The loss of faradic muscular contractility in chronic disease of joints is not referred to, and it is surprising to find that mobility of a joint under chloroform (which is the rule in the early stage of real hip disease) is mentioned as an important symptom in hysterical disease of a joint.

A few "Americanisms," as they would be called if the book were written in this country, are to be found: "symptom-pain," "limb-segment," page 35. "Dr. Lewis Sayre was round the wards with me," page 288. But this latter may be figurative, and refer to a circle of good fellowship or a halo of surgical skill.

A Paper on the Relations of the Minute Blood-Vessels to the Fat Cells in the Fascia of the Calf's Neck. Illustrated by Photographs and Drawings. Read before the Richmond Microscopical Society. By WILLIAM R. WEISGER, M. D., of Manchester, Va., President of the Society.

There is, we think, no pretense on the part of the author to present anything new bearing on this subject, but rather to show the photographs that illustrate the paper. He appears to be a very conscientious worker, and well versed in technical methods. His plan of substituting picric for oxalic acid in Norris and Shakespear's method of double staining appears well worth trying. We may say incidentally that beautiful as are the results of this method we have not found them lasting. The photographs are of unequal merit. We adhere to our opinion that drawings are to be preferred, but can gladly praise many of these very highly. We have seen photographs that could not be compared to them presented with great ostentation.

T. D.

The Hunterian Oration delivered at the Royal College of Surgeons of England on the 14th of February, 1881. By LUTHER HOLDEN, Ex-President of the College of Surgeons of England, etc. Printed at the request of the President and Council. London: J. & A. Churchill. 1881.

The name of John Hunter holds a remarkable position in the history of modern English medicine. He made his power felt in so many different fields that one can as little escape from his influence in the domain of medical science as find a spot on the continent of Europe that bears no trace of the hand of Napoleon.

But if he has done much for medicine he has also suffered much from medical biographers, and only a bold man would willingly undertake to say anything new about him. To be called upon to pronounce the Hunterian Oration must be by no means an unmixed pleasure.

Every one familiar with Mr. Holden's *Landmarks* will readily understand that whatever he had to say

as Hunterian orator was gracefully said and well repaid the listener; that he should have found something new to say is not so self-evident. That he should have found records hitherto unpublished shows how universal it is to accept for truth the statements of our predecessors without an attempt to verify them.

Mr. Holden's reputation as an instructor is not confined to his own side of the Atlantic, and he naturally looks upon Hunter from a teacher's standpoint. It is as an anatomist and teacher of anatomy that Hunter is particularly interesting to him; consequently he dwells at length upon his merits as a teacher.

At the close of his oration the orator turned somewhat abruptly to the discussion of the necessity of a preliminary classical training for medical students. Though unexpressed there was doubtless present to Mr. Holden's mind the thought that Hunter, as an extreme example of a successful man with very little classical training, should not be held up as a model in the education of medical students of the present day. Mr. Holden's plea for a classical education was quoted in the *JOURNAL* soon after its delivery.

Treatment of Varicocele by Excision of Redundant Scrotum. Illustrated by new instruments and an account of fifteen successful cases. By M. H. HENRY, M. D. New York: J. H. Vail & Co. 1881, pages 24.

This is by no means a new operation, having been proposed by Sir Astley Cooper, who published five cases, and it has been occasionally repeated since. Dr. Henry believes that it offers at least as good a prospect of cure as other operations, without the dangers attending the various methods employed for the obliteration of the enlarged veins. The new instruments consist of a serotal clamp—which embraces the exact portion which it is desired to remove; its use ensures regular surface for coaptation and thus favors union by first intention—and a pair of strong sharp scissors, which the author prefers to the knife. A few of the cases have been seen after the lapse of several years and have shown good results.

Landmarks, Medical and Surgical. By LUTHER HOLDEN, assisted by JAMES SHUTER. From the Third English Edition, with Additions by WILLIAM W. KEEN, M. D. Philadelphia: Henry C. Lea's Son & Co. 1881.

The distinctive feature of this edition consists in the additions by Dr. Keen. They are not very numerous, but are well chosen, and add decidedly to the value of the work.

—A class of nurses belonging to St. Thomas's Hospital has commenced to receive instruction in the details of sick-room cookery, at the National Training School for Cookery, South Kensington, which will, no doubt, much promote the labors of the medical staff, and provide for the patients suitably prepared food to meet the necessities of the case.

—A case of chronic lead-poisoning is reported by M. Malherbe, in which the lead was contained in matches as the chromate, the matches being used to light a pipe

Medical and Surgical Journal.

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HOUGHTON, MIFFLIN AND COMPANY,
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PRESIDENT GARFIELD'S DEATH.

THE intelligence received concerning President Garfield's condition since last Friday prepared the profession and the public for an early fatal termination to the prolonged struggle which has been carried on since the unhappy 2d of July when he was struck by the assassin's bullet. The severe chill of Saturday, and the successive chills of Sunday and Monday morning, cut away the last vestige of the little ground for hope upon which the sanguine have rested their beliefs, and even the despairing their wishes, and left the public confronted with little less than the certainty of what to the experienced surgeon has long been more than a probability — death.

The distinguished sufferer himself after twelve tedious weeks of pain, weariness, and uncertainty, only varied by hopes alternating with fears, weeks marked by a really heroic quietude, simplicity, and tranquillity upon the part of the patient, — he himself is at length at rest. The nation is mourning its loss, discovering, as so often happens, the value of what is taken away, and seeking a sad consolation in the belief that lessons of more value may and will be drawn by the people at large from these short but anxious months than from years full of happy and easily prosperous days.

In regard to the professional aspects of the case, no one, we believe, is in a position to say that the wound was not from the beginning of a necessarily fatal nature, or that other measures than those taken could have averted the result we all deplore. Some changes in the President's surroundings, had they been feasible, an abstract wisdom would doubtless have dictated. This much is at present permissible to say.

The result of the autopsy is already before the public, and it is probable that many histories of all the details of the case from various points of view will soon enough be published.

Neither the profession nor the public are in the mood at present for studies and discussions of this nature. There are, however, lessons which the life and closing days of President Garfield preëminently illustrate, which he who runs may read, and which we may all now lay to heart; such lessons are the power of the really strong man against "the slings and arrows of outrageous fortune," the beauty of simplicity of character with honesty of purpose, the patient, quiet endurance of unavoidable fate.

MALARIA IN NEW ENGLAND.

Our previous remarks upon the gradual reappearance of malarial diseases in various parts of New England having excited some attention, we reproduce the text of Dr. Samuel A. Green's observations upon its early existence in the neighborhood of Boston, as given in his Centennial Address before the Massachusetts Medical Society:—

"The character of the diseases that prevailed in the early days of the colony was substantially the same, though not entirely, as nowadays. It is known that intermittent fever often occurred in certain sections of Massachusetts, where now it is never seen.

"The Reverend Mr. Danforth, of Roxbury, during the winter of 1660, makes the following entry in the Church Records; 'The Lord was pleased to visit vs, with epidemical colds, coughs, agues, & fevers.' (Page 199.) Under date of September 8, 1671, he says furthermore: 'This summer many were visited with y^e ague & fever.' And again the next year, September 11, he records: 'Agues & fevers prevailed much among vs about y^e Bay, & fluxes & vomiting at Boston.' These extracts are taken from the printed edition, previously noticed.

"John Josselyn, who has been already mentioned in these pages, wrote *An Account of Two Voyages to New-England*, which was published at London in the year 1674. He speaks of arriving at Boston, September 1, 1671, and finding 'the Inhabitants exceedingly afflicted with griping of the guts, and Feaver, and Ague, and bloody-Flux.' (Page 213.) In another place he says that 'the Diseases that the *English* are afflicted with, are the same that they have in *England*, with some proper to *New-England*, griping of the belly (accompanied with Feaver and Ague) which turns to the bloody flux, a common disease in the Countrey.' (Page 183.) Joshua Scottow, in his *Old Men's Tears*, published in 1691, with a nomenclature more expressive than elegant, speaks of the 'burning and spotted Fevers, shaking Agues, dry Belly Aches, plague of the Guts, and divers other sore distempers' (page 15), which have afflicted the plantation. The plain Anglo-Saxon word, used as a synonym of the intestinal canal, has gone down in the language, and become indelicate to this generation."

Since our last issue our attention has been called to a case of undoubted tertian presenting itself in Duxbury in an individual who had never been absent from the town-ship, the diagnosis being only rendered doubtful by the fact that the case was entirely unprecedented within the memory of the attending physician.

Dr. Snow, the efficient and experienced registrar of Providence, has recently on several occasions made mention of the development of malarial affections in certain parts of that city.

We should be glad to receive for publication any carefully-observed cases of malarial taint occurring in the neighborhood of Boston or in New England at large in which the native origin of the poison is capable of proof.

THE SECRETARY-GENERAL OF THE INTERNATIONAL MEDICAL CONGRESS.

THE honor of knighthood bestowed by the Queen upon Mr. William MacCormac, the secretary-general of the late International Medical Congress, is a distinction which that gentleman certainly most fairly earned by his labors in preparing for the meeting of the Congress, and by the very marked success which characterized the arrangements made by him.

During the actual hurry, excitement, and preoccupation of such a week in London as that during which the Congress was held the eager participant is too apt to take all the facilities and conveniences which seem, as it were, to offer themselves, and which enable him to do and to see so much as matters of course. In the present instance the success of all the arrangements was so very striking that it could scarcely escape the attention of even the careless.

We are glad that the efforts of the secretary-general, to whom, with his able corps of assistants, the satisfactory results referred to were largely due, should receive this public recognition.

PROF. WM. WARREN GREENE.

WITH great regret we have to record the death of Prof. Wm. Warren Greene, of Portland, Maine, which occurred lately on board the steamer *Parthia* as he was returning from attendance upon the late International Congress at London. Professor Greene's talents and well-known skill as a surgeon earned him a very prominent professional position, especially in the State in which he lived. A more extended notice of his life and labors than the recent announcement of his decease permits this week will be given in the next issue of the JOURNAL.

Our readers will recall the very bright, entertaining, and instructive letter from Professor Greene's pen describing the proceedings of the Congress, and especially the discussions in the Surgical Section, which appeared in our columns only a few weeks since.

MEDICAL NOTES.

— Thirty or more cases of fever — some evidently typhoid, and all probably coming under that title — have occurred at Nahant. The annual increase in typhoid fever began earlier than usual this year in Boston and vicinity; the cases though numerous have been of rather a mild character. The outbreak in Nahant, however, seems to be a local epidemic. There are rumors that the sanitary conditions in some parts of the town are not as favorable as they might or should be. We should be sorry to think that any of the inhabitants would approve of the transformation of an exhausted well into a cess-pool.

— Gloucester reports a case of typhus fever, the origin of which we have not learned, but it probably is to be set down as one of the penalties paid for foreign commerce.

— As a contribution to the history of the United

States Pharmacopœia, as it is somewhat doubtful to whom the credit of originating the idea is due, the following extract from the *New England Journal of Medicine and Surgery* (Boston, July, 1821, vol. x., p. 293) may be interesting: "In the year 1808 the Massachusetts Medical Society published a Pharmacopœia. While it was in preparation circular letters were sent to the different medical institutions in the United States inviting them to coöperate in the work, and to render it national. The proposition was not acceded to, and the Pharmacopœia appeared as the work of a medical society of a single State."

— The books of the Deptford Small-Pox Hospital, which institution takes patients from the whole of the parishes of the metropolis, contain remarkable evidence of the efficiency of vaccination in preventing small-pox from resulting fatally. During the six months ended June 30th last 546 cases were admitted to the hospital. The vaccinated patients numbered 326, the unvaccinated 264, and those in which it was not known whether the patients had been vaccinated or not 46. The deaths among the vaccinated cases numbered only six, or a percentage of 2.5, whilst of the unvaccinated patients 127 died, making an average mortality of 48 in the 100. Of the 46 doubtful cases nine died. — *British Medical Journal*.

— In view of the possible danger arising from the soluble salts of tin in goods put up in tin cans, the Director General of Customs of France has issued an important decree forbidding the soldering of tin cans on the inside, and the use of tin plate except that made of pure tin in their manufacture.

PHARMACEUTICAL NOTES.

TINCT. FERRI CHLORIDI.

Dr. E. R. Squibbs says that the present revision of the United States Pharmacopœia makes a great mistake in permitting the acid solution of ferric chloride to be used in making up the tincture as it is wanted for use. It is not fit until at least six months old, and he now never sends it out until it is a year old. An important part of its therapeutic value depends upon ethers that are generated slowly from the alcohol by the large excess of hydrochloric acid present. By the use of his neutral ferric chloride solution much good alcohol has been wasted in the vain attempt of trying to make the tincture. — *Boston Journal of Chemistry*, September, 1881.

ADMINISTRATION OF QUINIA.

Dr. J. C. Stockard recommends quinia to be taken in albumen foam obtained from a well-beaten-up white of an egg. — *Bull. gén. de Thérap.*, June, 1881.

TANNATES OF CINCHONA ALKALOID.

These, obtained by their precipitation by tannin from solutions of the cinchona salts, are being used for administration to children, being tasteless. — *Pharm. Centralhalle*, 1881.

CROTON OIL, NEW METHOD OF APPLICATION.

A mixture of one hundred parts of croton oil with fifty parts each of wax and of cacao butter can be made up into sticks like cosmetic by the aid of a mould,

so as to be applied with great accuracy, both as to extent and depth of action, in such affections of the skin as ringworm, etc. — *British Med. Jour.*, 1881.

B. F. D.

Miscellany.

A CASE OF PISTOL-SHOT WOUND IN THE ABDOMEN.

BY C. E. BRIGGS, M. D.

THE following case, read before the St. Louis Medical-Chirurgical Society, and published in the *St. Louis Courier of Medicine*, is of interest in view of the recent discussions of wounds of this class:—

F. G., a young woman of abandoned life, about twenty years old, was seized with malarial fever in the last week of May, 1881. During the few days of treatment for this disorder she ate but little, and for medicine took quinine, a blue mass purgative, morphia, chloral, and bromide of potassium.

On Monday, the 30th of May, she ate sparingly at noon, and drank some coffee. At about three p. m., in a fit of weariness of life, she determined to commit suicide. Taking a small pistol that carries a conical ball that will nearly pass through No. 17 French catheter scale (that is to say, of about the size of a buck-shot), she tested the pistol by discharging it against the wall, possibly a distance of twelve feet. The ball penetrated not very deeply, I am told. The next shot she put into the upper part of her abdomen, near the median line. Shortly after receiving this wound she vomited blood.

For the next three days she was attended assiduously by several medical men. I saw her for the first time in the evening of Friday, the 2d of June, the beginning of the fourth day. She was then just moved about a mile and a half from the scene of the injury, and had been undergoing much excitement. She was not in much pain; her pulse was 112; her tongue moist.

She was a small, spare woman, and the wound was three fourths of an inch rectangularly to the right of the median line. On a line drawn through it and the navel, the puncture was about one inch from the cartilages of the ribs and two and a half inches from the navel, while the patient was lying flat on her back. There was no wound in the back, and during her illness no localized pain or swelling in the back indicated the presence of the ball, which was also fruitlessly looked for in the passages from the bowels. The probable course of the ball was to be conjectured from the site of the wound, the facts that the pistol had been in the hand of the patient, and that the ball had not had sufficient force to pass through the body, and also from the vomiting of blood soon after the shooting. While there was tenderness about the wound the abdomen did not present the signs of any considerable peritonitis. Attempts made to use the stomach for food or medication previous to my seeing her had been followed by vomiting. She informed me that she had been treated with large hypodermic injections of morphia. The irritability of the stomach was confirmatory of the theory that it had been perforated. The absence of marked peritonitis rendered it probable that there had been little or no leaking from whatever organs had been penetrated. The smallness of the ex-

ternal wound and its closed condition suggested hopeful views of the condition of the track of the ball internally. The test of vomiting which the stomach had undergone without resulting peritonitis seemed to show that while it was probable that this organ had been wounded, the wound, even under a strain, was not permeable. I administered a sixth of a grain of morphia hypodermically. The next morning her pulse had fallen to 100, and her respiration was easy and regular, but the night was reported as restless, with bilious and watery vomiting. An attempt was made to relieve the irritability of the stomach by medication, and to lessen the acidity of its contents by small quantities of liquid food and iced diluents, which would also come up with less straining than the scanty bilious vomit. At 4.30 p. m., however, it was found that the vomiting had increased, although the pain had not. Pulse 112 again. The general plan of treatment was adopted of feeding by rectum, and the administration of morphia by hypodermics for rest and relief from pain.

On June 4th, at 7.30 A. M. her pulse was 90. Since last visit she had had bilious vomiting six or seven times, and at seven A. M. a small offensive movement from the bowels; at eleven A. M. another, more natural. At 6.30 p. m. her pulse was 104.

June 5th. Had had a restless night, but the vomiting had ceased. She was in no pain, but complained of being ravenously hungry. Her pulse was 104 at first, but at a second examination had fallen to 94. Her menses made their appearance to-day and continued to the 7th inst. At night her pulse had risen to 114; her tongue was nearly clean.

June 6th. Pulse 112. During the night she had imposed upon an attendant, and obtained from her a half pint of tea and drunk it. She has not vomited, and has no pain. At one p. m. she had a dark watery movement amounting to about a pint. At 2.30 p. m. she vomited somewhat more than a pint of bilious water, and at 4.15 half a pint more. Her pulse at about six p. m. was 104, with a quick stroke; her tongue dark red, and there was pain near the external wound. This day completed the first week of the case, which terminated fatally on the first day of the seventh week.

The patient suffered throughout comparatively little direct pain from the wound, but doubtless had a great deal of nervous discomfort. Her violence, when refused, rendered it impracticable to lessen as much as I desired the amount of morphia given hypodermically. She had not been previously an opium eater, but had used freely alcoholic stimulants; and her disordered life and habits of self-indulgence had produced an infirmity of will which made her unmanageable as a patient, notwithstanding her desire for life. She had no attack of delirium tremens, and the diurnal periodicity seemed to have no connection with a malarial taint. There was an attack of prostration in the second week, and the abdomen became tender but not tympanitic. The pulse rose to 120 in the beginning of the third week, and there were obscure signs of an abscess, rather superficial, presenting a hardness between the wound and the right inguinal region two inches by three in dimensions. These local symptoms disappeared in the fourth week, and blood began to appear in the vomit. An attempt was made to substitute laudanum by the rectum for the hypodermics of morphia, which, as is well known, often cause nausea and vomiting; but the re-

sult was not satisfactory. In the middle of the fifth week the vomiting became excessive. In the middle of the sixth, she was vomiting twenty and thirty times in twenty-four hours. The pulse went up to 140, and, after a struggle for three days, she succumbed on the 12th of July.

Post-mortem. The examination was made eight hours after death.

Externally the body showed decided emaciation and marked rigor mortis. The thickly-strewn petechiae had become bloodless and almost imperceptible. The abdomen was flat and hard. On section the peritoneum was slightly congested directly under the wound, and a few thread-like adhesions connected it with the parts below. There was no perceptible scar on the inner surface of the abdominal parietes where the ball had passed through. The gall-bladder was full. Over the right border of it, about three fourths of an inch from the edge of the liver, was the scar of a perforation, the course of which through the liver was perhaps half an inch. The wall of the gall-bladder was congested and adherent to the under side of the liver. The stomach contained about four ounces of fluid. It presented no scar or sign of wound. The cardiac extremity was decidedly congested. The first two inches of the duodenum were inflated, and about one inch below the pylorus were two scars, as if of the entrance and exit of the ball. Beyond this we could not trace the course of the ball, being able to find no scar on the posterior peritoneum, nor any little hardness in the emaciated tissues behind the duodenum. Nor were there any signs in life of injury to the spinal cord, nor pain in the vertebral column. There was marked congestion of the peritoneum enveloping the organs below the right of the liver. The small intestines, as presenting on opening the body, were healthily inflated, and not adherent to each other or to adjacent tissue, as if the peritonitis had been chiefly confined to the lesser cavity of the peritoneum.

The heart was contracted and normal. No deposit of pus was anywhere found, and there was no effusion in the abdominal cavity.

Remarks. It seemed that the ball had passed through the anterior parietes of the abdomen, then through the edge of the liver, slightly wounding the sac of the gall-bladder, then through the duodenum (this part of which is not bound down), and then glancing upon the posterior parietes of the abdomen, its force being expended, it had gradually found its way, perhaps, into the pelvis. The blood vomited shortly after the wound was inflicted must have come from the wound in the duodenum. It does not seem impossible that some of it may have come from the gall-bladder. I attribute part, at least, of the irritability of the stomach to her previous intemperate habits. The vomiting of blood in the fifth week, I surmise, came from the rupture of some small blood-vessels in the congested stomach from the violence and frequency of the vomiting.

PROFESSOR ANNANDALE ON HOMOEOPATHY, ETC.

A CONSIDERABLE portion of the address in medicine before the British Medical Association by Dr. Bristowe was devoted to a consideration of Hahnemann and homoeopathy. This address was published in full in the JOURNAL from advance sheets. Another prom-

inent British physician, Professor Annandale, of Edinburgh, having lately touched upon the same topic, we extract from the *Lancet* a brief report of his remarks with its comments:—

"At the recent medical graduation in Edinburgh, Professor Annandale delivered the valedictory address to the one hundred and seventy-three new graduates, not ten of whom he expected to remain north of the Tweed. He chose for his address the subject of Quackery, which, he said, was to be found in other professions beside that of medicine. He took a large and liberal view of the question, and expressed the perfect right of the public to please itself, and of patients to please themselves, by changing their medical adviser, or by having a bone-setter, rubber, or mesmerist. On the subject of homoeopathy, not being in the Council of the British Medical Association, he seems still to be somewhat old-fashioned, though slightly at a loss to know what homoeopathy now means. We must make room for what appears to us sound sense and good ethics on this question in its present stage. The Professor said:—

"My difficulty in regard to homoeopathy is that, judging from the recent correspondence and discussions on the subject, the majority of homoeopathic practitioners no longer acknowledge or practice in their entirety the principles of the original founder of the system. I understand that they now make use of homoeopathy, allopathy, or any other treatment which they consider likely to be useful—I might in some, I hope not in many, instances, say agreeable—to their patients. Why, then, call themselves homoeopaths? and why do they let it be understood that their treatment is a special one, or is in any way superior to that practiced by the ordinary practitioner? The position of homoeopathic practitioners is a present both illogical and inconsistent as regards the practice of medicine; and I say that they should either hold to the original principle of homoeopathy and call themselves true homoeopathic practitioners, or they should retire from the ranks of homoeopathy, return to the field of the ordinary profession, and give up their pretensions to cure all diseases by any special system which is peculiar to themselves. . . . Perhaps the best advice I can give you in regard to the treatment of homoeopathy is to treat it as most sensible people treat aesthetics. I have no desire to say anything that is discourteous or personal in regard to homoeopathic practitioners themselves. Many of them are educated gentlemen, and are qualified members of our profession; but it is impossible, under present circumstances, that you can have any true sympathy with them in the matter of medical practice. You cannot meet them in consultation, because, although you might agree with them as to the nature or diagnosis of a case of disease, one or other of you must consent to sacrifice your principles and belief when the treatment of the disease has to be decided, and no man with any proper feeling will do this, or should do it, more particularly when the health or life of a human being is concerned."

"Mr. Annandale wound up with a few pieces of advice to the young graduates, which we heartily endorse. First, not to think that they were fully equipped with all knowledge, but to go on learning the practical parts of their profession. Secondly, not to consider that they had any vested interest in their patients. Thirdly, while willing in proper circumstances of poverty, misfortune, etc., to give their services, they must, as a rule,

expect and require from their patients*proper monetary remuneration. Fourthly, never to object to consultations with their professional brethren if their patients desire it. Fifthly, not to enter too actively into the region of politics, general, local, or theological."

GERMAN PHARMACISTS.

THE young man who wishes to be accepted as an apprentice ("Lehrling," in German) in pharmacy has first to prove that he has passed the examinations which are demanded for an "einjähriger Freiwilliger" in the army; but it is necessary that these examinations shall have been passed in a college where Latin is an obligatory branch of study. This corresponds with the English "First or Preliminary Examination," but must be regarded as much more severe; for it is necessary that the young man shall have been one year in the "Secunda," that is, the highest class but one in the German classical school, and this German examination is nearly equivalent to the Oxford and Cambridge Middle Class Examinations.

When these claims are fulfilled, the candidate must stay three years in a pharmacy; if he has passed "das Abiturienten-Examen" (that is, the final examination for the highest class in the classical school) he needs to remain only two years as an apprentice in the pharmacy. It must be mentioned here that there is a strong party among the German pharmacists who wish that the German Government shall demand this "Abiturienten-Examen" as the basis for all pharmaceutical education.

When the candidate has finished his apprenticeship, he passes his first pharmaceutical examination, the "Gehülfeprüfung" (that is, examination for assistants), required after January 1, 1876, by the law of November 13, 1875. This examination is not passed in the universities, but before special boards of examiners which are found throughout all Germany, and which consist of two pharmacists and a physician. The "Gehülfeprüfung" is in three divisions and lasts two days.

(1.) *The written examination* consists of three questions in chemistry, in botany or materia medica, and in physics. The candidates are watched during the six hours which are accorded for the answering of these three questions, and no access to books is allowed.

(2.) *The practical examination* consists in: (a) reading, preparing, and taxing three prescriptions; (b) preparing one "galenical" and one chemico-pharmaceutical preparation after the Pharmacopœia Germanica; (c) examining the purity of two of the chemical preparations of the Pharmacopœia Germanica. With these practical tests the candidate must present his "Laborations-journal," which he has prepared during the three years of apprenticeship and which includes a short description of all the work he has done in the laboratory in the three years.

(3.) *The oral examination* consists in: (a) recognizing and determining several fresh or dried plants; (b) explaining the derivation, adulteration, and pharmaceutical use of several drugs and chemical preparations and explaining their composition and preparation; (c) translating two articles of the Pharmacopœia Germanica; (d) knowing the elements of botany, pharmaceutical chemistry, and physics. With this oral test the candidate must present his *herbarium vivum*, that is,

an herbarium which is collected and arranged by himself during his apprenticeship.

This "Gehülfeprüfung" corresponds to the English "Minor Examination;" but the young man has not yet the permission to possess his own pharmacy: he can only be an assistant.

The candidate must now spend at least three years as an assistant ("Gehülfe") in a pharmacy, and after this stage ("Servirzeit") he may commence his studies for "*die pharmaceutische Staatsprüfung*" (also called "*das Apothekerexamen*," that is, the "Major Examination"). He is now obliged to attend the lectures and to do practical work in the laboratories of the university. Having thus been at least one year and a half occupied only with his studies, he has the right to present himself for this examination, which can be passed in either of the twenty universities of Germany or in one of the three polytechnic schools of Brunswick (Collegium Carolinum), Stuttgart, and Carlsruhe. This examination is demanded by the law of March 5, 1875, and consists of the following five parts:—

(1.) *Preliminary (written)*. Three questions in botany or materia medica, in inorganic and organic chemistry.

(2.) *Pharmaceutical, technical*. To make two "galenical" preparations and two chemico-pharmaceutical preparations.

(3.) *Analytical, chemical*. (a.) Qualitative and quantitative (gravimetric and volumetric) analyses; (b.) toxicological research (qualitative and quantitative).

(4.) *Pharmaceutical, scientific (oral)*. In botany, materia medica, and pharmaceutical chemistry.

(5.) *Final* ("Schlussprüfung") is also a scientific oral examination and is held in botany, chemistry, and materia medica by the professors of the university and in the laws of pharmacy by an apothecary.

Only after having passed this last examination has the German pharmacist permission to possess a pharmacy, but even then he cannot, as in France and England, establish himself without a privilege of the Government. — *Pharm. Journ.*

EYESTONES.

THE following account of these popular nuisances is interesting. It might properly be followed by an anathema on all who resort to their use.

"Eyestones are composed of calcareous material, and when placed in a smooth plate containing a weak solution of lime-juice or vinegar are slowly moved about by the evolution of carbonic acid gas. It is from this fact that ignorant people imagine that the eyestone has life, and a particular weakness for vinegar, in which above all other fluids it delights to swim.

"Most of the eyestones sold to the wholesale drug dealers of New York city are supplied to them by sailors employed on vessels engaged in the fruit trade of Venezuela and other South American republics. They are regarded with mystery and awe by the native inhabitants, by whom they are collected in large quantities.

"A very prevalent error exists as to the origin of eyestone. Many persons imagine, and many works on the subject state, that the eyestone is the product of the fresh-water lobster or crayfish, and that the stones are found in the stomach of the above-named animal, and constitute a storage of lime during the moulting

season. This is not so. The stones found in the crayfish are known as crabstones. In Poland, Russia, and Astrachan the crayfish are rotted in deep pits dug in the earth, after which the refuse is washed to obtain the crabstones, which are used in many parts of Europe to correct stomachic difficulties.

"Nearly all univalve shells have an operculum or door that fits closely to the inside of the mouth or opening of the shell. This door is generally situated on the upper side of the back part of the foot on which the animal moves. When the univalve draws in his body the operculum is the last part that is taken into the cavity or mouth of the shell, where it fits so accurately, and is of such a horny or calcareous nature, that it affords perfect protection to the animal against enemies from without. The operculum is an exact representation or duplication of an eyestone on a very large scale. In fact, all eyestones are operculums or small, close-fitting doors that are used by the eyestone bearing univalves to protect them from intruders.

"The under side of the eyestone is composed of numerous slightly concentric grooves. When moving over the eyeball the grooves collect and retain all foreign substances. The movement of the eyestone is caused by the pressure of the eyeball against the stone."
— *Scientific American*.

SEWAGE FARMING.

THE following description of the Croydon Sewage Farm is cut from the editorial columns of the *London Medical Times and Gazette*:—

The total area of the farm is 540 acres, but of these only 450 are regularly irrigated. On these is poured daily the sewage of about 63,000 persons, averaging in dry weather 2,000,000 gallons, but rising, when the rainfall is added, to sometimes twice that volume with no further treatment than a coarse straining to separate sticks, rags, paper, and such solid masses. The sewage is conveyed to every part of the estate by a system of channels and feeders, and turned on to each field in order for twelve to twenty-four hours at a time. The smallest trenches are dammed at intervals by boards, to distribute the flow over the land. After having been thus filtered through one field, it is conducted in like manner to a second or a third before it is allowed to pass into the River Wandle.

The effluent water is clear and devoid of taste and smell, and numbers of young fish may be seen in the conduit by which it leaves the farm. Even in parts actually submerged to the depth of an inch or more no odor is perceptible; none anywhere, in fact, save in the neighborhood of an uncleansed ditch, and there not to be compared with the stench arising from the turning over of an ordinary dunghill.

In short, it may be now taken as proved that sewage in a state of minute subdivision and of intimate contact with fresh earth does not undergo the septic changes to which it is prone in mass. On this depends the sanitary success of the earth-closet; but the sewage farm presents this advantage: that while the growing vegetation, constantly removing organic matter from the land, keeps it from becoming surcharged therewith, it at the same time avoids that prolonged, and therefore complete and destructive, oxidation of the organic matter which detracts so much from the fertilizing power of the earth from the closet.

The principal crop, as on all sewage farms, is Italian rye-grass, a plant whose powers of absorption are enormous. On common pastures it yields two crops in a season; here it is cut seven times, each crop averaging fifty to sixty tons, and worth £5 to £6 per acre. It is mostly used as green fodder, but there is no reason why it should not be made into hay, which would find a ready sale. Mangel-wurzel is also largely grown. These crops are specially suited for sewage culture, but none need be excluded, and good fields of wheat may now be seen on land which has not been irrigated since the corn was sown. The cattle kept on the farm are fattened for the butcher solely on its produce at the rate of four head per acre, ordinary pastures supporting not more than one. This is a most important fact in relation to the problem of our meat supply.

The question of the influence of sewage farms on the health of the surrounding population has also been conclusively settled by the farm under consideration. The population of the adjacent town of Croydon has risen in the past decade from 53,000 to 77,000, and the birth-rate, which always entails a proportionate mortality, is unusually high, yet the death-rate of Croydon has steadily decreased, until for several years it has not exceeded 16 per 1000—that of London being 22. In Beddington it is only 14 in a population of 5000, many of whom unwittingly drink the effluent water, as is shown by the rise in the nearest wells which follows each irrigation. In the very midst of the farm stands the Orphan Asylum, and the visitors had an opportunity of bearing witness to the healthy appearance of the girls—165 in number. About one death has occurred yearly from phthisis or tubercular disease; there has not been a fatal case of any zymotic disease.

All opposition in the neighborhood has been disarmed by experience, and the value of property in Beddington has doubled in the last ten years, the proximity of the sewage farm not having deterred the wealthy citizens of London from erecting their villas around. All claims for compensation made against the projectors of similar schemes have therefore no foundation in fact, and should be strenuously opposed.

OPHTHALMOLOGY: MIDDLEMORE FUND PRIZE ESSAY.

THE interest on the fund of five hundred pounds given in trust to the British Medical Association by Mr. Richard Middlemore, of Birmingham, to found a prize for the best essay on ophthalmology, having accumulated for three years, the committee of council now offer, in accordance with the terms of the trust deed, a prize of fifty pounds for the best essay on the Scientific and Practical Value of Improvements in Ophthalmological Medicine and Surgery made or published during the past three years. The successful essay will be the property of the Association. Essays must be in English or accompanied by an English translation, and forwarded under cover, with a sealed envelope bearing the motto of the essay, and containing the name and address of the author, addressed to the General Secretary of the British Medical Association, 1610 Strand, London, and must be in his hands on or before May 31, 1882. — *British Medical Journal*.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 10, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	866	446	39.26	21.02	6.35	8.31	1.96
Philadelphia.....	846,984	419	175	25.06	7.88	2.86	1.90	4.30
Brooklyn.....	566,689	398	229	40.70	25.63	5.28	7.54	1.01
Chicago.....	503,304	275	161	57.45	27.27	7.27	2.55	8.73
Boston.....	362,535	181	92	42.54	30.39	6.08	4.97	2.21
St. Louis.....	350,522	187	89	28.88	12.83	—	2.67	3.21
Baltimore.....	332,190	231	111	32.90	12.55	9.52	1.73	4.76
Cincinnati.....	255,708	130	58	33.08	17.69	2.31	6.15	10.00
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	110	52	36.36	19.09	3.64	.91	4.54
Pittsburgh.....	156,381	97	57	56.70	21.65	7.22	3.09	6.19
Buffalo.....	155,137	148	86	54.73	40.54	3.38	1.35	7.43
Milwaukee.....	115,578	63	46	22.22	15.87	1.59	7.94	—
Providence.....	104,857	41	19	29.27	17.07	4.88	9.76	—
New Haven.....	62,882	18	7	22.22	—	—	—	—
Charleston.....	49,999	37	25	18.92	8.12	2.71	—	8.12
Nashville.....	43,461	41	15	34.15	21.95	4.88	—	4.88
Lowell.....	59,485	23	10	30.43	26.09	—	13.05	4.35
Worcester.....	58,295	25	17	36.00	20.00	8.00	4.00	—
Cambridge.....	52,740	23	13	30.43	30.43	—	4.35	—
Fall River.....	49,006	21	14	33.33	14.29	4.76	—	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	26	11	23.08	15.38	7.69	3.85	—
Springfield.....	33,340	9	5	11.11	11.11	—	11.11	—
Salem.....	27,598	16	9	43.75	25.00	18.75	6.25	—
New Bedford.....	26,875	14	4	21.43	21.43	—	7.14	—
Somerville.....	24,985	13	7	53.85	38.46	7.69	—	7.69
Holyoke.....	21,851	9	4	44.44	22.22	—	—	11.11
Chelsea.....	21,785	14	9	35.71	14.29	7.15	—	—
Taunton.....	21,213	13	7	23.08	23.08	—	7.69	—
Gloucester.....	19,329	13	8	23.08	15.38	7.79	7.69	—
Haverhill.....	18,475	7	4	57.14	57.14	—	—	—
Newton.....	16,995	6	1	50.00	16.67	—	—	33.33
Newburyport.....	13,537	8	2	12.50	12.50	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Twenty-three Massachusetts towns.....	182,365	78	34	39.74	26.92	3.85	1.28	3.85

Deaths reported 3560 (no report from New Orleans): 1827 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1350, diarrhoeal diseases 728, consumption 375, diphtheria and croup 180, lung diseases 170, typhoid fever 132, malarial fevers 82, scarlet fever 75, small-pox 56, whooping-cough 36, cerebro-spinal meningitis 30, puerperal fever 12, erysipelas 10, measles eight, typhus fever one. From *malarial fevers*, New York 26, St. Louis 15, District of Columbia 10, Chicago nine, Brooklyn and Baltimore eight, New Haven three, Buffalo two, Nashville one. From *scarlet fever*, New York 26, Brooklyn 18, Philadelphia 15, Pittsburgh six, Chicago, St. Louis, Baltimore, and Buffalo two, Milwaukee and Providence one. From *small-pox*, Philadelphia 25, Chicago 14, Pittsburgh 11, New York four, Brooklyn and Cincinnati one. From *whooping-cough*, New York 11, Brooklyn six, Chicago and Boston five, St. Louis two, Philadelphia, Pittsburgh, Buffalo, Providence, Malden, Beverly, and Nantucket one. From *cerebro-spinal meningitis*, New York nine, Chicago four, Cincinnati and Fall River three, Milwaukee, Worcester, and Chelsea two, St. Louis, Baltimore, Pittsburgh, Holyoke, and Attleborough one. From *puerperal fever*, Chicago and St. Louis three, Boston and Pittsburgh two, Brooklyn and New Haven one. From *erysipelas*, New York four, Chicago two, Philadelphia, Brooklyn, St. Louis, and Baltimore one. From *measles*, New York five, Baltimore two, Providence one. From *typhus fever*, New York one. Thirty-seven deaths occurred in New York from the direct effects of solar heat, and three in Cincinnati.

Eight cases of small-pox were reported in Brooklyn, seven in St. Louis, 42 in Pittsburgh, one in Milwaukee; diphtheria 21, scarlet fever five, in Boston; diphtheria six, scarlet fever two, in Milwaukee. Dysentery is epidemic in Buffalo; 27 fatal cases occurred during the week.

In 40 cities and towns of Massachusetts, with a population of 1,048,703 (population of the State 1,783,086), the total death-rate for the week was 24.81 against 26.74 and 22.85 for the previous two weeks.

For the week ending August 13th in 149 German cities and towns, with estimated populations of 7,841,624, the death-rate was 30.5. Deaths reported 4596; under five 2943; diarrhoeal diseases 517, pulmonary consumption 405, acute diseases of the respiratory organs 211, scarlet fever 105, diphtheria and croup 92, typhoid fever 53, whooping-cough 52, measles and röteln 22, puerperal fever 18, typhus fever (Königsberg, Thorn two, Potsdam) four, small-pox (Königsberg, Berlin, Kottbus) three. The death-rates ranged from 14.1 in Elberfeld to 48.1 in Chemnitz; Königsberg 31; Breslau 43.1; Munich 38.9; Dresden 35.7; Berlin 35.5; Leipzig 32.2; Hamburg 29; Hanover 22.4; Bremen 21.9; Cologne 29.8; Frankfurt 16; Strassburg 40.8.

For the week ending August 20th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 21.7. Deaths reported 3169; diarrhoea 412, scarlet fever 122, measles 83, whooping-cough 73, fever 45, small-pox (London 38) 39, diphtheria 15. The death-rates ranged from 13.9 in Plymouth to 37.3 in Leicester; Bristol 17.9; Leeds 19.3; Birmingham 20; London 20.1; Sheffield 22.5; Manchester 23.4; Liverpool 27.9. In Edinburgh 16.6; Glasgow 19.8; Dublin 15.5.

In the 21 chief towns of Switzerland, for the week ending August 20th, population 479,934, there were 76 deaths from diarrhoeal diseases; whooping-cough nine, acute diseases of the respiratory organs seven, diphtheria and croup four, typhoid fever three, measles one. The death-rates were: Geneva —; Zurich 25.7; Basle 26.8; Berne 25.8.

For the week ending August 20th in 149 German cities and towns, with an estimated population of 7,794,925, the death-rate was 28.6. Deaths reported 4286; under five 2578; diarrhoeal diseases 504, pulmonary consumption 425, acute diseases of the respiratory organs 176, scarlet fever 96, diphtheria and croup 93, typhoid fever 62, whooping-cough 68, measles and röteln 26, puerperal fever 17, small-pox (Thorn, Benthien, Kottbus two, Duisburg) five. The death-rates ranged from 15.7 in Barmen to 54 in Posen; Königsberg 29.5; Breslau 40.9; Munich 38.2; Dresden 30.9; Berlin 30.8; Leipzig 36.4; Hamburg

24.6; Bremen 21.4; Cologne 21.2; Frankfort 24.9; Strasburg 30.4.

For the week ending August 27th in the 21 chief towns of Switzerland, population 479,934, there were 59 deaths from diarrheal diseases; acute diseases of the respiratory organs 11,

typhoid fever 10, diphtheria and croup five, whooping-cough four, puerperal fever one, small-pox one. The death-rates were Geneva 22; Zurich 25; Basle 21.8; Berne 24.6.

The meteorological record for the week in Boston was as follows:—

Date.		Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
			Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
September, 1881.																				
Sun.,	4	30.146	60	64	59	86	85	93	88	NE	SE	SE	8	7	5	X	O	O	—	—
Mon.,	5	30.172	66	70	59	92	85	91	89	S	S	SW	8	7	4	T	O	G	—	—
Tues.,	6	30.050	73	77	63	95	76	72	81	SW	W	W	8	10	12	G	S	H	—	—
Wed.,	7	29.969	84	101½	72	73	33	59	55	W	W	W	8	14	4	C	C	C	—	—
Thurs.,	8	30.171	65	83	61	68	59	78	68	NE	E	SW	11	9	7	C	C	C	—	—
Fri.,	9	30.083	69	77	60	59	68	90	69	SW	SW	SW	8	12	9	H	O	O	—	—
Sat.,	10	30.136	62	71	58	90	88	93	90	NE	NE	NE	7	11	9	O	O	O	—	—
Week.		30.104	69	101½	58														4.17	.08

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 10, 1881, TO SEPTEMBER 16, 1881.

BROWNS, P. R., captain and assistant surgeon. Granted leave of absence for one month. S. O. 210, A. G. O., September 13, 1881.

SKINNER, J. O., captain and assistant surgeon. To proceed to Fort Verde, A. T., and report to the post commander for duty as post surgeon. S. O. 101, Department of Arizona, September 2, 1881.

BERTON, H. G., captain and assistant surgeon. To accompany Light Battery C, Third Artillery, as medical officer, on its march from Fort Hamilton, N. Y., to Yorktown, Va., via Trenton, N. J., Philadelphia and Columbia, Pa., Baltimore, Md., and Washington, D. C., and remain with it there until further orders. S. O. 163, Department of the East, September 14, 1881.

AMERICAN GYNÆCOLOGICAL SOCIETY. — Programme of the sixth annual meeting, to be held in the hall of the Academy of Medicine, 12 West Thirty-First Street, New York, on September 21, 22, and 23, 1881. The profession is cordially invited to attend the meetings.

September 21st. Morning session at 9.30 o'clock. Roll-call, reception of guests, etc. Papers: 1. Address of Welcome by the President of the New York Academy of Medicine. 2. Acute Diffuse Hyperæsthesia of the Peritoneum, following Minor Gynæcological Operations and Manipulations. By Dr. S. C. Busby, of Washington. 3. Exploratory Puncture of the Abdomen. By Dr. H. J. Garrigue, of New York. Appointment of the Auditing Committee. Adjournment at 4 p. m. Afternoon session at three o'clock. 4. Notes on Cases of Pelvic Abscess. By Dr. G. H. Laman, of Boston. 5. Genital Renovation, particularly by Kolpos Tenotomy and Kolpocæpsetis, in Uterine and Faecal Fistules. By Dr. N. Bozeman, of New York. Adjournment at five p. m.

September 22d. Morning session at 9.30 o'clock. 6. Forceful Elongation of Pelvic Adhesions. By Dr. E. Van de Warker, of Syracuse. 7. Sixth Annual Address, by the President, Dr. W. H. Byford, of Chicago. 8. Esthiomène, or Lupus of the Vulva, with Cases and Colored Illustrations. By Dr. L. E. Taylor, of New York. Adjournment at one p. m. Afternoon session at three o'clock. 9. Bursting Cysts of the Abdomen. By Dr. William Goodell, of Philadelphia. 10. Erysipelas in Childbed without Puerperal Peritonitis. By Dr. H. F. Campbell, of Augusta, Ga. 11. The Practice of Gynecology in Ancient Times. By Dr. E. W. Jenks, of Chicago. Adjournment at five p. m.

September 23d. Business meeting at nine a. m. with closed doors. Report of the Treasurer and Auditing Committee.

Election of officers for 1882. Nominations for honorary and active fellowship by the Council. Balloting on the same. Morning session at 10.30 o'clock. 12. Extensive Adhesion of the Bladder as a Complication of Ovariectomy. By Dr. T. G. Thomas, of New York. 13. A Case of Inverted Uterus caused by a Fibroid Polyp. By Dr. T. A. Reamy, of Cincinnati. 14. Axis Traction of the Obstetric Forceps. By Dr. A. H. Smith, of Philadelphia. Adjournment at one p. m. Afternoon session at three o'clock. 15. Jaundice in Pregnancy. By Dr. J. W. Underhill, of Cincinnati. 16. A Case of Clitoridectomy. By Dr. G. J. Engelmann, of St. Louis. 17. Measurements of the Uterine Cavity in Childbed. Second and Third Series of 108 Cases each. By Dr. A. D. Sinclair, of Boston. Adjournment at five p. m. J. R. CHADWICK, M. D., Secretary.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, 19 Boylston Place, on the first Thursday of October, at 10.30 a. m. H. A. Martin, M. D., and H. O. Marey, M. D., will report on matters pertaining to the Medical Congress, both of Gynæcological and of general medical interest. Profession invited.

HENRY M. FIELD, M. D., Secretary.

PRIZE ESSAY. — The committee of selection appointed by the chairman of the section on Practical Medicine, Materia Medica, and Physiology, at the recent meeting of the American Medical Association, have selected, and hereby announce, as the subject for the prize to be awarded in 1883, the following question:—

What are the Special Modes of Action, or Therapeutic Effects upon the Human System, of Water, Quinia, and Salicylic Acid, when used as Anti-Pyretics in the Treatment of Disease? The essays must be founded on original experimental and clinical observations, and must be presented to the chairman of the committee of award on or before the first day of January, 1883.

N. S. DAVIS,
H. D. HOLTON,
W. H. ULRICH, } Committee of Selection.

BOOKS AND PAMPHLETS RECEIVED. — Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. XX. General Index. New York: William Wood & Co. 1881.

General Medical Chemistry for the Use of Practitioners of Medicine. By R. A. Wuthaus, M. D. New York: William Wood & Co. 1881. Wood's Library of Standard Medical Authors.

The Dangers and the Duty of the Hour. By William Goodell, M. D. (Reprint.)

Original Articles.

THE MEDICAL EDUCATION OF WOMEN. THE PRESENT HOSTILE POSITION OF HARVARD UNIVERSITY AND OF THE MASSACHUSETTS MEDICAL SOCIETY. WHAT REMEDIES THEREFOR CAN BE SUGGESTED?¹

BY HENRY I. BOWDITCH, M. D., M. M. M. S.

I DESIRE to discuss these questions dispassionately. I hold certain views which I know are honestly and earnestly opposed by some of my best friends; men eminent in the profession, and equally desirous with myself of upholding the honor and the best interests of that profession. I am sorry to differ from such comrades, but I cannot do or say otherwise without incurring my own self-contempt.

As I shall endeavor to discuss the question without undue heat, I hope that I shall not offend the sensibilities of any one. I claim, too, from yourselves an equally non-sentimental hearing. I ask for the strongest arguments you can bring against any position I may take, because by such ample discussion we shall all the sooner arrive at truth upon the matters in dispute. I regret to feel that our discussions in all the medical societies I attend in Boston are, usually, very deficient in this wrestling of one mind with any other upon any subject that may be presented. Often the most important questions are received with a dead and, as it were, ominous silence, save in the private talk or judgments given after we leave this hall. Some, it is true, prefer that there *should be never any discussion of the special subject* I shall present, and they wish that certainly no action should be taken during this our centennial year. Others, on the contrary, think that discussion should be continued until the right prevail, and that it is especially appropriate to this centennial gathering.

The festival would, according to them, be ennobled and consecrated, as it were, by the performance of an act of simple justice, already too long delayed.

AXIOMS.

Before entering upon the specific question announced permit me to lay down a few axioms, which I hope you will admit as simple truisms, perhaps.

(1.) In this country and at this period of the world every adult, male or female, has a right to such an amount and species of instruction, that is offered to the public, as may seem good to that individual mind.

(2.) Sex, though undoubtedly often influencing an individual in the search for such public instruction or work, has nothing to do with this primal right.

(3.) In every class of the community woman has, of late years, claimed and obtained for herself positions and spheres of action which seventy-five or a hundred years ago would not have been claimed by woman, or, if claimed, would not have been granted by our forefathers.

(4.) She now claims all these positions, at times, even, to the exclusion of men. By work in the halls of the State-house, down through all public offices to the lowest clerkship or shop-worker, she often not only supports herself, but sometimes large families, on labor, that would have been repelled by both sexes, a century

since, as unsuited to woman. She has also entered successfully into the higher realms of literature, science, and of professional life, and has gained honors in all of them. The names of Madame De Staël, George Eliot, George Sand, Mary Somerville, La Chapelle, Boivin, dead, and many others, living, prove this for literature, science, and medicine.² The crowds of young women who, morning and evening, fill our streets at the opening and close of the business day, but which were never seen, even thirty years ago, intimate how women engage now in all branches of trade.

(5.) It is a truth, not to be denied, that there are, at present, not a few intelligent women who, loyally bent upon getting a proper medical education, have crossed the ocean once and at times twice in order to get that instruction, which Harvard College refuses to impart to them, or for which the Massachusetts Medical Society gives them no credit. Daily this number of foreign-educated women is increasing, some of whom are in medical acquirements the peers of any in this assembly.

(6.) As a corollary to this proposition, you must admit that Harvard, by her present position, not only forces women to go to Europe or other distant places, but it also compels many, who, from pecuniary circumstances, cannot visit Europe, to take refuge in other and inferior schools, or, perchance, drives some into the ranks of quackery.

OPPOSITION OF HARVARD AND OF THE MASSACHUSETTS MEDICAL SOCIETY.

These facts being admitted, we next ask, how do Harvard College and the Massachusetts Medical Society meet them? Harvard simply ignores them. She shuts her eyes and virtually says: "As we have done for two centuries so we mean to do for an indefinite space of time." It is, however, a curious psychological fact that while she gives in the higher branches of learning usually taught to male undergraduates similar instruction to women, for female students of medicine she refuses all care. Thus she does, as I think, not only injustice to the claims of women but an actual detriment to this community and this, too, to the lowering of her own fame and probably with a pecuniary loss. By this neglect, the State is being gradually flooded by imperfectly-educated female physicians. I cannot see how any one can deny that this is the present unfortunate position of our time-honored university.

The Massachusetts Medical Society stands upon no higher plane. It does not, like the university, give instruction, but, *by a law of Massachusetts, it is obliged to examine persons educated elsewhere, and to give certificate or licenses* to practise medicine to all applicants, who may be found capable of winning such an honor. But when fully educated women come and ask for such examination, it sternly refuses to give it. It gives no intelligent reason for this action and merely replies: "No, do not come near us." "We won't have you." "Your sex unfits you to be our associates." "You cannot practise medicine." "You unsex yourselves in trying to do so, and we won't even examine into your qualifications." "You disturb our meetings by your persistent demands."

² If any one wishes to see how woman has gradually but steadily, progressed in the path of medicine, let him read the admirable and exhaustive article by Dr. J. R. Chadwick, in the *International Review* for October, 1879, entitled, *The Study and Practice of Medicine by Women*. H. I. B.

¹ A paper read before the Suffolk District Medical Society. Vide Boston Medical and Surgical Journal, August 4, 1881, for report of discussions on this paper.

WOMEN PHYSICIANS INCREASE IN NUMBER, IN SIGHT
OF HARVARD AND THE MASSACHUSETTS MEDICAL
SOCIETY.

Notwithstanding this opposition from these two powerful institutions educated female physicians and surgeons have steadily increased in numbers.¹ How unwise, therefore, for these two institutions to think they can stem the tide, which is daily bringing women into this department of human action, where they feel that they will and can be efficient workers. You cannot stop this flood "any more than you can dam Niagara with a bulrush."

Is this procedure on the part of the University and the Society consistent with the duty these institutions, by their very charters, owe the State? Is it justice to the public or to the applicants? Is it consistent with the highest reason? Nay, is it sustained even by the rules of common sense? I take the negative of all these questions, and in so doing I think I stand upon a firm basis. But some of you may reply, we do not rest our opposition upon your so-called high ground, but we base it upon expediency which, on supreme occasions, overrides all of your arguments.

I grant that this position is, at times, applicable to *great emergencies*. But I cannot insult the intellect or the moral sense of this Society by admitting that the fear of giving instruction to women, in any department of learning, can be brought into this category.

THESE TWO BODIES HOLD A GREAT TRUST FROM
THE STATE.

The only question, now open to the College and to the Society, is whether or not they will give up their honorable prestige as leaders in all the higher medical education for every applicant, or relegate that position to an inferior set of instructors. How degrading to Harvard and to the Society is this bare suggestion!

In truth this matter of medical education is a *great trust*, committed by the State to these two bodies, and upon the proper and conscientious performance of the duties devolving upon them in this trust, or their neglect of the same, depends in a great degree the character of the medical profession of Massachusetts for centuries to come.

Let us examine a little more closely into the acts of the two, and after doing this I will venture to suggest a course, which seems to me would be just and reasonable, and which will, perhaps, be not disagreeable even to the minds of opponents to any action in the premises.

A FEW HISTORICAL FACTS. HARVARD COLLEGE.

I regret that the corporation of the College refused to accept the sum of ten thousand dollars, generously offered by a lady provided the College would instruct women in medicine.²

Four out of five of a committee, consisting of the

¹ There are at least twenty-five women, well educated as any of this Society, now working in various parts of the State as follows: Boston, fourteen; South Frammingham, two; Sherborn Woman's Reformatory Prison, two; Pittsfield, two; Worcester, one; Uitchburg, one; Springfield, one; Mt. Holyoke Seminary, one; Wellesley College, one.

² Vide Report of a meeting of the President and Fellows of Harvard College in Boston, April 3, 1878, and a majority report in favor of accepting the offer of ten thousand dollars signed by Alexander A. Gould, Merrill Wyman, Charles W. Elliot, J. Elliot Lloyd, and a minority report, opposing the plan, signed by Le Baron Russell, May 3, 1879.

president and four of our most accomplished alumni, reported to the overseers in favor of the measure, and the fifth, though not disapproving of the education of women, thought it inexpedient, under present circumstances, to establish female medical instruction. At Harvard, notwithstanding this favorable reply from the body of overseers from which it had sought counsel, the proposition was finally declined by the corporation. This result, it is hinted, was owing to a strong opposition on the part of the Faculty of the Medical School. Doubtless, the sum might have been much augmented, if only the proper *animus* had been exhibited by the corporation and faculty on that occasion. It is not my province, nor would it be becoming on my part, to attempt to mete out the relative blame lying upon the corporation and the medical faculty, that is, between the supreme authority of the university and one of its subordinate departments. Suffice it to say that, by that refusal, Harvard University presents itself to-day before the community as the opponent of the medical education of women. Let me add, too, that the funds thus refused by Harvard were finally transferred to the Homœopathic Medical School of the Boston University, where, if we may trust the statistics given in the last report of that institution, it will be wholly lost, if one may judge from the steady decrease in the number of pupils the past three years.

While Harvard is thus derelict of her higher duties, we hear that her mother university in England now grants diplomas to both sexes in all branches of learning, which she undertakes to teach. We can but hope that her daughter in America will soon, from pure shame if for no other reason, imitate her excellent example.

THE MASSACHUSETTS MEDICAL SOCIETY.

The Massachusetts Medical Society holds, if possible, a worse position than that of Harvard. It is true that the Society itself has never had any opportunity of fully discussing these questions. All discussions, if such they may be called, have generally consisted in cutting off debate and the rejection of proposition looking towards the end proposed. Some discussions, if such they may be called, have been confined to the councilors, and this latter body has shown, of late at its various meetings, a degree of vacillation that is as amazing as it is amusing to all interested in the subject. Their treatment of these matters opens a question as to the liability of the censors to be mulcted by the laws of the State for each and every applicant to whom they have, in consequence of these doings of the councilors, refused examination.

To make this suggestion more clear we must examine what, under the constitution of the Massachusetts Medical Society and the laws of Massachusetts, the censors of the Society are legally bound to do, and their precise liabilities, if they fail to perform their duty.

In the original act of incorporation, passed by the Legislature November 1, 1781, appear the following words in *italics*:—

"Sect. 6. *It is clearly of importance that a just discrimination should be made between those who are duly educated and properly qualified for the duties of their profession and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered or perhaps lost to the community.*"

Section 7 gives to the Society the right to appoint

examiners for all applicants who wish to be candidates for the practice of physic, and section 8 imposes a penalty of £100 for obstinately refusing to examine applicants, said penalty to be recovered by such candidate for his own use from any court in Massachusetts, proper to try the same.

The same penalty is continued in the Revised Statutes, 1836, Part I., Chapter 22, Section 5, in a rather more pungent form, as follows: "*If the said censors shall unreasonably refuse to examine any person who is duly qualified for such examination, they shall severally forfeit a sum not exceeding four hundred dollars, to be recovered by such candidate for his own use.*" The italics are my own.

That possible penalty stands now upon the statute book, and although it is by no means certain that any penalty would be imposed upon the censors if the courts of Massachusetts were appealed to, there is no doubt, as I learn from two eminent jurists of this State, that such an appeal could be very properly made by any woman whom the censors have refused. Would our Society, think you, stand higher in the eyes of the public, even if victorious in such a suit? I think not.

It may be asked whether the main body of the Society or the councilors have been the chief cause of this legal liability. The facts are as follows, as I learn from the secretary: "The Society has never voted or had any action upon the subject."

The course of the councilors has been nearly if not quite as follows:—

More than twenty years ago, an accomplished woman physician requested me to appeal to the councilors for examination, and for a license in the usual form.

She asked for it simply in order to stand, under the seal of the Society, as one capable of practising medicine, and to place herself by license of the Society above the herd of ignorant old women then as now infesting the community and claiming to be doctors. She did not ask to be a member of the Society or to attend its meetings. But so important did this license seem to her that she was ready to agree that, if she could not pass the strictest examination by the censors, she would study any length of time they might deem necessary, under teachers whom they might appoint, and promised to do so *until she could* so pass. Certainly nothing could be more loyal to the highest professional ideal, and nothing could be more humble in its request. These propositions, made by one who subsequently proved herself, as I know by consultations with her, to be an able physician, were rejected with scorn and without proper debate by the councilors.

Since that time very little, I think, has been done. The arbitrary vote then and there given absolved me and a few others holding similar opinions from any attention to the supposed requirements of the by-laws, preventing members at that time from consulting with any person outside of the pale of the Society. One or more of the strenuous advocates of our by-laws hinted at possible rebuke, and perhaps our expulsion for thus doing. We only replied, "Do exactly what you wish in the premises," but we thought then, as doubtless the majority of the Society think now, that it would be an evil hour for the Society if any such action were ever taken. We are gratified to find that such illiberal notions would not now be sustained by the highest expounder of by-laws, namely, our actual president, who, at the last meeting of the councilors, took the broad ground

that any member had a right to consult with any physician he might, himself, think duly educated!

After the above action of the councilors, although the subject has been referred to at times, very little if anything further has been accomplished.¹ Many well-educated female physicians have settled in the city. The New England Woman's Hospital, with its corps of physicians and surgeons, and the Woman's Dispensary have been established. There is an increased number of physicians daily consulting with female physicians. But these latter have continued to feel, and, as I think, justly, that the license of the Massachusetts Medical Society would give a certain dignity to their professional position, and, what is more impor-

¹ This remark, though substantially correct, is not strictly true. Through the kindness of Dr. J. R. Chadwick I have been able to obtain the following brief statement of the action of the councilors from the first time that the subject was presented to them. It is a summary of an investigation made by Dr. Hodgden into the records of the councilors. In addition to the story of the doings of the councilors in reference to the admission of women, it fully sustains the statement made in the text that the councilors have usurped powers not granted them by the constitution of the Society, in the fact that they have passed votes ordering the expenditure of money, and instructing the censors, etc., without duly consulting the Society at large.

February 2, 1852. The councilors (on the question of the admission of women to the Society) voted, the censors are directed to examine males only, and the Massachusetts Medical Society would assume any responsibility or expense which the censors might incur (a most extraordinary usurpation of power).

June 4, 1867. To a question from the trustees of the Massachusetts General Hospital the councilors voted that it was inexpedient for our State medical schools or the hospital to admit female medical students. The vote stood, seven affirmative, forty-nine negative.

October 7, 1872. The censors for Suffolk asked what they should do, as they had been requested by a female physician to allow her to be examined for a license to practice and for admission to the Society. A committee was appointed to report February, 1873.

February 5, 1873. Four of the committee were in favor of, one against, granting the request. After discussion the report was recommended to the same committee, with directions to take legal counsel as to the question whether, as the law now stands, women had a right to ask admission.

June 3, 1873. Committee reported in substance as follows from their counsel, E. R. Hoar and George Putnam, Esq.:—

(1.) The Society has a right to say that only males shall be admitted to a license and membership.

(2.) It has never done so by any by-law.

(3.) That in the absence of such by-law the censors have to decide whether sex is a disqualification for the medical or surgical practice.

(4.) That in the absence of any by-law from the Society, if any woman be licensed by the proper officers she is thereby entitled to membership. The censors may reject a woman if they think sex a disqualification for medical and surgical practice.

Upon this report the councilors voted to instruct the censors not to admit women. Carried by a small majority. (The question should have been referred to the Society.)

June 8, 1875. On motion, it was voted to choose a committee of five to report whether duly educated women cannot receive the rights and privileges of membership.

October 5, 1875. This majority reported in favor of examining males and females without distinction. The minority objected to such examination. A long discussion ensued, and an indefinite postponement of the whole matter was carried by a very close vote.

June 11, 1878. A resolution came to the councilors from the Middlesex South District Society desiring that well qualified female practitioners should after examination be admitted. A committee of five was chosen to report at the next meeting.

June 10, 1879. A year afterwards the councilors reported that of the largest number of the committee which could attend a meeting the members were equally divided in opinion. Voted to recommit to the same committee, and with a request to report at the next meeting.

October 1, 1879. The majority of the committee advised no action. The minority reported as follows, that the censors of the Massachusetts Medical Society should be instructed to admit women for examination. The councilors voted, 43 to 38, to adopt the minority report.

February 4, 1880. The censors of Suffolk protested against such instructions unless ratified by the Society. After some discussion, during which a proposition was suggested that an appropriate by-law should be recommended to the Society, it was finally voted that the vote passed October 1, 1879, directing the censors of districts to examine women, be rescinded!

February, 1881. The subject was again brought up by a councilor, and it was laid upon the table.

tant, would place them in more pleasant relations with the whole profession everywhere, not only in Massachusetts but elsewhere. Armed with such certificate of approval by the Society a woman could settle in any town in this country, and, by showing it to physicians resident near her, could prove that they would not degrade themselves by consultation with her.

Accordingly, some time in the autumn of 1879, a number of the female practitioners of Boston applied to the censors of the Society for examination. For months the applicants were devoted students, in addition to attending all their professional practices in the city and vicinity.

Fortunately for the Society, but unfortunately for the applicants, the censors of Suffolk sent in, at the February meeting, 1880, a solemn protest that they could not examine women without the sanction of the Society.¹

But what action did the councilors take on this protest of the censors? Instead of standing manfully to their previously expressed opinion and referring the whole matter to the Society, as we have seen they ought to have done at first, they rescinded their previous vote! Such vacillation is unworthy of the representatives of the profession in Massachusetts. It shows also a determination to keep the subject, if possible, away from the candid consideration of the Society at large.

ACTION OF THE COUNCILORS IN FEBRUARY, 1881.

Under a conviction that injustice had been done, I presented the following resolutions at the last meeting of the councilors, February 10, 1881, with the idea that possibly they might again change their minds, and that the Society, itself, would perhaps then have the question properly submitted to it.

(1.) *Resolved.* That the councilors recommend that the censors be directed to examine women for admission into the Society upon the basis now required for men.

(2.) *Resolved.* That the secretary be hereby directed to present the above vote to the Society at its next annual meeting for action thereupon.

I considered that these resolves were very simple, and I hoped that there could be but little doubt about the propriety of referring them to the Society.

After a very brief but warm discussion and appeals to emotional prejudice, rather than to right and justice, the propositions were very summarily laid upon the table.

PRESENT CONDITION OF THE QUESTION AND PROPOSED REMEDY.

And this is the present condition of the question of the medical education of women, so far as Harvard University and the Massachusetts Medical Society have power and influence on the question. They have both decided that they will do nothing in the premises.

Is this position consistent with reason, justice, or common sense? Nay, is it not degrading to both the

College and the medical Society? I hope you will receive and consider candidly whatever I have said as independent, conscientious thinkers, not as sentimentalists or prejudiced persons. Do not shut your eyes to the facts and think that, by so doing, you can for any length of time check the irresistible onward course of human progress in giving all learning for woman as well as man.

I submit the following propositions and suggestions, hoping that they will commend themselves even to those heretofore opposed to any action in the premises.

(1.) Harvard owes it to herself and to the community to instruct women in medicine.

(2.) Co education, at present, is not advisable, except perhaps in certain departments.

(3.) A separate school for women should be forthwith commenced by Harvard, provided a sufficiently large sum of money can be guaranteed to the corporation to make sure of perfect success.

(4.) Should the medical faculty, either in part or the whole, be unable or refuse to teach, there can be found without doubt in this community many young scientific men, who would be very willing and able to carry on such a school.

(5.) As a new building is to be soon erected for male students, it would seem that a most excellent opportunity is now offered to the College to use the present building for a female medical school.

(6.) The Massachusetts Medical Society should examine women who apply for a license from the Society under the laws of the State, and a diploma should be given to all, who can pass the requisite examination.

(7.) Such diplomas should enable the holders to present themselves before any member of the Society and ask for consultation with him, as any other physician may do.

(8.) This diploma would not necessarily give her the right to attend the meetings of the district, or general society, or to vote on any subject bearing on the organic laws of the same.

(9.) The general society or the district societies might at any time, if the members saw fit to do so, invite women to attend the meetings.

In accordance with these preliminary propositions I present the following resolutions:—

(1.) *Resolved.* That this Society recommends that licenses to practise physic in Massachusetts be hereafter given to those women, who, upon an examination similar to that given to men, are found fully proficient in the principles and practice of medicine.

(2.) *Resolved.* That with such licenses should be given all the rights and privileges granted to men, except those of attending the meetings and of voting upon questions involving the organic laws of the Society.

(3.) *Resolved.* That to each district society and to the general society shall be left the question of extending an invitation to female licentiates to attend their respective meetings.²

(4.) *Resolved.* That in the opinion of the Suffolk District Medical Society it is desirable for Harvard University to establish a medical school for women, and that this course has become necessary if the proper standing of medical instruction is to be kept up in Massachusetts.

(5.) *Resolved.* That the secretary of this Society be

¹ The censors are right in protesting against these repeated usurpations of the councilors, and I heartily thank them for doing so. It is a great pity that it was not made years ago, and then perhaps we should not have lost the valuable old library gathered by our forefathers, and which the councilors had, with bold assurance, given away without asking for the concurrent action of the Society itself, until after the books had been given to the city of Boston and placed in its Public Library. Let us hope that this sharp rebuke from the censors will be a lesson to the councilors to keep within the bounds of their prerogatives, and that it will also teach the Society to look more keenly at the doings of the councilors, and see to it that its laws are not set aside, or its property voted away, without its consent.

² Since writing this paper I learn that eminent legal counsel hold that a license to practice carries with it membership of the Society.

directed to send copies of these resolutions to the councilors of the Massachusetts Medical Society and to the Society itself at the next annual meeting, and likewise to the President and Corporation of Harvard University.¹

THE MECHANISM OF THE CARDIAC AND ARTERIAL TRACES, AND SOME OF THE TEACHINGS OF CARDIO-SPIRYGMOGRAPHY.

BY A. T. KEYT, M. D., CINCINNATI, OHIO.

MECHANISM OF THE CARDIAC TRACE.

In the cardiac cycle there occur as palpable phenomena —

(1.) Auricular systole, with contraction of the auricular fibres, hardening of the auricular parietes, sudden rise of intra-auricular blood pressure, impulsion of blood through the auriculo-ventricular orifice, shrinkage of the auricular volume, and systole quickly changing into —

(2.) Auricular diastole, with relaxation of the fibres, softening of the parietes, sudden fall to negative of the blood pressure, filling of the cavity from the great veins, gradual increase of the blood pressure, swelling of the volume.

(3.) Ventricular systole, with contraction of the fibres, hardening of the parietes, sudden rise of the blood pressure, closure and tension of the auriculo-ventricular valve, opening of the semilunar valves, impulsion of blood through the arterial orifice, reduction of volume, variable maintenance (after the first change) of contraction, hardness, and pressure, and systole suddenly changing into —

(4.) Ventricular diastole, with relaxation of the fibres, softening of the parietes, sudden fall to negative of the blood pressure, opening of the auriculo-ventricular valve, closure of the semilunar valves, filling of the cavity from the auricle, gradual rise by stages of the blood pressure, augmentation by stages of the volume.

(5.) The changes and conditions of arterial filling and emptying.

The elements which determine mainly the formation of the cardiac trace are:—

(1.) Changes of contraction and relaxation of the cardiac fibres.

(2.) Changes of intra-cardiac blood pressure.

(3.) Changes of consistence of the cardiac walls.

(4.) Changes of volume of the heart.

The cardiac trace is produced in man by the instrumental registry of the variations of protrusion and recession of the intercostal space, occasioned by the action and states of the heart beneath. In general terms the space advances and remains more or less elevated during ventricular systole, while it recedes and remains more or less depressed during ventricular diastole.

We will now endeavor to discern the normal types of the individual factors above stated, whose composition must form the true normal cardiogram.

(1.) Systole of the ventricle is marked by contraction of the fibres of the ventricle. At the end of systole the fibres relax, and diastole is marked by relaxation of the ventricular fibres. It is well known that

the ventricle continues for a time to alternately contract and relax, even when its cavity is deprived entirely of blood; yet in normal action it is true that the force and duration of contraction is influenced by the resistance to be overcome. Experiment shows that a stimulated muscle contracts stronger and longer when weighted. So the ventricle will modify its force of contraction by the resistance to the exit of its blood, and will continue its action, within limits, until the object of its systole, the discharge of an adequate volume of blood into the artery, has been fulfilled. Accordingly, then, it is conceived that contraction begins and increases its force until the semilunar valves open and the blood begins to escape. As the blood passes out into the relaxed aorta the resistance diminishes, and with this the force of contraction diminishes; the aorta becoming filled the resistance increases, and with this the force of contraction increases. It seems probable that the arterial resistance is carried back to the ventricle and stimulates its renewed contraction in the form of a double effort, the last one the stronger. Systole being completed, contraction suddenly changes to complete relaxation of the fibres, and the flaccid condition continues throughout ventricular diastole. The module, then, of systolic contraction of the ventricle would be a line first ascending quickly to a high point, then turning a little downwards, then forming a small upward wave, then a wave running as high at least as the level of the first summit; and the module of diastolic relaxation of the ventricle would be a line quickly descending from the high level of the end to the level of the beginning of systolic contraction, and thence running horizontally to the end of diastole. This type is represented in the plate, No. 1., by the line beginning with *a b* and continued by the uppermost dotted line to *a'*. (See next page.)

(2.) The module of intra-ventricular blood pressure is, in systole, closely that of ventricular contraction. Pressure and contraction must begin simultaneously (although the latter is the initial condition), and the elevation of the one and force of the other proceed *pari passu*, and the climaxes be reached at the same time. After the opening of the valves to the end of systole the blood pressure first falls sharply, then is checked and raised a little by the establishment of arterial tension, and then raised more decidedly by the increased force of contraction engendered by the arterial resistance. Thus in strict comparison the waves of blood pressure are sharper than those of contraction, the first fall and second rise of the former *leads* the weakening and strengthening of the latter, while the renewed contraction *leads* in turn the third and last rise of blood pressure. In diastole the blood pressure first descends below zero, then rises by the influx of blood from the auricle, then more slowly by the continued but slower flow, and then more rapidly again by the auricular change. The type, then, of the variations of intra-ventricular blood pressure would be, in systole, a line beginning as with *a b*, then running by the second dotted line to the point intersected by *E*, and, in diastole, continued by *e f*, and thence on to *a'*, nearly by the course of the solid middle line there seen.

(3.) The changes of consistence of the ventricle are a varying hardness during systole and a varying softness during diastole. The varying hardness of systole is the result of changes of contraction and changes of blood pressure combined, and its module is *essentially* that of changes of blood pressure. The varying soft-

¹ For the discussion and the action of the Society on these resolutions see Medical and Surgical Journal, Aug. 4, 1881.

ness of diastole is the result of relaxation and changes of blood pressure combined, and its module is *purely* that of changes of blood pressure. So the line of changes of consistence of the ventricle would be essentially the same as that of variations of intra-ventricular blood pressure before described.

Contraction increases again the rate of reduction. Contraction changing to relaxation, the ventricle suddenly enlarges by lengthening of its fibres and elasticity of its walls, and quick falling into it of blood from the auricle; then the enlargement is slowed, for a time following a slower influx, and next is accelerated again

by the change of auricular systole. Thus the module of changes of volume of the ventricle is typified, in systole, by a line first horizontal, then quickly descending, then more slowly descending, and then again more rapidly descending; in diastole, first quickly, then more slowly, and then again more rapidly ascending. This type is shown in the lowest dotted line running from *a* to *a'*.

Such is our analysis and representation of the phenomena of the movements bearing upon the formation of the cardiac trace. Are these modules correct? They are consistent with accepted physiology of the heart's movements; they are supported in principal features, as self evident propositions, and for the most part they have been confirmed by experiment.¹ With regard, however, to the intermediate systolic wave, it is admitted that other agencies might be adduced as auxiliary factors in its production, and that these agencies might sometimes cause the wave to present in multiple form. These agencies are: (a) locomotion of the heart by back action as the issuing blood meets with resistance; (b) locomotion of the heart by lateral pressure of the pulse wave as it distends the descending aorta; and (c) vibration of the ventricular parietes under the systolic effort and arterial resistance. These factors, if operative, would usually accord in time with the resistance reflected by the interior, and so contribute to the production of the intermediate wave as ordinarily seen; but if, peradventure, they should be discordant, then the wave might appear multiple, as sometimes seen, instead of single.

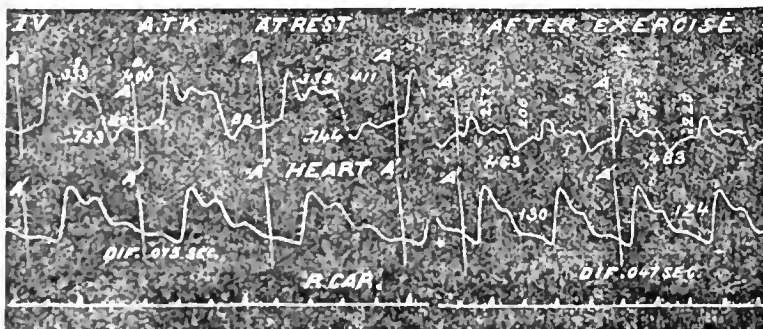
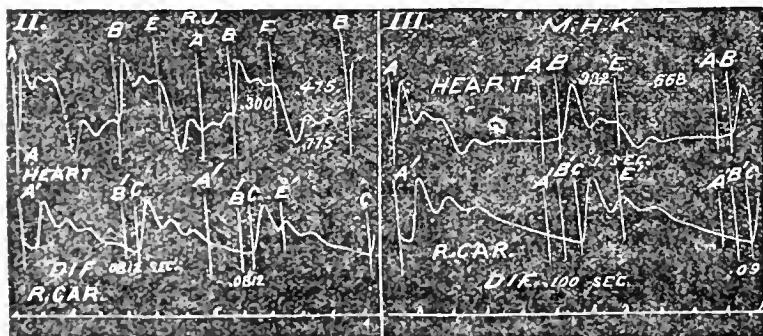
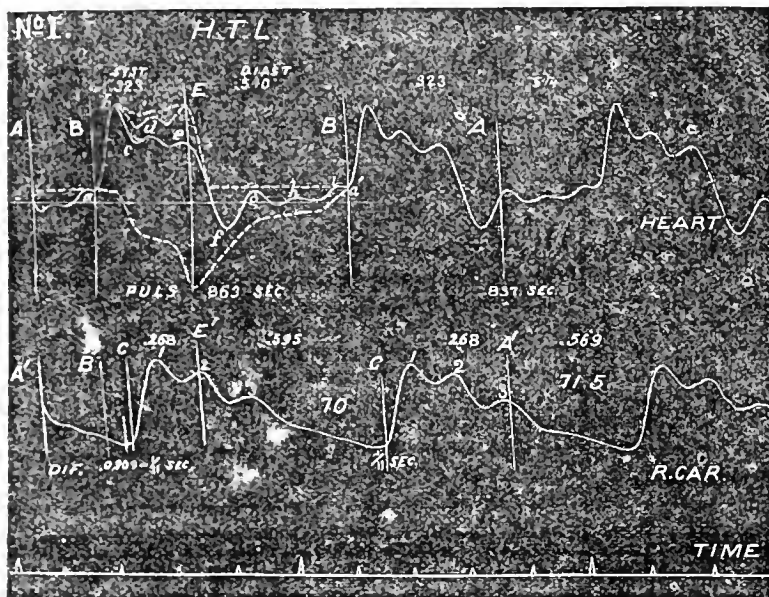
Accepting, then, the representations given as substantially true, we proceed to seek in the synthesis of these lines the normal type of

the movements of the heart.

We have seen that the modules of contraction, consistence, and pressure resolve themselves essentially into that of intra-cardiac pressure; so the composition sought is substantially between the two lines of pressure and volume, which so far simplifies the investigation.

In the first part of systole, that is, during the pre-

¹ See La Methode Graphique, page 386.



IV. A.T.K. AT REST. AFTER EXERCISE. The changes of volume of the ventricle are reduced by stages during the sphygmie portion of systole, and augmentation by stages during diastole. After the beginning of contraction the ventricle remains at its maximum volume until the blood begins to flow from it actively. The escape, at first free, permits, at first, a diminution in the volume, retarded by the pressure of the blood in the aorta; and the escape is again retarded by the renewed vigor of con-

sphygmie portion, there being no volumetric decline, the intra-ventricular pressure rises without limitation from this cause to its high point of climax, but from this point the line of systole is lower than the line of pressure would make it, in consequence of reduction of ventricular volume; in the oscillations of blood pressure each decline and each elevation mark a lower position, and the level of the end of systole is much below that of the first summit. The diastolic line of recession is shortened in the upper part, and the rest of the line corresponds with that of pressure. The line, then, we would construct from these elements as the module of the heart's pulsation is the solid line *a, b, c, d, e, f, g, h, i, a'*, and this is a real trace of a normal human heart, enlarged to double size by photography.

The module of auricular systole evidently would be composed of contraction of the auricular fibres and intra-auricular blood pressure, and would manifest itself at the surface of the auricle as a single rising and falling wave, appearing a little before the advent of ventricular systole, but over the ventricle this wave would divide itself into two small ones, the first representing the beginning of contraction, and the second the impulsion of blood into the ventricle. Thus the waves *h i* stand respectively for these events.

We maintain that this division of the effect of auricular systole at the surface over the ventricle is favored in sound theory, and the constancy of these small waves in all normal and well-taken cardiograms is confirmatory proof that such is the mechanism of their production.

This cardiogram, taken from a man in health, aged twenty-eight years, is a trustworthy representation of the movements it followed, and is equal to the best specimens of cardiographic art. It shows correctly the phases and limits of ventricular systole and diastole, and the markings of auricular systole. The valvular closures it does not distinctly show. We know that the auriculo-ventricular valve closes in the first part of systole, and the semilunar valves close in the first part of diastole, but these events are drowned, as it were, in the greater events which include them, and transpire, the one whilst the lever is rapidly ascending, the other whilst it is rapidly descending, thus contravening a distinct record of their occurrence. It sometimes happens, however, that a cardiogram of very sloping descent will show a break which marks the closure of the semilunar valves.

MECHANISM OF THE ARTERIAL TRACE.

In the plate the tracing below the cardiac is that of the carotid artery taken simultaneously with the former. It, too, is a typically correct representation of the arterial movements it followed. This trace would differ from a trace of the commencing aorta only in smaller amplitude and a little greater delay on the pulsation of the heart. Allowing only for the latter it may be studied as if it were an actual trace of the initial aorta.

Below is the time in fifths of seconds written by a chronograph also simultaneously with the pulsations. *A A'* are the signal lines made by the levers with the recording slip at rest; *B*, parallel to *A*, cuts the basal point of the cardiac trace which marks the beginning of ventricular systole; and *C*, parallel to *A'*, cuts the basal point of the arterial trace, which marks the beginning of the pulse; *B' C* shows the difference in distance between *A B* and *A' C*, which is the delay of the pulse on the heart, and measured on the chrono-

gram its time-value is neatly found; also *E*, parallel to *A*, cuts the point marking the end of cardiac systole, and *E'*, parallel to *A'*, cuts the pulse trace when it may, the distance *A' E'* being the same as *A E* of the heart line.

Under the systole of the ventricle at the opening of the aortic valves the blood is launched into and expands the artery. Under the charge the climax of arterial tension is soon reached, but is rapidly receded from in consequence of the quick, outward flow of the blood. Thus is formed the first wave of the pulse and first line of recession. The climax of arterial tension is reflected through the open valve back to the heart where it raises a small wave of pressure and excites the ventricle to renewed contraction. This last effort of the ventricle quickly sends forth more or all of the remaining contents staying the arterial recession, and raising a second wave. Thus is formed the second wave of the pulse. Systole being ended and diastole begun, the pressure in the ventricle becomes negative, which starts the arterial current towards the heart, causing rapid recession of the arterial line. This centripetal flow with arterial fall is duly checked by the closure of the aortic valves, and the rebound of the blood completes a third wave. Thus is formed the second line of recession and third or aortic wave of the pulse. (This wave is in fact a double wave, the division arising from the shock of closure and rebound of the blood. I have often traced it on myself, showing the double form.) After this the pulse gradually recedes by the arterial emptying towards the capillaries, and the descending line is thrown into a series of indistinct wavelets, which, if legibly traced, would probably be one for the ventricular filling, one each for auricular contraction and impulsion, and one for the first phase of ventricular contraction, these influences of course transmitted to the closed aorta.

CORRESPONDENCES BETWEEN THE PHASES OF CARDIAC AND ARTERIAL MOVEMENTS.

The arterial line is yet declining when the cardiac ascent begins. This is demonstrated in the tracings in that *B* which marks the basal point of the heart trace cuts the pulse trace at a considerable distance anterior to *C*, the basal point of the latter. It is known that the time occupied by the transmission of the pulse-wave from the aortic orifice to the carotid point is only a small part of the time represented by the distance *B' C*. (The division is indicated by the dotted line between *B'* and *C*.)

The high point of the cardiac trace corresponds closely with the basal point of the arterial. This also is demonstrated in the tracings. The distance *B b* is found to equal the distance *B' C* minus the small distance representing the transit time. Next the arterial line ascends while the cardiac descends, and there is more or less correspondence between the arterial summit and cardiac depression, *c*. The first arterial depression and second wave of the pulse correspond with the remaining part, *c d e*, of cardiac systole. The intermediate cardiac wave *d* fails to appear in the pulse-trace for the reason, probably, that as it is merely a small reflected wave in the heart, its second reflection in the pulse is not apparent. The renewed contraction of the heart would raise a corresponding actual wave, the second wave of the pulse. This correspondence is shown by the relation of the lines *E E'* to these phases, respectively. After this correspondences are no

longer distinctly traced, for although the second arterial notch plainly marks the closure of the aortic valves, this event, as before stated, is not shown in the rapidly falling diastolic line of the heart, and, as previously remarked, the waves of ventricular filling, auricular contraction, auricular impulsion, and initial phase of ventricular contraction, all indicated in the cardiac trace, have but faint and uncertain correspondences in the arterial.

Taking the rise of the pulse as its beginning, the cardiac systolic phase is shorter than the cardiac systole, and the cardiac diastolic phase is longer than the cardiac diastole in either case by so much as the pertaining presphygmie interval.

It is proper to state that the correspondence between the end of ventricular systole and the acme of the second wave of the pulse, although complete in this showing, is liable in other instances to be less exact; the default, however, is never sufficient in frequency or extent to raise a doubt as to the correlation between these events. It sometimes happens that the second pulse-wave attains its point before the end of systole is accomplished, as if the ventricle expelled its blood, and then held its contraction a moment longer. On the other hand, it would seem that the ventricle sometimes changes from systole to diastole before its emptying is completed, and the second wave is sent forward a little delayed on the systolic ending.

OTHER DEMONSTRATIONS.

The illustration before us is a true map in which are correctly shown all the facts of the cardiac and arterial cycle here inscribed, their characters, phases, and relations to each other, and in which the chronometry of the events recorded are shown with mathematical precision.

In addition to phenomena already considered we instance the following showings of durations:—

First cardiac cycle .863 second; systole .323, diastole .540.
Second cardiac cycle .837 second; systole .323, diastole .514.
First cardio-carotid interval .0909 = 1-11 second.
Second cardio-carotid interval .0909 = 1-11 second.
First ventricular presphygmie interval .0555 = 1-18 second.
Second ventricular presphygmie interval .0555 = 1-18 second.
First cardiac systolic phase of pulse .268 second; cardiac diastolic phase .595 second.
Second cardiac systolic phase of pulse .268 second; cardiac diastolic phase .569 second.

The duration of the presphygmie interval was approximately determined in the following way: The carotid-femoral interval in the same subject had previously been ascertained to be .0909 second (unusually long), and on the basis of this the transit interval between the heart and carotid was calculated at .0354 second, and the latter deducted from the cardio-carotid time, difference .0909 second, gave .0555 as the presphygmie interval. The near accuracy of the result so obtained will be apparent when it is considered how closely alike except in lengths are the arterial tracts concerned, and that such similarity would insure uniformity in the rate of propagation of the pulse-wave, and then with correct measurement of the arterial distances and correct observation of the carotid-femoral interval, there could be no room for material error in the estimation of the cardio-carotid transit interval. Relating to these points we have elsewhere¹ treated the presphygmie interval and its variations, and the

velocity of the pulse wave along different parts of the arterial tree.

Another point is the precedence of the auricular to ventricular systole. Measuring from the beginning of the first wave the interval is about two tenths of a second, and from the beginning of the last wave about one tenth of a second. The last wave is that which is usually assigned as answering to auricular systole; but plainly enough this is too close to the systole of the ventricle to include the beginning of auricular contraction, while the first wave is in proper position to mark this event, and the second wave is properly located for marking the event of auricular impulsion.

In accordance with the foregoing views and demonstrations, as well as proven by numerous careful experiments not here recorded, the cardiac and arterial movements and cardio-arterial time-differences are expressed in the graphic lines of the pulsations as follows:—

Of the heart, the initial force of systole (ventricular) is indicated by the height of the main ascent. The quickness of systole by the steadiness of the main ascent. The sustentation of systole by the relative height, as respects the first summit, of the point of systolic ending. The duration of systole by the horizontal distance between successive points of systolic beginning and ending. The duration of ventricular diastole, obviously, by the horizontal distance between successive points of systolic ending and beginning. And the duration of the cardiac cycle by the horizontal distance, preferably, between successive systolic beginnings. Of all these phases and qualities of the heart's pulsation, except the initial force of systole, the graphic lines are true indices without qualification. Regarding the exception, the height of the main ascent is much influenced by other conditions besides the force of systole, as the relation of the heart to the chest-wall, the width and thickness of covering of the intercostal spaces, the position of the subject, all of which in different cases so modify the amplitude of the traces that the height of the upstroke can only be received as an index of systolic energy when other things are known to be equal. Thus the index may be of value in the same individual, but for purposes of comparison between different individuals it must be held of little significance.

The auricles, so far as admissible in view of their position, express their energy of systole by the height of the auricular waves, and their time of systole by the distance between the auricular and ventricular rises.

Of the pulse, the amplitude is shown by the height of the major ascent. The quickness by the steepness of the major ascent. The tension by the relative height and horizontal distance of the second wave and aortic notch from the basal point. The diastole by the height of the aortic wave. The duration or frequency by the distance between successive basal points. The duration of the cardiac systolic and cardiac diastolic portions by the horizontal distances measuring these divisions. All these qualities of the pulse are thus accurately shown, only in estimating the amplitude by the height of the main ascent, regard must be had for the thickness of the tissues over the artery; for plainly of two arteries of the same calibre and movement the more superficial one will afford the higher trace.

Of the cardio-arterial time-differences, these are shown by the difference in distance, from synchronous signals, of the cardiac and arterial basal points, respectively (the synchronous signals are the lines, crossing the traces, made by the levers with the record-

¹ U. S. New York Medical Journal, February, 1878. Cincinnati Clinician, April 13, 1878. Boston Medical and Surgical Journal, April 29, 1880, p. 492.

ing slide at rest as before described) Thus the cardio-carotid time-difference may be found to measure one twelfth of a second, the cardio-radial one sixth of a second, and the cardio-dorsalis pedis one fourth of a second; or, whatever the interval at the moment of observation between the pulsation of the heart and that of any artery, this differential distance mathematically expresses it.

In further illustration of this subject, and to show variations of form and chronometry of the cardiac and arterial movements in health, tracings from three other individuals are produced. They are in *fac-simile* and with the original of enlarged representation just considered were all taken with the compound sphygmograph figured and described in a previous number of this journal.¹

Nos. II. and III. are respectively from young men each twenty years of age. No. IV. is from a man aged fifty-four years; the first part at rest, the last part immediately after active exercise.

The reader who is interested may study at his leisure the indications of these traces, assured that they truly represent the phenomena of cardiac and arterial movements passing in the individuals at the time the observations were made; for the skillful use of our method subordinates the sources of fallacy and gives results whose fidelity withstands the most rigorous tests.

Thus by this method a group of interesting and important facts come easily within our reach — facts physiological and clinical which a few years ago were entirely hidden from view for the want of the proper devices to disclose them; but now that the multiple simultaneous graphic method has been developed and made practical results are already manifest and richest revelations await to reward its freer application.

TWO HUNDRED CASES OF CHOREA.

BY H. C. HAVEN, M. D.

HOPING to find some facts bearing on the pathology of chorea, and particularly on the embolic theory, some time since I examined the records of two hundred cases treated at the Massachusetts General and City Hospital and the Boston Dispensary. Owing to the necessarily incomplete history and record of most who attend an out-patient clinic, little either for or against the embolic theory was elicited. Some other facts, which appeared from the tabulation of these cases, though now in the main universally acknowledged, may be of some slight interest.

SEX.

Females have always been known to be especially susceptible, the ratio between the sexes varying as one male to two, three, or four females. In this series seventy-two were males, one hundred and twenty-eight females, or not quite one to two. Gerhard in eighty cases found the preponderance of females greatest in the second decade, and attributed it to the relatively greater disturbance of the nervous system incident to the establishment and disorders of menstruation. Hasse, however, found in twenty-seven adults, aged from twenty to seventy-six years, quite as large an excess of females, the ratio being 1 to 2.5. Of eighty-eight of this series occurring in the second decade twenty-seven

were males, sixty-one females, or 1 to 2.25, only a slightly larger proportion than in the whole number.

AGE.

Of one hundred and ninety-five in whom the age was noted two were *said* to be congenital, eleven were less than six years old, ninety-two between six and eleven, fifty-eight between eleven and fifteen, twenty-two between fifteen and twenty-one, ten between twenty-one and sixty. These figures agree very closely with other statistics.

SEASON.

Weir-Mitchell and, later, Gerhard have called attention to the number of cases beginning in spring in Philadelphia, and the tendency to relapse during this same season. They attribute it to the enervating influence. Later Dr. Mitchell has called attention to the striking coincidence between the curves of chorea occurrence and the number of storm centres passing within one hundred miles of Philadelphia.

In one hundred and eight cases recorded by Gerhard and Mills sixty-three occurred in spring, thirteen in summer, twelve in fall, twenty-one in winter.

In one hundred and forty-six cases I found seventeen beginning in January, fifteen in February, fifteen in March, sixteen in April, twenty-five in May, thirteen in June, eight in July, nine in August, seven in September, seven in October, five in November, nine in December, or fifty-six in spring, thirty in summer, nineteen in fall, forty-one in winter.

The difference here seems to be much more marked between the first and last months than between the seasons, one hundred and one occurring in the first six months, forty-five in the last six months.

RELAPSES.

Wickes believes relapses are most common in winter, and gives statistics to that effect. Relapses were noted in thirty-one cases of this series: one relapse in twenty-two cases, two in four cases, three in two cases, four in one case, five in one case, seven in one case. Of individual relapses in which the date was given, seven occurred in spring, two in summer, three in fall, seven in winter. Fourteen in the first six months, five in the last six months.

ÆTIOLOGY.

As to the causal relation between chorea and rheumatism, in only forty-two is any mention made of its presence or absence. In twelve cases where the time was accurately noted, rheumatism had preceded the attack at intervals varying from one week to six months. In a number of other cases shifting pains in the joints and limbs were mentioned. These are often regarded as prodromata of chorea. If, however, we consider them as evidence of rheumatism, as in children it might be done with considerable fairness, the number would be much increased over the forty-two mentioned above. The occurrence of a cardiac murmur was rarely noted, it apparently not being considered of much import at the time many of the records were made.

In two cases chorea was associated with the puerperal condition; in one of these acute mania was a concomitant. Psychological influences were considered responsible in comparatively few cases. Fright in seven

¹ May 20, 1880, page 484.

association with choreics three, sudden plunge in cold water (tright?) two.

As having a certain bearing on the cerebral localization of the lesion and to a certain extent the embolic theory, the seat of the choreic motion and affection of speech are interesting. Out of thirteen cases in which the speech was said to have been affected, I found the right side was alone affected or became so first and remained the worse in ten. One case is particularly interesting; the movements began on the left side, and were confined there for some days. The right side then became implicated, and simultaneously the speech, which had been perfect before, became much impaired. In three of the thirteen the left side was alone or first attacked. One of these is also interesting: in a previous attack the left side alone was affected, and the speech was much impaired; during the last attack the right side alone was affected, and the speech remained perfect.

In sixty-six the seat of motion was definitely noted: seventeen with right hemichorea, ten with left hemichorea, twenty beginning on right side afterwards universal, but remaining worse on the right, eight same on left side, five universal mostly right, one universal mostly left; one began on left side, became universal, but worse right. Thus fifty were entirely or worse on the right side, sixteen entirely or worse on the left side.

DURATION.

This was exactly stated in but few cases. In twenty-five the average was 94.5 days; in seven of the twenty-five, treated by arsenic alone, it was 77 days. These numbers are, of course, too small to have any value, but are interesting in view of the facts recorded by Gray and Tuckwell, who found the duration of six and twelve cases, treated on the purely expectant method, to be 72 and 73 days, respectively. Gray found an average duration of 75 days in seven cases treated with different remedies, and Tuckwell of 76 days in ten cases where arsenic alone was given.

RESULT.

Three fatal cases occurred in this series.

REPORT ON PROGRESS OF THERAPEUTICS.

BY ROBERT AMORY, M. D. (HARV.), LONGWOOD, BROOKLINE.

THE ACTION OF DIGESTIVE FERMENTS.

M. A. Petri¹ conducted certain experiments upon the digestive properties of ferments, and the following summary contains a pretty fair synopsis of his work:—

(1.) That the best test of the digestive properties of a given ferment are dependent upon the fact of a total transformation into peptones of a determined weight of fibrin.

(2.) The simple solution of fibrin is but a small and insignificant portion of the action of pepsin.

(3.) It is possible to prepare pepsins which have the power of converting a thousand times their weight of fibrin into peptones, and of dissolving in a few hours five hundred thousand times their weight of fibrin.

(4.) Pepsin is a nitrogenous body resembling the composition of albuminoid materials.

(5.) Certain bodies which have a strong action upon alcoholic fermentation and upon the fermentation of diastase, such, for instance, as sulphurous acid, have apparently no peptic fermentative properties.

(6.) There is no equivalent action between the different acids in point of view of their action upon albuminoid matters, some of them being almost inert, such as acetic, butyric, and valerianic acids.

(7.) Most salts have no specific action upon peptic fermentation; some, such as acetates, butyrates, valerianates, phosphates, etc., can, however, assist in the process of digestion by substituting in the formation of hydrochloric acid, and are more or less active according to the amount of this acid produced by the decomposition of their salts.

(8.) Emetics do not act in doses beyond those which are medicinal.

(9.) Alkaloids have no specific action.

(10.) The addition of certain salts in a small quantity (particularly that of sodium chloride) enfeeble the action of pepsin.

(11.) Sugar, even in large amount, does not hinder the action of pepsin; the use of this substance in form of syrup being perfectly rational.

(12.) The digestive properties of an aqueous solution of pepsin are not in the least hindered when a volume of twenty per centum is added to it. If the volume of alcohol is below five per centum, the pepsin will preserve all its activity, will transform the fibrin into peptones and will dissolve rapidly coagulated albumen at a temperature of 42° C.

(13.) Preparations in form of elixirs will preserve for a long time (nearly four years) their digestive properties.

(14.) Upon the principle that a solution of pepsin in dilute alcoholic liquors will retain its action when agreeably diluted it follows, in a therapeutic sense, that the proscription of the employment of a pure wine during repast is not rational, and the small quantity of alcohol introduced into the stomach in the form of wine or elixir can be absolutely neglected.

(15.) The alcoholic strength of table wines varies from eight to ten per centum, and sometimes even as low as two to five per centum, according to the quantity of water added. The favorable conditions of peptonic activity are therefore found in this case, and it is unnecessary to explain, as do some experimenters, this apparent innocency in the use of mild wines during repast to the very rapid absorption of alcohol (this absorption taking place in half an hour, and in the case of milk in one hour).

(16.) The substances really incompatible, and which have almost a specific action upon pepsin, are bromine, iodine, chloral, salicylic acid, gallo-tannic acid, and, in a slighter degree, benzoic acid, phenol, or phenic acid.

DIGESTIVE ACTION OF PAPAYA AND ITS ALKALOID PAPAIN ON LIVING TISSUES.²

Bouchut, in continuation of his experiments on the digestive properties of papaya and its derivative papain, which proved that this substance converted proteic materials, such as fibrin, gluten, and milk, into peptones, has found: that the juice of papaya and its alkaloid papain placed upon an exposed brain in a living animal caused the digestion of those portions of the cerebral tissues which were in contact, and that the animal became collapsed in two or three hours, and that the mus-

¹ *Journal de Thérapeutique*, February, July, 1880.

² *Archives Gen. de Médecine*, Juillet, 1880.

cles on one or both sides were paralyzed? A gramme of this juice injected into the muscular tissue caused its degeneration into a pulpy, gelatinous condition. So, also, when it was placed on pathological tissues would a similar degeneration follow. The apposition of the same drug upon adenomata and cancerous surfaces would convert these tissues into a digested peptone precisely similar to dead tissues. He suggests the therapeutic value of this drug in diseased tissues.

NITRITE OF AMYL; ITS PHYSIOLOGICAL ACTION.

Filehne¹ concludes, from a series of experiments, in which he performed a ligation of carotids, that amyl-nitrite, in dilating the capillaries and reducing the blood tension, acts by means of the central nervous system and not by the sympathetic, for it causes a suppression of action or a paralysis of the nerve centres, so that an animal affected by the inhalation of this vapor is like one in which there is no central nervous action upon the vaso-motor nerves. Probably the action upon these latter is due to a paralysis of the contracting (or constricting) muscles of the arteries. The acceleration of the heart's action is not, in his opinion, due entirely to a paralysis of the pneumogastric nerve. Filehne also attributes the toxic effects of amyl-nitrite, such, for instance, as the dyspnea and convulsions, to a diminution of arterial tension, and also to a deprivation of oxygen in the blood circulation, and a destruction of the oxy-haemoglobine. The medulla oblongata then, without an oxygenated blood, causes trouble in the respiratory movements and convulsions.

The use of phosphates in pulmonary phthisis has been investigated by Dr. Stokvis² with the following conclusions:—

(1.) The elimination of phosphoric acid by the kidneys in phthisis is not recognized in a diagnostic or pathological sense, because the total amount of phosphoric acid eliminated with the urine in twenty-four hours is not increased either at the beginning or at the end of phthisical cases. In cases of phthisis as compared with other pulmonary diseases phosphoric acid elimination is diminished, though in certain chronic cases of phthisis unassociated with fever or diarrhoea the earthy phosphates were comparatively in larger amount than the alkaline phosphates, yet even in these cases this amount in twenty-four hours was less than the average in healthy urine or in that from certain other diseases, as, for instance, that of phosphaturia, diabetes mellitus, and renal diseases. The elimination of phosphoric acid in phthisis does not show any constant deviation from the normal as compared with the amount of urea, the relative amount being usually diminished, and yet this relative amount may be slightly increased when compared with the chlorides eliminated. This latter increase is more marked in complications of fever and imperfect digestion, especially when associated with inanition, hence it is fair to suppose that the relative increase as compared with the chlorides is due to the deficiency of the latter. Comparisons of elimination of phosphoric and sulphuric acid shows first that the relative amounts are not very remarkable, and that when observed it is probably due to an increase in the amount of sulphates in the urine, which fact is not uncommon in prolonged fever and in emaciation. Therefore the variations in amount of phosphoric acid elimination met with in cases of pul-

monary phthisis are specifically due both to a greater or less degree of animal temperature and to interference with the digestive functions and to dietetic disturbances or faulty nutrition. Hence it follows that any improvement which is noticed in the treatment of phthisis by the phosphates and hypophosphites should be explained by the fact that an extra supply of phosphoric acid is furnished to the organism to make up for the losses occasioned by the elimination of the phosphates by the kidneys. Salicylic acid is most conveniently administered to rheumatics, according to Dr. Thomas,³ by its combination with acetate of potassa in the following formula:—

Rx	Potass. acetat.	. . . . .	ij.
	Acid salicylic	. . . . .	ss.
	Aq. menth. piper	. . . . .	iv.
	Syrup limonis	. . . . .	ij. M.

The potassa acetate should be rubbed up in a mortar with the peppermint water, the acid being gradually mixed with it until perfectly dissolved. The dose is half an ounce of the solution every two, three, or four hours or oftener, according to the violent symptoms, or about twenty grains of the acid with eighty grains of acetate of potassa. The advantages of this mixture consist in not disturbing digestion, that it is palatable, that the salicylic acid is well dissolved, that no bad effects upon the heart are observed, being even less depressing than salicylate of soda, and that it is an efficient method of treatment. In vigorous patients Dr. Thomas employs one eightieth to one sixtieth of a grain of atropia with or without morphia to allay pain. His experience leads him to expect convalescence in five or six days. It is well to remark here that certain Boston physicians, among them the present reporter, almost always have employed, the past three years, salicylic acid in solution with liquor potassa acetatis to which a little peppermint is added; the addition of lemon syrup would seem to assist in dissolving the salicylic acid.

OFFICIAL BULLETINS OF THE PRESIDENT'S CASE.

OUR readers will find below a reproduction of the official bulletins issued by President Garfield's attending surgeons; they offer by themselves an interesting study, and they will prove in this form convenient for reference. Appended to the bulletins will be the account of the autopsy and a chart of pulse and temperature which we have taken pains to compile. Slight differences will be found between any two records of temperature, as the telegrams issued at noon often differed from the *résumé* given to the consulting surgeons at night, according to published reports.

EXECUTIVE MANSION.

WASHINGTON, D. C., July 2, 1881, 11 P. M. }

The President is resting quietly, and is cheerful. Pulse 124, temperature 99°, respiration 20. All the symptoms are favorable.

EXECUTIVE MANSION.

WASHINGTON, D. C., July 3, 1881, 1 A. M. }

The improvement in the President's condition, which began early in the evening, has steadily continued up to this hour. His temperature and respiration are now normal, and his pulse has fallen to 120. The attending physicians regard all his symptoms as favorable, and a more hopeful feeling prevails.

¹ Arch. für Anat. u. Phys., pages 385-416, 1879.

² Archives Gen. de Médecine, June, 1880.

³ American Practitioner, May, 1880.

10 P. M. The condition of the President is less favorable. Pulse 120, temperature 100°, respiration 20. He is more restless, and again complains of the pain in his feet.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 4, 1881, 12.30 A. M. }

The President's condition is changed very little since the last bulletin. Pulse 112, temperature 99.8°, respiration 20. Some tympanites is recognized. Does not complain so much of pain in the feet.

8.15 A. M. The condition of the President is not materially different from that reported in the last bulletin (12.30 A. M.). He has dozed at intervals during the night, and at times has continued to complain of the pain in his feet. The tympanites reported has not sensibly increased. Pulse 108, temperature 99.4°, respiration 19.

We held a consultation with the physicians in charge of the President's case at 7 this morning, and approve in every particular of the management and the course of treatment which has been pursued.

FRANK H. HAMILTON, of New York.
D. HAYES AGNEW, of Philadelphia.

1 P. M. There has been but little change in the President's condition since the last bulletin. He complains much less of the pain in his feet; slight vomiting occasionally. Pulse 110, temperature 100°, respiration 24.

7.45 P. M. The President this evening is not so comfortable. He does not suffer so much from pain in the feet. The tympanites is again more noticeable. Pulse 126, temperature 101.9°, respiration 24. Another bulletin will be issued at 10 P. M., after which, in order not to disturb the President unnecessarily, no further bulletins will be issued until to-morrow morning.

10 P. M. Slight ameliorating symptoms during past two hours. No vomiting during that period. Pulse 104, temperature 101°, respiration 24. In order not to disturb the President unnecessarily, no further bulletins will be issued until to-morrow morning.

TO LOWELL, Minister, London:—

An important consultation was held this morning, at which Dr. Agnew, of Philadelphia, and Dr. Hamilton, of New York, able and skillful surgeons, were present. The result is not reassuring, though the conclusion was that recovery is possible. We do not give up hope.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 5, 1881, 8.30 A. M. }

The President has passed a comfortable night, and his condition this morning is decidedly more favorable. There has been no vomiting since last evening at 8 o'clock, and he has been able to retain the liquid nourishment administered. There is less tympanites, and no abdominal tenderness except in the wounded region. Pulse 114, temperature 100.5°, respiration 24.

12.30 P. M. The favorable condition of the symptoms reported in the last bulletin continues. There has been no recurrence of the vomiting. Pulse 110, temperature 101°, respiration 24. The President lies at present in a natural sleep. No further bulletins will be issued till 8.30 P. M., unless in case of an unfavorable change.

8.30 P. M. The condition of the President continues as favorable as at the last bulletin. Pulse 106, temperature 100.9°, respiration 24. No further bulletins will be issued till to-morrow morning, unless in case of an unfavorable change.

TO THE CONSULTING SURGEONS.—9.30 P. M.

After you left, urgent symptoms continued. There was much restlessness, constant slight vomiting, and by 8 o'clock P. M. the President's condition seemed even more serious than when you saw him. Since then his symptoms have gradually become more favorable. There has been no vomiting or regurgitation of fluid from the stomach since 8 o'clock last evening. The President has slept a good deal during last night and this morning, and expresses himself as comparatively comfortable. The spasmodic pains in the lower extremities have entirely disappeared, leaving behind, however, much muscular soreness and tenderness to the touch. There is less tympanites and no abdominal tenderness whatever except in the hepatic region. Since 8 P. M. he has taken an ounce and a half of chicken broth every two hours, and has retained it all. The wound was again dressed antiseptically this morning. Altogether, but half a grain of morphia has been administered hypodermically the last two or four hours, and it has been found quite sufficient. His pulse, however, still keeps up. At 8.30 A. M. it was 115, temperature 99.5°, respiration 24. Seventy-two hours have now

elapsed since the wound was received. We cannot but feel encouraged this morning, although, of course, we do not overlook any of the perils that still beset the path toward recovery. The course of treatment agreed upon will be steadily pursued.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 6, 1881, 8.30 A. M. }

The President has passed a most comfortable night, and has slept well. His condition has remained throughout as favorable as when the last bulletin was issued. The pulse is becoming less frequent, and is now 98, temperature 98.9°, respiration 23.

12.30 P. M. The President remains quite as comfortable as at the date of the last bulletin. He takes his nourishment well. Pulse 100, temperature 99.7°, respiration 23.

8.30 P. M. The President's condition continues as favorable as at last reports. He has passed a very comfortable day, taking more nourishment than yesterday. Pulse 104, temperature 100.6°, respiration 23. Unless unfavorable symptoms develop, no further bulletins will be issued until to-morrow morning.

TO THE TWO CONSULTING SURGEONS.—1 P. M.

Since our telegram of yesterday the case has continued to make favorable progress. The President was quite comfortable during the day, and needed no morphine until bed-time last night. His mind was perfectly clear, but he obeyed our injunction to refrain from conversation. The afternoon exacerbation of symptoms, heretofore observed daily, did not occur. On the contrary, a slight diminution in the pulse took place. By 8.30 P. M. it was 106, temperature 100.0°, respiration 24. During the afternoon he had several small, solid, natural evacuations from the bowels, the first since the accident. They occurred without pain or discomfort, and contained no trace of blood. During the early evening, from 7 to 10 P. M., he was troubled occasionally by acid eructations, but on suspending the administration of nourishment for a time this symptom disappeared. At 10.30 P. M. one quarter of a grain of morphine was administered hypodermically, being the only morphine given since our telegram to you yesterday. He slept very well during the night, and expressed himself as feeling quite comfortable, though weak, this morning. At 8.30 this morning his pulse was 98; temperature 98.9°; respiration 23. The tenderness of the lower extremities to the touch has considerably diminished. He is taking with relish every two hours some chicken broth, made more nutritious by the addition of raw egg albumen. At 12.30 P. M. to-day his pulse was 100, temperature 99.7°, respiration 23. Will continue to keep you advised of the progress of the case.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 7, 1881, 9.15 A. M. }

The President passed a most comfortable night and continued steadily to improve. He is cheerful and asks for additional food. Pulse 94, temperature 99.1°, respiration 23. There will be no further bulletin issued until 1 o'clock.

The 1 o'clock bulletin was to the effect that the patient's condition was quite as favorable as in the morning, his pulse being 100, temperature 100.8°, and respiration 23.

8.30 P. M. The favorable condition of the President continues. Pulse 106, temperature 100.2, respiration 25. Unless some unfavorable change occurs no further bulletin will be issued until to-morrow morning.

TO THE CONSULTING SURGEONS.—1 P. M.

During the past twenty-four hours the President has continued to improve slowly. As was anticipated, a slight rise of temperature and slight increase in the frequency of the pulse occurred during the afternoon and evening. At 8.30 P. M. the pulse was 104, temperature 100.6°, respiration 23. But in accordance with this diurnal movement both pulse and temperature were again diminished this morning, and showed some improvement over yesterday at the same hour. At nine A. M. the pulse was 94; temperature 99.1°; respiration 23. We anticipate, of course, a similar movement for some days to come, and so to-day find at 1 P. M. the pulse 100, temperature 100.8°, respiration 23. Last evening, at 9.30 P. M., a quarter of a grain of morphia sulphate was administered hypodermically, and the President slept very well during the night. In addition to the chicken broth and albumen, he had yesterday afternoon a small quantity of scraped beef tenderloin which, however, he did not relish very much. This morning he is taking oatmeal gruel and milk at intervals of two hours with relish. Yellowishness of the skin, so common after wounds of the liver, developed to a slight degree during the day yesterday, but is not more marked this morning. We do not attach a great deal of importance to this symptom except so far as to confirm the opinion already formed of the na-

ture of the wound. Altogether we feel that the patient has done as well as could reasonably have been expected up to the present time, and our hopes of his ultimate recovery are strengthened by the events of the last two days.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 8, 1881, 8.15 A. M. }

The condition of the President continues favorable. He is more comfortable than on any previous morning. Pulse 96°, temperature 99.2°, respiration 23. The wound is beginning to discharge laudable pus.

A bulletin at 12.30 p. m. stated that the patient's condition continued to be favorable, pulse 108, temperature 101.4°, respiration 24.

8 p. m. The President's condition continues favorable. He has passed a very comfortable afternoon, and has taken more nutriment than on previous days. Pulse 108, temperature 101.3°, respiration 24.

TO THE CONSULTING SURGEONS. — 3 P. M.

The President's condition has not changed materially since our telegram to you yesterday. During the afternoon and evening he was again troubled with acid eructations and the administration of nutrients was again suspended for several hours. One quarter of a grain of morphia was administered hypodermically at 8.30 p. m., and followed at once by tranquil sleep. Towards midnight, however, he became restless, and complained a good deal of muscular soreness in the feet, and of pain in the ankle-joint, so that we were on the point of administering an additional anodyne when he fell asleep, and on awaking was so free from pain that it was not given. After 1 A. M. he passed the night tranquilly, sleeping composedly most of the time. At intervals since that hour he has taken an ounce of the albumenized chicken broth, alternating with an ounce of milk, to which a teaspoonful of old and excellent rum was added; all this has been retained, as well as five grains of sulphate of quinia taken this morning at 8 A. M. The yellowish tinge of the skin, mentioned in our last telegram, has sensibly diminished. When the antiseptic dressing was renewed this morning the wound was found to be discharging a small quantity of healthy-looking pus. The reaction accompanying the establishment of suppuration is, as might be expected, marked by a slight rise in temperature and pulse as compared with the corresponding hours of yesterday. This, however, we do not regard as unfavorable under the circumstances, and should not be surprised if it continued through this afternoon, and were repeated in the afternoon and evening for several days. The record since our last telegram is as follows: Yesterday, at 8.30 p. m., pulse 106, temperature 100.2°, respiration 23. This morning, at 8.30 A. M., pulse 96, temperature 99.2°, respiration 23; at 1 p. m. it was pulse 108, temperature 101.4°, respiration 24.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 9, 1881, 7.15 P. M. }

The President's condition has continued favorable during the day. The febrile reaction does not differ materially from that of yesterday. Pulse 108, temperature 101.9°, respiration 24.

TO THE CONSULTING SURGEONS. — 1 P. M.

The President continues to improve slowly. The acid eructations have not recurred during the last twenty-four hours. An ounce of milk, with a teaspoonful of rum, has been taken every two hours during the day, and at longer intervals during the night, without producing any gastric embarrassment. At 9 A. M. to-day he took nine grains of bisulphate of quinia, which did not disturb the stomach. Yesterday, towards evening, he became restless, wearied, and anxious for the morphia, and a quarter of a grain was given hypodermically at 8.30 p. m., after which he passed a tranquil night, sleeping most of the time. Yesterday afternoon he had a small, solid passage from the bowels, in which a notable deficiency of biliary coloring matter was observed. The yellowish tinge of the skin continues about as last report. At 8 p. m. the pulse was 108, temperature 101.3°, respiration 24. This morning at 1.30 the pulse was 100, temperature 99.4°, respiration 24. At 10 p. m., pulse 104, temperature 101.2°, respiration 22.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 10, 1881, 8 A. M. }

The President has passed the most comfortable night he has experienced since he was wounded, sleeping tranquilly and with few breaks. The general progress of his symptoms continues to be favorable. Pulse 106, temperature 100°, respiration 23.

A bulletin at 1 o'clock, p. m., stated that the patient's symptoms continued to be favorable. Pulse 102, temperature 100.5°, respiration 22.

7 p. m. The President's symptoms continue to make favorable progress. Pulse 108, temperature 101.9°, respiration 24.

TO THE CONSULTING SURGEONS. — 3 P. M.

Such slight changes as have taken place in the President's condition since our telegram of yesterday are of a favorable character. About 7 p. m. his bowels were freely moved. Shortly afterwards he received a hypodermic injection of one quarter of a grain of morphia. He slept more naturally during the night than he has done since he was hurt, and this morning is comfortable; takes his nourishment well, and appears on the whole better than hitherto. During the last twenty-four hours he has taken altogether fourteen ounces of milk and one ounce of rum. This morning at 10.30 he again received ten grains of bisulphate of quinia. Both yesterday and the day before the wound was dressed antiseptically twice during the twenty-four hours. This morning it is discharging rather less pus than yesterday, but its appearance is healthy. Yesterday, at 7.15 p. m., his pulse was 108, temperature 101.9°, respiration 24. To-day, at 8 A. M., pulse 106, temperature 100°, respiration 23. At 1 p. m., pulse 102, temperature 100.5°, respiration 22.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 11, 1881, 8 A. M. }

The President has passed a comfortable night, and his condition shows an improvement over that of yesterday. Pulse 98, temperature 99°, respiration 22.

The bulletin at 1 o'clock stated that the favorable progress of the President's case continued. His pulse at that time was 106, temperature, 99.8°, respiration 24.

7 p. m. The President has had rather more fever this afternoon. In other respects his condition is unchanged. Pulse 108, temperature 102.8°, respiration 24.

TO THE CONSULTING SURGEONS. — 1 P. M.

During the last twenty-four hours the favorable progress of the President's case has continued. He has taken and retained twenty-two ounces of milk and one ounce of rum. This morning at 9 A. M. he had, besides, a slice of toast softened in milk, and at 11.15 he took fifteen grains of bisulphate of quinine. There has been no irritability of stomach at any time. Last evening at 7.15 he received one quarter of a grain of morphia sulphate, hypodermically, and slept well during the night. The wound was again dressed antiseptically yesterday evening and this morning, and continued to discharge a small quantity of pus. Last evening at 7 p. m. his pulse was 108, temperature 101.9°, respiration 24. This morning at 8 o'clock, pulse 98, temperature 99.2°, respiration 22. At 1 p. m. pulse 106, temperature 99.8°, respiration 24.

EXECUTIVE MANSION, }
WASHINGTON, D. C., July 12, 1881, 9 A. M. }

The President is comfortable this morning. The rise in temperature noted in last evening's bulletin began to diminish about an hour later. Pulse 96, temperature 99.6°, respiration 22.

The second bulletin, at 1 o'clock, stated that the President was passing a comfortable day. His pulse at that hour was 100, temperature 100.8°, and respiration 24.

7 p. m. The President has passed a much more comfortable day than yesterday. Pulse 104, temperature 102.4°, respiration 24.

TO THE CONSULTING SURGEONS. — 1 P. M.

During the afternoon yesterday the President's temperature rose to the highest point it has yet attained. It began to fall, however, immediately after he received his evening morphia, one quarter of a grain of the sulphate hypodermically, and this morning corresponds with previous days. About 6 p. m. he had a consistent and copious movement of the bowels. His wound was dressed antiseptically yesterday evening and this morning. He continues to retain all the nourishment prescribed him, and has had twenty-four ounces of milk and one of rum during the last twenty-four hours, besides a small quantity of milk toast this morning. At 8.30 this morning he also received ten grains of bisulphate of quinia. His general condition this morning appears to us rather better than yesterday morning. Last night at 7 o'clock his pulse was 108, temperature 102.8°, respiration 24. This morning at 8 o'clock, pulse 96, temperature 99.6°, respiration 22. At 1 p. m., pulse 100, temperature 100.8°, respiration 24.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 13, 1881, 8.30 A. M. }

The President is doing well this morning. Pulse 90, temperature 98.5°, respiration, 20. His gradual progress towards recovery is manifest, and thus far without serious complications.

7 P. M. The President has had less fever this afternoon than either yesterday or the day before. He continues slowly to improve. Pulse 100, temperature 101.6°, respiration 24.

TO THE CONSULTING SURGEONS.—1 P. M.

The febrile rise yesterday afternoon was less marked and occurred at a later hour on the previous day, and to-day for the first time the President's morning temperature fell to the normal point. The general progress of his symptoms appears more favorable than hitherto. During the last twenty-four hours he has taken thirty-two ounces of milk and one ounce of rum. This morning he had also a slice of milk toast and chewed the breast of a woodcock, but did not care to swallow the meat. He had last night one-quarter of a grain of sulphate of morphia hypodermically (in no twenty-four hours during the past week has he received more than a single dose of this quantity), and slept well during the night. This morning he received ten grains of the bisulphate of quinia. Yesterday at 7 P. M. his pulse was 104, temperature 102.4°, respiration 24. To-day, at 8.30 A. M., pulse 90, temperature 98.5°, respiration 20. At 1 P. M., pulse 94, temperature 100.6°, respiration 22.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 14, 1881, 8.30 A. M. }

The President has passed a comfortable night, and continues to do well. Pulse 90, temperature 99.8°, respiration 22.

The 1 o'clock bulletin states that the progress of the President's case continued to be satisfactory. His pulse at that hour was 95, temperature 98.5°, respiration 22.

7 P. M. The febrile rise this afternoon has been less pronounced, and has not caused the President so much discomfort. His general condition is good. Pulse 98, temperature 101°, respiration 23.

TO THE CONSULTING SURGEONS.—1 P. M.

The President has continued to progress favorably during the last twenty-four hours. The febrile rise yesterday afternoon was again less than on the previous day. He has taken since our last telegram twenty-nine ounces of milk, with an ounce of rum, in divided dose as heretofore, besides a small slice of milk toast this morning, and at noon to-day a small sandwich of scraped raw beef, with two teaspoonfuls of Valentine's beef juice and an ounce of Tokay wine of 1868. The medication has consisted of a single hypodermic injection of one-quarter of a grain of sulphate of morphia, given last night, and ten grains of bisulphate of quinia at 8 A. M. to-day. We administered yesterday at 5 P. M. an enema of soap and water, which was promptly followed by a copious movement of normal consistence and color. At 7 P. M. his pulse was 100, temperature 101.6°, respiration 24. To-day at 8.30 A. M., pulse 90, temperature 99.8°, respiration 22. At 1 P. M., pulse 94, temperature 98.5°, respiration 22.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 15, 1881, 8.30 A. M. }

The President has rested well during the night, is doing admirably this morning, and takes his food with relish; pulse 90, temperature 98.5°, respiration 18.

7 P. M. The President has passed a better day than any since he was shot. The afternoon fever is still less than yesterday. At 1 P. M. his pulse was 94, temperature 98.4°, respiration 18. His pulse is now 98, temperature 100.2°, respiration 19.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 16, 1881, 8.30 A. M. }

The President has passed another good night, and is steadily progressing towards convalescence. Pulse 90, temperature 98.5°, respiration 18.

7 P. M. The President has passed a better day than any since he was shot. The afternoon fever is still less than yesterday. At 1 P. M. his pulse was 94, temperature 98.4°, respiration 18. His pulse is now 98, temperature 100.2°, respiration 19.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 17, 1881, 7 P. M. }

Our expectations of favorable progress have been fully realized by the manner in which the President has passed the day. He has taken more solid food, and with greater relish, than hitherto, and his afternoon fever, which is as slight as that of yesterday, came on later. At 1 P. M. his pulse was 94, temper-

ature 98.5°, respiration 18. At present: pulse 98, temperature 100.2°, respiration 20.

TO THE CONSULTING SURGEONS.—7 P. M.

Since our dispatch of yesterday the President has done as well as our hopes then indicated. He has had a single hypodermic injection of one eighth of a grain of sulphate of morphia (at bedtime), and slept well. Quinia in three-grain doses has been continued, as has also the plan of nourishment heretofore reported. His bowels have been kept free by enemata. The wound is dressed, with antiseptic precautions, twice daily. There is now a free discharge of healthy pus. The afternoon fever, both yesterday and to-day, has been comparatively slight. Yesterday, at 1 P. M., his pulse was 94, temperature 98.5°, respiration 18. At 7 P. M., pulse 98, temperature 100.2°, respiration 19. To-day, at 8.30 A. M., pulse 90, temperature 98.4°, respiration 18. At 1 P. M., pulse 92, temperature 98.5°, respiration 18. At 7 P. M., pulse 98, temperature 100°, respiration 20.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 18, 1881, 8.30 A. M. }

The President has passed another comfortable night, and is doing well this morning. Pulse 88, temperature 98.4°, respiration 18.

A bulletin at 1 o'clock stated that no material change in the President's condition has occurred since morning. At that hour he was resting quietly, his pulse being at 90, temperature and respiration normal.

7 P. M. The President has had a little more fever this afternoon, which is regarded as merely a temporary fluctuation. At 1 P. M. his pulse was 98, temperature 98.5°, respiration 18. At present his pulse is 102, temperature 100.7°, respiration 21.

TO THE CONSULTING SURGEONS.—7 P. M.

Shortly after our dispatch of yesterday the President received a hypodermic injection of one eighth of a grain of sulphate of morphia. He slept well during the night, and this morning at 8.30 had a pulse of 88, temperature 98.4°, respiration 18. His day, however, was not quite so comfortable as yesterday. Slight gastric disturbance was noted toward noon, in consequence of which the quantity of nourishment administered was temporarily diminished. This was followed by rather more afternoon fever than yesterday, but the difference was not great, and is thought to be merely a temporary fluctuation. At 1 P. M. his pulse was 98, temperature 98.5°, respiration 18. At 7 P. M., pulse 102, temperature 100°, respiration 21.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 19, 1881, 8.30 A. M. }

The President has passed a very good night, and this morning he is free from fever, and expresses himself as feeling quite comfortable. Pulse 90, temperature 98.5°, respiration 18.

7 P. M. Last evening the President received a hypodermic injection of one eighth of a grain of morphia, and slept well during the night. He continues to take sulphate of quinia in three-grain doses thrice daily, and has enemata when required. As anticipated, the increased fever of yesterday proved only temporary, and he has had a better day to-day than any since he was injured. This morning at 8.30 his pulse was 90, temperature 98.4°, respiration 18. At 1 P. M. pulse 92, temperature 98.5°, respiration 19. At 7 P. M. pulse 98, temperature 99.8°, respiration 19.

EXECUTIVE MANSION,
WASHINGTON, July 20, 1881, 8.30 A. M. }

The progress of the President toward recovery continues uninterruptedly. He has passed a quiet night. Pulse this morning 86, temperature 98.4°, respiration 18.

7 P. M. The President has passed an excellent day. At 1 P. M. his pulse was 88, temperature 98.4°, respiration 18. At the present time his pulse is 98, temperature 99.6°, respiration 19.

TO THE CONSULTING SURGEONS.—7 P. M.

During the past twenty-four hours the President's progress has been uniformly satisfactory. He had a good night, and has expressed himself throughout the day as feeling quite comfortable. The medication reported in our last telegram has been continued without change. At 8.30 A. M., pulse 86, temperature 98.4°, respiration 18. At 1 P. M., pulse 88, temperature 98.4°, respiration 18. At 7 P. M., pulse 98, temperature 99.6°, respiration 19.

EXECUTIVE MANSION,
WASHINGTON, July 21, 1881, 8.30 A. M. }

The President has had a good night, and is doing excellently this morning. Pulse 88, temperature 98.4°, respiration 18.

7 P. M. The President has had another good day. At 1

p. m. his pulse was 92, temperature 98.4°, respiration 19. At 7 p. m., pulse 96, temperature 99.9°, respiration 19.

TO THE CONSULTING SURGEONS.—7 P. M.

Since our telegram of yesterday the President has continued to do well. He passed a comfortable night. This morning a morsel of clothing about one quarter of an inch square came away spontaneously with the pus from the deeper part of the wound. It proved on examination to consist chiefly of cotton fibres, with a few woollen fibres adhering. Medication continued without change. At 8.30 a. m. his pulse was 88, temperature 98.4°, respiration 18. At one p. m. pulse 92, temperature 98.4°, respiration 19. At 7 p. m., pulse 96, temperature 99.9°, respiration 19.

EXECUTIVE MANSION, }

WASHINGTON, July 22, 1881, 8.30 A. M. }

The President rested well during the night and is quite easy this morning. Pulse 88, temperature 98.4°, respiration 17.

7 P. M. The progress of the President's case continues without material change. At 1 p. m. his pulse was 98, temperature 98.4°, respiration 18. At 7 p. m., pulse 98, temperature 100.2°, respiration 19.

TO THE CONSULTING SURGEONS.—7 P. M.

The President slept well last night, and has been easy during the day. At the morning dressing, the wound, which is looking very well, discharged several ounces of healthy pus. A little solid fragment that floated out with the discharge proved to consist of a thin scale of bone, about one eighth of an inch in length, with a morsel of sloughing, fibrous tissue and a number of adhering fibres of cotton and wool. He continues to take and digest a reasonable quantity of nourishment. The evening hypodermic injection of sulphate of morphia (one eighth of a grain) and the quinia (three grains thrice daily) have also been continued. At 8 a. m. his pulse was 88, temperature 98.4°, respiration 17. At 1 p. m., pulse 98, temperature 98.4°, respiration 18. At 7 p. m., pulse 98, temperature 100.2°, respiration 18.

EXECUTIVE MANSION, }

WASHINGTON, D. C., July 23, 10 A. M. }

The President was more restless last night, but this morning at 7 A. M., while preparations were made to dress his wound his temperature was found to be normal. Pulse 92, temperature 98.4°, respiration 19. At 7.30 he had a slight rigor, in consequence of which the dressing of his wound was postponed; reaction followed promptly, and the dressing has now just been completed. At present his pulse is 110, temperature 101, respiration 24.

7 P. M. After the bulletin of 10 A. M. the President's fever continued. At 11.30 he again had a slight rigor and his temperature rose until at 12.30 o'clock it was 104°, pulse 125, respiration 26. Between that time and 1 p. m. perspiration made its appearance and the temperature of the patient began to fall gradually. It is now 101.7°, pulse 118, respiration 25. There has been a free discharge from the wound during the day.

WASHINGTON, D. C., July 23, 1881.

TO LOWELL, *London*: About noon to-day the President's condition became very suddenly worse. He had chills, alternating with fever, increased pulse, and very high temperature. His symptoms at 4.30 are better, and he is much easier in every respect. The consulting surgeons, Drs. Hamilton, of New York, and Agnew, of Philadelphia, have been summoned, and are now en route to Washington by special train. BLAINE, *Secretary*.

TO LOWELL, *Minister, London*: At 10 o'clock to-night the President's symptoms are better. Pulse, temperature, and respiration are improved. The distressing nausea has left and there is no appearance of chills. BLAINE, *Secretary*.

EXECUTIVE MANSION, }

WASHINGTON, July 24, 1881, 10 A. M. }

The President was more restless than usual during the night, and had another rigor just before midnight. This morning, at 8.15, his pulse was 98, temperature 98.4°, respiration 18. A consultation was then held with Dr. Hamilton, of New York, and Dr. Agnew, of Philadelphia, after which a counter-opening was made through the integument of the back, about three inches below the wound, which it is hoped will facilitate the drainage of pus and increase the chances of recovery. The President bore the operation well. His pulse is now 112.

4 P. M. The President has been much relieved by the operation of this morning, and the pus has been discharging satisfactorily through the opening. At noon to-day his pulse was 118, temperature 99.8°, respiration 24. At present his pulse is 104, temperature 99.2°, respiration 23.

WASHINGTON, D. C., July 24.

TO LOWELL, *Minister, London*: At midnight the President had another chill, and was restless and uncomfortable till near morning. At a consultation of all his physicians, at 8 o'clock, a surgical operation was resolved upon, and an incision made in his back, below the wound, to facilitate the drainage of pus. The result was very favorable, and at 12 o'clock noon, his condition is improved. The President endured the knife without ether, and without the slightest tremor. We are anxious and hopeful. BLAINE, *Secretary*.

TO LOWELL, *Minister, London*: At 6 o'clock, p. m., the President's symptoms continue favorable. The result of the surgical operation of this morning has proved beneficial.

BLAINE, *Secretary*.

TO LOWELL, *Minister, London*: At 11 o'clock p. m., the President's condition is improved. He has much less fever, and a general subsidence of unfavorable symptoms.

BLAINE, *Secretary*.

EXECUTIVE MANSION, }

WASHINGTON, D. C., July 25, 1881, 8.30 A. M. }

The President has passed a more comfortable night, and has had no rigor since that reported in the bulletin of yesterday morning. He is doing well this morning. Pulse 96, temperature 98.4°, respiration 18.

7 P. M. The President has done well during the day. His afternoon fever did not come on till after three o'clock. It is somewhat higher than yesterday, but there has been no chill. At noon his pulse was 104, temperature 98.4°, respiration 20. At 7 p. m. his pulse was 110, temperature 101.8°, respiration 24.

TO LOWELL, *Minister, London*: —

The President has passed a fairly comfortable day. Toward nightfall his pulse and temperature rose higher than was anticipated, and the flow of pus was not quite so free as desired. At 11 o'clock, p. m., his symptoms are more favorable, giving promise of general improvement to-morrow.

(Signed) BLAINE, *Secretary*.

EXECUTIVE MANSION, }

WASHINGTON, July 26, 1881, 8.30 A. M. }

The President was somewhat restless during the night, and the fever, which had subsided after our last bulletin, rose again about midnight, and continued till 3 A. M., after which it again subsided. He is now about as well as yesterday at the same hour. Pulse 102, temperature 98.4°, respiration 18.

7 P. M. The President has done well during the day. At the dressing of his wound after the morning bulletin was issued a displaced spiculum of the broken rib, about half an inch long, was removed. The track of the wound at this point was dilated, and a larger drainage tube inserted for the purpose of facilitating the discharge of pus. Since that time he has had several quiet naps. He has taken more nourishment than during any of the last five days, without gastric irritation, and when the wound was dressed this evening the discharge of healthy pus was satisfactorily abundant. At noon his pulse was 106, temperature 98.4°, respiration 19. At seven p. m. pulse 104, temperature 100.7°, respiration 22.

TO LOWELL, *Minister, London*: —

At 11 o'clock, p. m., the President's physicians report temperature and respiration normal, and pulse 96; best report at same hour for five nights. The entire day has been most encouraging, and a feeling of confidence is rapidly returning.

BLAINE, *Secretary*.

EXECUTIVE MANSION, }

WASHINGTON, July 27, 1881, 8 A. M. }

The President slept sweetly last night from about 8 p. m. to 5 A. M., with but a slight break of short duration at 11 p. m. Since 5 o'clock this morning he has dozed quietly, awakening at intervals. He takes his nourishment well, and his general condition is improving. He expresses himself as feeling better, and more rested. Pulse 94, temperature 98.4°, respiration 18.

12.30 P. M. The President's wound was dressed just after the morning bulletin was issued. It looks well, and the pus, which is healthy in character, is discharging freely. Since then he has rested quietly, and takes his nourishment readily and without gastric disturbance. At present his pulse is 90, temperature 98.4°, respiration 18.

7 P. M. The President is still resting quietly. He has been able to take more nourishment to-day than for several days past, and up to the present hour has had no febrile rise of tem-

perature. His wound has just been dressed. It looks well and has continued to discharge healthy pus in sufficient quantity during the day. His pulse is now 96, temperature 98.5°, respiration 20.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 28, 1881, 8 A. M. }

The President rested well during the night, and no rigor or febrile disturbance has occurred since the bulletin of yesterday evening. This morning the improvement of his general condition is distinctly perceptible. He appears refreshed by the night's rest, and expresses himself cheerfully as to his condition. Pulse 92, temperature 98.4°, respiration 18.

12.30 P. M. The President bore the dressing of his wound this morning with less fatigue than hitherto. It appears well, and is discharging sufficiently. Shortly afterwards his bed was rolled into an adjoining room, while that occupied till now is being thoroughly cleansed and put in order. His pulse is now 94, temperature 98.5°, respiration 18.

7 P. M. The President has passed a pleasant day, and has taken his nourishment with apparent relish. His temperature continued normal until about 5 o'clock, when a moderate afternoon rise occurred, which, however, gives the patient but slight discomfort and causes no anxiety. At present his pulse is 104, temperature 100.5°, respiration 20.

TO LOWELL, Minister, London:—

This afternoon and evening the President has shown some increase in pulse and temperature, but not sufficient to create uneasiness on the part of his physicians. At 11 o'clock he is resting very quietly.

BLAINE, Secretary.

EXECUTIVE MANSION,
WASHINGTON, July 29, 1881, 8.30 A. M. }

Immediately after the evening dressing yesterday the President's afternoon fever began gradually to subside. He slept well during the night, and this morning is free from fever, looks well, and expresses himself cheerfully. No rigors have occurred during the past twenty-four hours, nor indeed at any time since the 25th instant. A moderate rise of temperature in the afternoon is to be anticipated for some days to come. At present his pulse is 92, temperature 98.4°, respiration 18.

12.30 P. M. The President bore the dressing of his wound well this morning, and exhibited very little fatigue after its completion. The appearance of the wound, the character and quantity of the discharge, and the general condition of the patient are satisfactory. He rests well, and takes an adequate quantity of nourishment. At present his pulse is 98, temperature 98.4°, respiration 19.

7 P. M. The President has been comfortable and cheerful during the day, and has had quite a nap since the noon bulletin was issued. The afternoon febrile rise came on later, and was not so marked as yesterday. The wound has been discharging freely and looks well. At present his pulse is 98, temperature 100°, respiration 20.

TO LOWELL, Minister, London:—

The President's afternoon fever was less to-day than yesterday, and at this hour, 11.30 P. M., has almost disappeared. Temperature very nearly normal. His wound is in a healthy condition, and he is doing well in all respects. His physicians are greatly encouraged.

BLAINE, Secretary.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 30, 1881, 8.30 A. M. }

The President enjoyed a refreshing sleep during the greater part of the night. The slight febrile rise of yesterday afternoon had subsided by midnight, and this morning his temperature is again normal. A gradual improvement of his general condition in all particulars is observable, and is recognized by himself. His pulse is now 92, temperature 98.5°, respiration 18.

12.30 P. M. The President showed no fatigue from the dressing of his wound this morning. It looks very well, and the discharge of pus is satisfactory in quantity and quality. His general condition continues gradually to improve. A moderate quantity of solid food has been added to his nourishment, and was eaten with relish. A frame has been introduced beneath the mattress of his bed, by which his head and shoulders have been elevated somewhat, and he expresses himself as well pleased with the change of position. At present his pulse is 98, temperature 98.5°, respiration 20.

7 P. M. The President has passed the day comfortably, without febrile or unpleasant symptoms, and has taken an ample amount of nourishment. The afternoon rise of temperature is moderate, and did not commence till about 5 o'clock. The discharge of pus has been abundant, and at the evening dress-

ing was washed away freely from the deeper parts of the wound. At present his pulse is 104, temperature 100.2°, respiration 20.

TO LOWELL, Minister, London:—

The President continues to improve steadily and markedly. He is perhaps better to-day than at any other time since he was wounded.

BLAINE, Secretary.

EXECUTIVE MANSION,
WASHINGTON, D. C., July 31, 1881, 8.30 A. M. }

The President slept well during the night and awoke refreshed this morning. The afternoon fever subsided earlier than the night before, and had quite disappeared by 10 P. M. His appearance and expressions this morning indicate continued improvement. At present his pulse is 94, temperature 98.4°, respiration 18.

12.30 P. M. The President bore the morning dressing of his wound without fatigue. It continues to look well and discharge adequately. After the wound was dressed he ate with relish a breakfast of solid food, and has since passed a comfortable morning, during which he had a pleasant nap. The quantity of nourishment now taken daily is regarded as quite sufficient to support his system, and favor the gradual increase in strength which is plainly observable. At present his pulse is 100, temperature 98.5°, respiration 19.

7 P. M. The President has passed an excellent day. From just after the morning dressing till about 6 P. M., he has had his head and shoulders elevated by a frame beneath the mattress; he has taken and relished an ample supply of nourishment, and continues to improve in general condition. The appearance of the wound at the evening dressing was in every way satisfactory. The afternoon rise of temperature has been quite insignificant. At present his pulse is 104, temperature 99°, respiration 20.

WASHINGTON, D. C., July 31, 11.30 P. M.

TO LOWELL, Minister, London:—

The President is steadily improving, and I shall henceforth omit my daily telegram. Not hearing from me, you may infer that all goes well.

BLAINE, Secretary.

EXECUTIVE MANSION,
WASHINGTON, D. C., August 1, 1881, 8.30 A. M. }

The President slept well during the night, and this morning is cheerful and expresses himself as feeling better than at any time since he was hurt. After the slight rise of yesterday afternoon, his temperature became again normal early in the evening and so continues. He appears stronger, and has evidently made good progress on the road towards recovery during the last few days. His pulse is now 94, temperature 98.4°, respiration 18.

12.30 P. M. The President's wound continues to do well; at the morning dressing it was found to be in all respects in a satisfactory condition. After the dressing was concluded, his head and shoulders were raised in the same manner as yesterday, and he took solid food for breakfast with more relish than he has hitherto shown. At present his pulse is 100, temperature 98.4°, respiration 19.

7 P. M. The President remained with his head and shoulders elevated until time for dressing his wound this evening. The wound continues to progress in a satisfactory manner, and discharges healthy pus freely from the deeper as well as the superficial portions. He has taken nourishment well and in sufficient quantity, and in all respects continues to do well. The rise of temperature this afternoon is slight. At present his pulse is 104, temperature 99.5°, respiration 20.

EXECUTIVE MANSION,
WASHINGTON, August 2, 1881, 8.30 A. M. }

The President passed a very pleasant night and slept sweetly the greater part of the time. This morning he awoke refreshed and appears comfortable and cheerful. Pulse 94, temperature 98.4°, respiration 18.

12.30 P. M. The President is passing the day comfortably with his head and shoulders raised in the same manner as yesterday. At the morning dressing his wound was found to be doing admirably. His pulse is now 99, temperature 98.4°, respiration 19.

7 P. M. The President has continued to progress favorably during the day, and appears perceptibly better in his general condition than yesterday, a more natural tone of voice being especially perceptible. The appearance of the external wound at the evening dressing was exceedingly good. That made by the ball is rapidly granulating, while the discharge from the deeper portion of the wound, which is abundant and healthy,

comes through the counter-opening made by the operation. The rise of temperature this afternoon is moderate and attended by no inconvenience to the patient. At present his pulse is 104, temperature 100°, respiration 20.

EXECUTIVE MANSION, }
WASHINGTON, August 3, 1881, 8.30 A. M. }

¶ The President slept tranquilly the greater part of the night. This morning his temperature is normal and his general condition satisfactory. Another day of favorable progress is anticipated. At present his pulse is 96, temperature 98.4°, respiration 18.

12.30 P. M. The President continues to progress steadily toward convalescence. He has taken to-day an increased proportion of solid food, his wound is doing well, and his general condition is better than yesterday. At present his pulse is 100, temperature 98.4°, respiration 19.

7 P. M. The President has passed a very satisfactory day. The wound continues to do well. He takes an adequate quantity of nourishment and appears in all respects better than at any time since he was injured. The rise of temperature this afternoon is slight. At present his pulse is 102, temperature 99.4°, respiration 19.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 4, 1881, 8.30 A. M. }

The President continues to improve. He slept well during the night, and this morning looks and expresses himself cheerfully. Another satisfactory day is anticipated. At present his pulse is 90, temperature 98.4°, respiration 18. The next bulletin will be issued this evening, and hereafter the noon bulletin will be dispensed with.

7 P. M. As the morning bulletin indicated would probably be the case, the President has passed another good day, without drawback or unpleasant symptom of any kind. He has taken his nourishment well, and shown little fatigue after his dressings and changes of position. The wound is doing well both in appearance and in the character and amount of the discharge. At 12.30 P. M. his pulse was 96, temperature 98.4°, respiration 18. The afternoon rise of temperature came on late, and was moderate in degree. At 7 P. M. his pulse is 102, temperature 102.2°, respiration 19.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 5, 1881, 8.30 A. M. }

The President slept naturally the greater part of the night, although he has taken no morphia during the last twenty-four hours. His improved condition warranted, several days ago, a diminution in the quantity of morphia administered hypodermically at bedtime, and it was reduced at first to one twelfth and afterwards to one sixteenth of a grain in the twenty-four hours without any consequent unpleasant result, and finally has been altogether dispensed with. His condition this morning exhibits continued improvement, and another good day is anticipated. At present his pulse is 88, temperature 98.4°, respiration 18.

7 P. M. The President has passed another good day. The appearance of the wound and the character and amount of the discharge of pus continue satisfactory. He has taken an adequate quantity of nourishment, and has had several pleasant naps during the day. At 12.30 P. M. his pulse was 99, temperature 98.4°. After 4 P. M. his temperature began to rise as usual, but to a moderate degree and without perceptible dryness of skin. At present his pulse is 102, temperature 100.4°, respiration 19.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 6, 1881, 7 P. M. }

The President passed a comfortable morning, his symptoms and general condition being quite satisfactory. At 12.30 P. M. his pulse was 100, temperature 99.9°, respiration 19. During the afternoon he complained somewhat of the weather, the extreme heat being such that it was found impracticable to keep the temperature of his room much below 90 without closing the windows and doors, which was not thought prudent. The afternoon rise of temperature began as late as yesterday, but has been higher, though unaccompanied by dryness of skin. At 7 P. M. his pulse was 102, temperature 101.8°, respiration 19. The appearance of the wound at the evening dressing was, however, good, and there has been no interruption to the flow of pus.

EXECUTIVE MANSION, }
WASHINGTON, August 7, 1881, 8.30 A. M. }

Shortly after the bulletin of last evening was issued the President fell into a pleasant sleep, during which the febrile rise subsided and was no longer perceptible when he awoke at 10 P. M. Subsequently he slept well, though with occasional

breaks, during the rest of the night. No morphia or other anodyne was administered. This morning he is in good condition, although the effects of the febrile disturbance of yesterday are still slightly perceptible in pulse and temperature. At present his pulse is 96, temperature 98.7°, respiration 18.

7 P. M. The President has been comfortable during the day, although his temperature began to rise earlier than yesterday and rose almost as high. At 12.30 P. M. his pulse was 104, temperature 100°, respiration 20. At 7 P. M. his pulse was 104, temperature 101.2, respiration 20. Nevertheless, he has been able to take nourishment as usual, and has had several refreshing naps during the day. The discharge of pus has been liberal and healthy in character.

EXECUTIVE MANSION, }
WASHINGTON, August 8, 1881, 8.30 A. M. }

The President passed a comfortable night and slept well without anodyne. The rise of temperature of yesterday afternoon subsided during the evening, and did not recur at any time through the night. At present he appears better than yesterday morning. Pulse 94°, temperature 98.4, respiration 18.

10.30 A. M. It having become necessary to make a further opening to facilitate the escape of pus, we took advantage of the improved condition of the President this morning. Shortly after the morning bulletin was issued he was etherized. The incision extended downward and forward, and a counter-opening was made into the track of the ball below the margin of the twelfth rib, which it is believed will effect the desired object. He bore the operation well, has now recovered from the effects of the etherization and is in excellent condition.

7 P. M. After the last bulletin was issued, the President suffered somewhat for a time from nausea due to the ether, but it has now subsided. He has had several refreshing naps, and his general condition is even better than might have been expected after the etherization and operation. At noon his pulse was 104°, temperature 100.2, respiration 20. At present his pulse is 108°, temperature 101.9, respiration 19. Under the circumstances the fever must be regarded as moderate.

TO LOWELL, Minister, London:—

The President's condition at 11 o'clock to-night is considered by his physicians as encouraging. The increase of pulse and temperature is regarded as a natural result of the radical operation of this morning, in which a deep incision, three inches in length on the surface, was made. The same cause may possibly produce a still higher pulse and temperature to-morrow, after which a decided amelioration is confidently anticipated by the surgeons.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 9, 1881, 8.30 A. M. }

Notwithstanding the effect of yesterday's operation the President slept the greater part of the night without the use of anodyne. The febrile rise of yesterday afternoon slowly subsided during the night. This morning at 8.30 his pulse is 98, temperature 99.8°, respiration 19. Since yesterday afternoon small quantities of liquid nourishment, given at short intervals, have been retained, and this morning large quantities are being administered without gastric disturbance.

12.30 P. M. At the dressing of the President's wound this morning it was found that pus had been discharging spontaneously and freely through the counter-opening made yesterday. He has been quite comfortable this morning, and has taken a liberal supply of liquid nourishment. His pulse is now 104, temperature 99.7°, respiration 19.

7 P. M. The President has been very easy during the day, and has continued to take the nourishment allowed without gastric disturbance. The discharge of pus from his wound is quite abundant, and it is evident that thorough drainage has been secured by yesterday's operation. The degree of fever this afternoon differs little from that of yesterday. Pulse 106, temperature 101.9°, respiration 19.

WASHINGTON, D. C., August 9, 1881.

TO LOWELL, Minister, London:—

At 11 o'clock to-night the physicians report the President's condition as satisfactory. He sleeps well without the aid of anodynes. It is now the sixth day since he took any morphia. The pulse and temperature did not rise so high from the effect of yesterday's operation as the surgeons expected. The situation is one of continuing anxiety, but also of cheerful hope.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, August 10, 1881, 8 A. M. }

The President slept soundly during the night, and this morning his temperature is again normal, although his pulse is still

frequent. At present it is 104, temperature 98.5°, respiration 19.

12.30 p. m. The President is getting through the day in a very satisfactory manner. He has asked for and taken a small quantity of solid food, in addition to the liquid nourishment allowed. At the morning dressing the discharge of pus through the new opening was more free than at any previous time; its character was good and the wound looks well. Temperature and respiration continue within the normal range, although the debility following the operation is still shown by the frequency of the pulse. At present his pulse is 110, temperature 96.6°, respiration 19.

7 p. m. The President has passed an excellent day. The drainage of the wound is now efficient and the pus secreted by its deeper portions has been coming away spontaneously. The afternoon rise of temperature is almost a degree less than yesterday and the day before. Pulse at present 108, temperature 101°, respiration 19.

To LOWELL, Minister, London:—

At 1 o'clock p. m. the President's condition has not essentially changed since the morning report. At noon he signed an important public document, to which his signature was indispensable, with a firm, clear hand.

BLAINE, Secretary.

To LOWELL, Minister, London:—

The President is progressing satisfactorily. He is now (10 p. m.) in a refreshing sleep. His temperature has fallen nearly one degree since yesterday. The drainage of the wound to-day has been efficient and spontaneous, and he has taken more nourishment than any day for five days.

HITT, Assistant Secretary.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 11, 1881, 8.30 A. M. {

The President has passed an exceedingly good night, sleeping sweetly, with but few short breaks, and awakening refreshed this morning at a later hour than usual. At the morning dressing, just completed, it was found that the deeper parts of the wound had been emptied spontaneously. The quantity of pus secreted is beginning to diminish. Its character and the appearance of the wound are healthy. His temperature shows an entire absence of fever this morning, and his pulse, which is less frequent than yesterday, is improving in quality. At present it is 100, temperature 98.6°, respiration 19.

12.30 p. m. The President is doing well to-day. Besides a liberal supply of liquid nourishment at regular intervals, he has taken for breakfast, with evident relish, an increased quantity of solid food. He continues free from fever. His skin is moist, but without undue perspiration; pulse 102, temperature 98.6°, respiration 19.

7 p. m. After the noon bulletin was issued the President's condition continued as then reported until about 4 p. m., when the commencement of the afternoon febrile was noted. In its degree it did not differ materially from that of yesterday. His pulse is now 108, temperature 101.2°, respiration 19.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 12, 1881, 8.30 A. M. {

The President slept well during the greater part of the night. The fever of yesterday afternoon subsided during the evening, and has not been perceptible since 10 p. m. His general condition this morning is good. Pulse 100, temperature 98.6°, respiration 19.

12.30 p. m. The President has passed a comfortable morning. He continues to take, with repugnance, the liquid nourishment allowed, and ate with relish for breakfast a larger quantity of solid food than he took yesterday. At present his pulse is 100, temperature 99.3°, respiration 19.

7 p. m. The President has passed a comfortable day. At the morning dressing the wound was found to be doing well. The quantity of pus secreted is gradually diminishing. Its character is healthy. The rise of temperature this afternoon was about the same point as yesterday. At present the pulse is 108, temperature 101.2°, respiration 19.

Lowell, Minister, London:—

The President is doing well, pus diminishing and healthy. At present rise of temperature same as yesterday. Appetite improving.

HITT, Acting Secretary.

At 11 A. M. of August 18, 1881, a communication was received from the President's physician, Dr. J. C. Warren, which professes to present my views in regard to the treatment of the President's wound. As this article has been given the basis for an editorial on the same

subject in *The New York Herald*, and has, as I understand, been the subject of comment in other papers, I deem it my duty to say that in no particular do the details given represent my views of the case; nor were they ever given by me to any representative of the press.

D. HAYES AGNEW.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 13, 1881. {

The President did not sleep as well as usual during the early part of the night. After midnight, however, his sleep was refreshing, and only broken at long intervals. This morning he has a little fever, nevertheless he expresses himself as feeling better than for several days. Pulse 104.5, temperature 100.8°, respiration 19.

1.30 p. m. The President has been cheerful and easy during the morning, and his temperature has fallen a little more than a degree and a half since the morning bulletin was issued. The wound is discharging healthy pus. His pulse is now 102, temperature 99.2°, respiration 18.

7.30 p. m. Since the last bulletin the President has continued to do well. The afternoon fever has been half a degree lower than yesterday. At the evening dressing the appearance of the wound was improved. The discharge of pus has been adequate, and its character is healthy. At present his pulse is 104, temperature 100.7°, and respiration 19.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 14, 1881, 8.30 A. M. {

The President slept well during the night, and this morning expressed himself as feeling comfortable. His temperature is one degree less than at the same hour yesterday. His general condition is good. Pulse 100, temperature 99.8°, respiration 18.

12.30 p. m. The President has done well this morning. His temperature has fallen one half of a degree since the last bulletin was issued. At the morning dressing the condition of the wound was found to be excellent, and the discharge of pus adequate and healthy. Pulse 96, temperature 99.3°, respiration 18.

6.30 p. m. The condition of the President has not materially changed since noon. The afternoon febrile rise is about the same as yesterday. Pulse 108, temperature 100.8°, respiration 19.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 15, 1881, 8.30 A. M. {

The President did not sleep as well as usual last night until towards 3 o'clock. His sleep was not sound, and he awoke at short intervals. His stomach was irritable, and he vomited several times. About 3 o'clock he became composed, and slept well until after 7 this morning. His stomach is still irritable, and his temperature reached higher than yesterday. At present his pulse is 108, temperature 100.2°, respiration 20.

12.30 p. m. Since the last bulletin the President has not again vomited, and has been able to retain the nourishment administered. At the morning dressing the discharge of pus was free and of good character. Since then his pulse has been more frequent, but the temperature has fallen to a little below what it was at this time yesterday. At present his pulse is 118, temperature 99°, respiration 19.

6.30 p. m. The irritability of the President's stomach returned during the afternoon, and he has vomited three times since 1 o'clock. Although the afternoon rise of temperature is less than it has been for several days, the pulse and respiration are more frequent, so that his condition is on the whole less satisfactory. His pulse is now 130, temperature 99.6°, respiration 22.

To LOWELL, Minister, London:—

The President's condition is less satisfactory. Inability of the stomach has returned, the patient vomiting three times since 1 o'clock. Temperature 99.6°, less for several days; pulse 130, respiration 22.

HITT, Acting Secretary.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 16, 1881, 8.30 A. M. {

The President was somewhat restless and vomited several times during the early part of the night. Since 3 o'clock this morning he has not vomited and has slept tranquilly most of the time. Nutritious enemata are successfully employed to sustain him. Altogether the symptoms appear less urgent than yesterday afternoon. At present his pulse is 110, temperature 98.6°, respiration 18.

12.30 p. m. The President has been tranquil and has not vomited since the morning bulletin, but has not yet rallied from the prostration of yesterday afternoon as much as was hoped. The enemata administered are, however, still retained. At present his pulse is 114, temperature 98.3°, respiration 18.

7 p. m. The President's symptoms are still grave, yet he seems to have lost no ground during the day, and his condition on the whole is rather better than yesterday. He has vomited but once during the afternoon. The enemata are retained. At present his pulse is 120, temperature 98.9°, respiration 19.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 17, 1881, 8.30 a. m. }

The President has passed a tranquil night, sleeping most of the time. He continues to retain the nutritive enemata, and has not vomited since the last bulletin. His general condition appears more hopeful than this time yesterday. Pulse 110, temperature 98.3°, respiration 18.

6.30 p. m. The President's condition is even better than it was this morning. There has been no vomiting during the day, and the enemata continue to be retained; moreover, a teaspoonful of beef extract has been twice administered by the mouth and not rejected, and small quantities of water swallowed from time to time excite no nausea. The wound continues to do well. At present his pulse is 112, temperature 98.8°, respiration 18.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 18, 1881, 8.30 a. m. }

The President has passed a very comfortable night, sleeping well the greater part of the time. There has been no further vomiting, and the nutritive enemata are still retained. This morning his pulse is slower, and his general condition better than yesterday at the same hour. Pulse 104, temperature 98.8°, respiration 17.

12.30 p. m. The President is suffering some discomfort this morning from commencing inflammation of the right parotid gland. In other respects his condition is somewhat improved, and especially his stomach is becoming less intolerant. He has asked for and retained several portions of liquid nourishment, much more than he could swallow yesterday. The nutritive enemata continue to be used with success. At present his pulse is 108, temperature 98.4°, respiration 18.

6.30 p. m. The President has done well during the day. He has taken additional nourishment by the mouth this afternoon, with evident relish and without subsequent nausea. There is some rise of temperature, but his general condition is rather better than at this time yesterday. Pulse 108, temperature 100°, respiration 18.

To LOWELL, Minister, London:—

At 2 o'clock p. m. the President shows a slight improvement in his power to retain and digest food, but his general condition is not strongly re-assuring.

BLAINE, Secretary.

To LOWELL, Minister, London:—

The condition of the President at 11 o'clock to-night shows improvement. He has swallowed, retained, and apparently digested nine ounces of liquid food during the day, asking for it himself and relishing it. The swelling of the parotid gland has created some uneasiness in the public mind, though it is not regarded as especially discouraging by his medical advisers.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 19, 1881, 8.30 a. m. }

The President slept much of the night, and this morning is more comfortable than yesterday. The swelling of the right parotid gland has not increased since yesterday afternoon, and is now free from pain. Nutritive enemata are still given with success, and liquid food has already this morning been swallowed and relished. Pulse 100, temperature 98.4°, respiration 17.

12.30 p. m. The President's condition has perceptibly improved during the last twenty-four hours. The parotid swelling is evidently diminishing, and it has not pained him since last night. He is taking to-day an increased quantity of liquid food by the mouth, which is relished, and produces no gastric irritation. Pulse is now 106, temperature 98.8°, respiration 17.

6.30 p. m. The President has been easy during the afternoon, and the favorable conditions reported in the last bulletin continue. The swollen parotid gland has not been painful. The temperature is the same, the pulse rather less frequent than at this hour yesterday. Pulse 106, temperature 100, respiration 18.

To LOWELL, Minister, London:—

In the judgment of his physicians the President has gained since the last reports. He has taken during the day twenty-two

ounces of liquid food with relish and without apparent tendency to nausea or indigestion. Other symptoms not essentially changed. Pulse and temperature possibly a little better. The swelling of the parotid gland has not increased, and fear of its suppuration has somewhat diminished. At this hour (11 p. m.) the President is sleeping quietly.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 20, 1881, 8.30 a. m. }

The President has passed a quiet night, and this morning his condition does not differ materially from what it was yesterday at the same hour. The swelling of the parotid gland is unchanged and is free from pain. This morning his pulse is 98, temperature 98.4°, respiration 13.

12.30 p. m. The President continues to do well. He is taking liquid food by the mouth in increased quantity and with relish. The nutritive enemata are still successfully given, but at longer intervals. His pulse is now 107, temperature 98.4°, respiration 18. At the morning dressing the wound was looking well and the pus discharged was of a healthy character. After the operation of August 8, the flexible tube used to wash out the wound at each dressing readily followed the track of the ball to the depth of three and a half or four inches. At the dressings, however, a small quantity of healthy pus came, as was believed, from the part of the track beyond this point, either spontaneously, or after gentle pressure over the anterior surface of the right iliac region; but this deeper part of the track was not reached by the tube until yesterday morning, when the separation of a small slough permitted it to pass unresisted downward and forward for the distance of twelve and a half inches from the external surface of the last incision. This facilitates the drainage and cleansing of the deeper parts of the wound, but has not been followed by any increase in the quantity of pus discharged. The large pus cavity which has formed in the immediate vicinity of the broken rib, is filling up with healthy granulations, and the original wound of entrance as far as that cavity has healed.

6.30 p. m. The President has passed the day quietly. He has been able to take more liquid food by the mouth than yesterday, and the quantity given by enema has been proportionably diminished. The parotid swelling remains about the same. Pulse 110, temperature 100.4°, respiration 19.

To LOWELL, Minister, London:—

The President has passed a fairly comfortable day. His condition has not materially changed since last night. Pulse and temperature both a little higher, possibly attributable to the heat of which he has complained. He has shown increased appetite, and has swallowed during the day thirty-three ounces of liquid food, principally milk or its preparations. At 11 o'clock he is soundly asleep, with the fever of the afternoon slightly subsiding.

BLAINE, Secretary.

EXECUTIVE MANSION, }
WASHINGTON, D. C., August 21, 8.30 a. m. }

The President awoke more frequently than usual, yet slept sufficiently during the night and appears comfortable this morning. The parotid swelling is about the same but is not painful. He took liquid nourishment by the mouth several times during the night as well as this morning. Pulse 106, temperature 98.8°, respiration 18.

12.30 p. m. The President's condition continues about as at the morning bulletin, except that there is a slight rise of temperature. He continues to take liquid nourishment by the mouth as well as by enema. Pulse 108, temperature 99.4°, respiration 18.

6.30 p. m. The President has vomited three times during the afternoon; the administration of food by the mouth has, therefore, again been temporarily suspended and the nutritive enemata will be given more frequently. His temperature is lower, and his pulse rather less frequent than yesterday afternoon. The parotid swelling is painless, but stationary. Pulse 108, temperature 99.2°, respiration 18.

To LOWELL, Minister, London:—

The President's sleep last night was broken and restless. His symptoms throughout the day have been less favorable, and his general condition is not encouraging. He is unable to retain food on his stomach, having vomited twice during the afternoon, the last time at 5 o'clock. This evening he has been able to drink water and retain it. The swelling of the parotid gland has not increased. Pulse and temperature about the same as yesterday. His sleep up to this hour (11 p. m.) has been somewhat disturbed. We are all deeply anxious.

BLAINE, Secretary.

(To be concluded, with chart appended.)

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THE PRESIDENT'S WOUND, AND THE MANAGEMENT OF THE CASE.

In discussing the President's wound as long ago as the fourteenth of July, that is, twelve days after the infliction of the injury, the JOURNAL gave expression to opinions which, even with the light now thrown on the case by the autopsy, it is not amiss to repeat. In an editorial of the above date we said:—

"The intercostal space through which the bullet forced its way is far too narrow to permit so large a projectile to pass without meeting with resistance from the ribs, which, as has been stated, were splintered by the ball. When we take into account the ease with which a ball is deflected from its path, there being, in fact, nothing so insignificant that may not influence its course, it is evident that in the present case it might easily have been turned to the right or left. In the latter direction the least possible deviation from its course would have brought it in contact with a large bony prominence, in the spongy tissue of which it would find a comparatively safe and firm lodging-place, the body of one of the dorsal vertebrae. A cross section of the abdomen at this point will show this bone to be the anatomical centre of the body, and amply protected in the direction from which the shot was fired by dense masses of muscles, tendons, and bone. Although the range was extremely close, the charge of powder was a light one, and might easily have exhausted itself upon such obstacles. This would leave the offending body in close contact with the nerve centres, and it is precisely to injury of such structures that one of the most prominent symptoms points, namely, the pain in the feet. Dr. Bliss is stated to have explained this symptom as produced by an injury of one of the sympathetic ganglia which lies directly in the track we have suggested. Had the ball been deflected to the right it would hardly have spent its force until it had penetrated deeply into the abdominal cavity. The theory that it has passed downwards into the pelvis and is in contact with the ischiatic plexus, is of course among the possibilities, for there is no track of which a bullet is not capable.

"The fact we have at our command up to the time of writing, we may safely say, give no symptoms of a penetrating wound of the abdominal cavity.

"If this be the case, the dangers of the future arise chiefly from the character of the wound itself rather than from the presence of the bullet, which thus far has not shown that it is not securely imbedded in a

place of comparative safety. The tortuous shape of gunshot wounds and their contused surfaces are often to blame for difficulties which it is common to ascribe to the missile. By good drainage and antiseptic treatment these may be happily surmounted.

"We have nothing but praise for the judicious manner in which the illustrious patient has been treated, and commend strongly the good judgment which refrained from making a meddlesome hunt after the ball."

The report of the autopsy, to be found in another column with the collected official bulletins issued by the attending surgeons during the progress of the case, shows that the ball, after splintering the ribs, was deflected to the left, as we suggested might be its course, and after fracturing the body of the first lumbar vertebra became firmly and safely encysted behind and not far from the pancreas. The future dangers, and the final fatal termination arose, as we predicted, from the character of the wound itself, its tortuous shape and contused surfaces, complicated by spiculae of fractured bones, and not from the presence of the bullet. Moreover, though the ball was not completely arrested by the body of the vertebra, its force was so much spent as to prevent any opening into the abdominal cavity.

We very much doubt how far any good end is to be subserved by much criticism of the management of the case, or by trying to guess what might have happened had this or that course been adopted. It is plain, and is generally acknowledged, that no good and much harm would have resulted from any serious attempt to extract the ball, even had it been possible to determine its real situation. But as we have before remarked, the freaks of bullets after once entering the body are infinite, and this the surgical history of our civil war abundantly illustrates. It was unfortunate, though very natural, that the attending surgeons were deceived as to the direction of the ball by the sinus created by the gravitating discharges, and we were disposed to imagine at the time when Drs. Agnew and Hamilton were suddenly summoned to Washington, July 24th, after the President's first chill, and again August 8th, when the patient was etherized, counter-openings being made lower than the original wound and drainage tubes inserted,—we supposed at these times, and especially at the second date, that a more extended, though fruitless, search was made for the ball than the public was aware of.

Whether, if the nature of the wound had been recognized at the outset and drainage tubes and all antiseptic devices had been freely and persistently employed, it would have been possible to prevent the accumulation and burrowing of the discharges, to keep the course of the wound aseptic, and conduct the case to a different termination is a speculation of a purely abstract character, which must be premised by the great difficulty of recognizing the course of the wound, and which as an abstract question, in view of the fact that scarcely any two gunshot wounds are alike, it is idle to discuss.

We have collated the official bulletins, those of Mr. Blaine to Mr. Lowell, and the report of the autopsy, that our readers might have them in one

place for convenient reference and as showing to some extent the progress of the case. Drs. Hamilton and Bliss, we understand, will shortly publish full accounts of the case drawn from their own notes, but we doubt whether any further material contributions to its history are likely to be made.

In justice to, though not in justification of, Dr. Bliss, whose name was intimately associated with the most regrettable incident, from a professional standpoint, in the course of the case, we reproduce elsewhere a statement lately made by him in the columns of a daily paper, in which he describes the manner of his being originally summoned to President Garfield and of his being retained in charge of the case.

We also reprint Dr. Hamilton's reported account of the autopsy.

There is one other point which may properly be remarked upon in the management of this case, though we do not call attention to it in any critical spirit. The absence of trained and experienced nurses from the patient's bedside has unquestionably excited comment upon the part of many physicians who would ordinarily wish to avail themselves of such for carrying out their instructions in cases of this delicate character. The results of the training schools for nurses have impressed the profession in our large cities more than ever with the many advantages trained and experienced nurses offer in the care of the sick, advantages never more apparent than when contrasted with the services of amateur attendants, however devoted.

THE TRIAL OF THE ASSASSIN.

THE body of our murdered President having been borne to its last resting-place, through the sorrowing throngs and amid the mourning emblems of a nation, and laid in the quiet grave overlooking the waters of one of our great Western lakes, there remains to the country the performance of the last duty directly entailed by the crime of the 2d of July,—the trial of the assassin.

Through all the trying emotions and exciting events which have rapidly succeeded each other since that fatal day the dignity and quiet self-respect manifested by this nation must be a surprise even to itself, and certainly to those unacquainted with the inherent strength of a free government. We hope and believe that this same attitude will be maintained even to the end.

There was a moment at first when horror and a longing for revenge struggled for the mastery in men's minds, but this was only for a moment; the nation quickly recovered its self-possession, and schooled itself to regard all the circumstances of the almost unprecedented blow which had fallen with the law-respecting control befitting the dignity of a great and free people.

We repeat, we hope and believe that this same characteristic will be preserved throughout the trial of the wretched creature, the immediate source of the nation's sorrow, to its termination in judgment and the execution of the sentence, whatever that may be.

Before the termination of that trial it would be as little fitting in us to say that the murderer should not be hanged or shot as to say, as has been said in high quarters, that shooting or hanging would be too good for him; but we know that competent authorities maintain that there are circumstances in his case which make it extremely probable that he is suffering from one of the forms of mental disease most destructive of responsible action; there are indications that his sufferings have been great enough to demand attention, if not sympathy, if, as we more than suspect, his deed arose partly from pure weakness of mind, and partly from a controlling delusion. At all events, he should not be condemned in advance, and is fairly entitled, under the laws, to an even-minded decision of his case.

Whether Guiteau is insane or not, we consider it our solemn duty to warn the public and the daily press that the very symptoms characteristic of insanity be not perverted into evidences of responsibility. The officers of our government, the public, and the press should calmly await the action of the courts, and at least not so excite a popular spirit of vindictiveness as to make a fair trial impossible and our justice a by-word in the future.

In expressing these opinions we are guided by no maudlin feelings of philanthropic sentimentality, and are fully impressed with the obligations and necessities imposed upon society for self-protection in the future against the repetition of crime, which, and not revenge, should be the end of all justice. As a mere question of policy, however, neither history nor sociology have taught us that a short shrift at a rope's end is the most effective restraint upon the class of mental monstrosity which, to us, Guiteau represents. We may wish that he and others like him had never been born, that their names might never find a place on men's tongues, that they might be foiled of the notoriety which they so often crave; but such wishes are not furthered by the taking of their lives on the wheel, on the rack, or on the scaffold.

WILLIAM WARREN GREENE.

WILLIAM WARREN GREENE was born in North Waterford, Oxford County, Maine, on the 1st of March, 1831. His father was Jacob Holt Greene, a man of rugged physical and intellectual build, an independent thinker, with marked inventive talent and a keen sense of justice, which made him an outspoken antislavery man at a period when it required courage to advocate views which are now universally entertained. His mother was Sarah Walker Frye, a descendant of the family which gave its name to the town of Fryeburg. When he was nine years old, he was placed under the instruction of his relative, the late Rev. Dr. William Warren, for whom he was named. At sixteen, he began to teach, and for several winters had charge of district schools in Bethel and in his native town, where he opened the first high school that Waterford ever had. From 1848 to 1851 he was a student in Bethel Academy. His medical studies were prosecuted under the preceptorship of the late Dr. Seth C. Hunkin.

and he attended lectures at the Berkshire Medical College, Pittsfield, Mass., in the medical department of the University of Michigan, graduating with great credit from the latter institution in 1855. A year or two after this, he was offered the demonstratorship of anatomy by his Alma Mater; but, being dependent upon his professional work for his income, he was obliged to decline the position, which brought no pay but honor. Immediately after graduating, he began practice in his old home, but removed to the town of Gray after two and a half years. In the fall of 1862, he served two months as volunteer surgeon in the Federal army. His old teachers in the Berkshire College, — some of them also his instructors in Ann Arbor — had kept track of the promising student; and, a vacancy occurring in the chair of theory and practice of medicine, the place was tendered him. He at once accepted, and removed to Pittsfield in November, 1862; but he was soon transferred to the chair of surgery, for which his natural endowments and cherished tastes peculiarly fitted him, and this position he filled until the close of his connection with the institution in 1868. In the autumn of 1865, the professorship of surgery in the Medical School of Maine was made vacant by the death of Dr. D. S. Conant, and Dr. Greene was called to it, giving his first course here in 1866. Excepting two years, in which ill health necessitated the appointment of temporary substitutes, he has given every surgical course in this school since that time. In the winter of 1867-68, he was professor of surgery in the University of Michigan, but resigned when the well-known homoeopathic difficulty arose. In 1868, he removed from Pittsfield to Portland. Already an active member of the Maine Medical Association, of the Massachusetts Medical Society, and of various other medical organizations, in 1870 he received the marked distinction of an election to honorary membership in the Medical Society of the State of New York. From 1872 to 1874 he was professor of surgery in the Long Island College Hospital, Brooklyn, N. Y., in this, as in every other school with which he was connected, winning easy recognition as a clear, forcible, and charming lecturer, and a clinical teacher of exceptional power. In 1880, he was elected president of the Maine Medical Association, and made his service memorable by his successful efforts to secure the passage of an anatomical bill by the State legislature. His inaugural address, recently published in the *JOURNAL*, was probably his most scholarly production.

Dr. Greene was twice married: in 1855, to Miss Lizzie Carleton, of Watertown, who died in 1860 without living issue; and in 1861, to Miss Lizzie A. Lawrence, of Fownd, who died in 1876. Two children survive him, a son of nineteen and a daughter of ten years of age. He had three brothers, all younger than himself: Jacob Lyman, president of the Connecticut Life Insurance Company; George Frye, who resides on the old homestead; and Samuel Thomas, who is a teacher in Belleville, Ontario. He had one sister, who died in 1878.

In July of this year he went to England to attend the meetings of the International Medical Congress. On the passage, however, on the steamer *Parthia*, he was suddenly attacked with complete suppression of urine, and died in a uræmic convulsion, after an illness of hardly twenty-four hours. The facilities on board the vessel were not such as to permit the preservation of the body until it could be brought to land, and the

burial took place on the 10th of August, the day of his death.

For many years Dr. Greene's work, both as practitioner and teacher, was almost exclusively in the department of surgery, and in this branch of medicine he had the leading practice in Eastern New England. He was unquestionably a genius. Few men possess his diagnostic skill, fewer still his marvelous facility with the knife; indeed, as an operator, it is difficult to conceive of his superior. His knowledge of anatomy was so accurate, and his grace, steadiness, and rapidity so striking, as to make the most difficult operation appear simple and easy. His daring was equal to his dexterity, and, while yet a young man in the profession, he performed the bold operation which, more than anything else, will hand his name down to posterity. This was the successful removal of a large bronchocele, in 1866, from a patient whose case had been pronounced hopeless by a number of able surgeons. Several other equally satisfactory results in formidable goitre operations were sufficient to establish the propriety of the procedure in certain cases, and to evoke from a leading surgical authority an admission to this effect, although, in a previous edition, he had declared that "no honest and sensible surgeon would ever engage in this horrid butchery." But, while the distant future may remember him solely in connection with this brilliant contribution to legitimate surgery, the present generation of medical men, so many of whom bear his signature upon their diplomas, will associate with his name the idea of a dignified and impressive, but delightful and magnetic presence; a voice whose sweetness attracted and whose eloquence enchained; a mind of generous breadth, wonderfully alert and fertile in ingenious expedients and a hand under whose delicate touch the lurking mysteries of disease came forth from their concealment.

The various communities in which he exercised his art with such success will long mourn for him as for one whose place cannot be supplied, and the benedictions of the multitude which almost worshiped him for changing their misery to joy will follow him to his ocean grave. The medical profession of his native State with gratitude acknowledges that to him, more than to any other in its ranks, it owes progress in knowledge, incentive to activity, and increase of achievement.

F. H. G.

MEDICAL NOTES.

— American beef is asserting itself in the British market. Its value was practically tested by the Edinburgh Parochial Board last month. Two masses of English and American beef, each weighing seventy pounds twelve ounces, were boiled, when it was found that the amount of good meat in each case was about the same, while the soup made from one was undistinguished from that made from the other. But in a contract of one thousand pounds there was a saving of one hundred pounds in favor of the American meat — a result which cannot but bring important conclusions to those who are interested in cheap meat, more especially in workhouse and hospital administration.

— The gratitude of patients to their doctors, though not often taking a practical shape, does sometimes do so, and in one recent instance was very touching.

Thomas Hobson, seventy-eight years of age, hanged himself in the workhouse. Before committing the act he made a will in which he bequeathed his body to the medical attendant, "in gratitude for his kindness and urbanity." The doctor, however, declined the bequest. A like reluctance has been shown by the School of Anatomy at Owens College, which was named as second legatee. — *London Correspondent of the American Practitioner.*

— The *Atlanta Medical and Surgical Journal* has changed its name to the *Atlanta Medical Register* simultaneously with a change in editorial management.

NEW YORK.

— The sixth annual meeting of the American Gynecological Society was held on the 21st, 22d, and 23d of the month at the hall of the Academy of Medicine in New York.

— The excursions of the floating hospital of St. John's Guild have now ended for the season. During the summer forty-two excursions were made, and 25,201 children and their mothers taken out upon the water for a day.

— Twenty-one milk-dealers were recently arraigned before the Court of General Sessions in one day and convicted of selling adulterated milk; it being shown that in some instances as much as 90 per cent. of the cream had been removed from the milk. Fines varying from \$10 to \$150 were imposed — the total amount of the fines being \$1,200; but it is evident that if this wretched traffic is to be interfered with to any extent, the fines should be greatly increased and imprisonment for a longer or shorter period added to the punishment.

Miscellany.

DR. HAMILTON ON THE AUTOPSY.

DR. HAMILTON makes the following statement in the daily press with regard to the autopsy: —

The ball entered the inter-vertebral space between the last dorsal and first lumbar vertebra, at a point very near the transverse and oblique processes; that is, obliquely from behind. It passed a little downward and forward, penetrating the body of the first lumbar vertebra; escaped from the vertebra very near the middle in front, and was found a little to the left of the body of the vertebra, lying under the lower margin of the pancreas, and nearer its posterior or dorsal aspect than its anterior, behind the peritoneum, and outside the cavity of the belly. The ball was encysted, completely surrounded by a firm capsule, which invested it entirely and closely, the capsule containing nothing but the ball. Perhaps a grain or two of white tenacious substance attached to the point of its inner surface, which was not easily removed by the edge of the knife, and which may be found under the microscope to consist of a drop of desiccated pus, or it may prove to be the leaden stain occasioned by the oxidation of the surface of the ball. It also contained a small fragment of black matter, perhaps three quarters of an inch in length and an eighth of an inch in breadth, which under the microscope may prove to be a piece of cloth, the exact character of which has not yet been determined. A most critical examination of this sac under a strong light and with a probe did not disclose any connection between it and the track of the ball. Not far removed from the seat of the ball was the blood cavity, perhaps distant one or two inches, and in this neighborhood could be felt distinctly under the finger innumerable small substances like grains of sand of greater or less magnitude, which have not yet been submitted to microscopical examination, but which were supposed to be minute fragments of bone torn away from the broken vertebra, and thus widely

disseminated in the adjacent tissues. The blood sac was behind the peritoneum, but the autopsy revealed that it had ruptured into the cavity of the peritoneum, probably just before the occurrence of death, and at least a pint of blood, coagulated, was found in the peritoneal cavity. The abscess spoken of in the official report of the autopsy was not in this region precisely, but somewhat more to the right, between the liver and the transverse colon. No connection was discovered between this and the external wound made by the bullet, and there are no means of knowing whether it communicated with the original track at some earlier period in the history of the case or not. It may have done so and become subsequently closed, or it may have been the result of the extension of inflammation from the original track to the adjacent tissues. There was no lesion of the liver, recent or ancient, indicated in the autopsy.

It was evident from this account that the presence of the ball in the situation in which it was found was not the immediate cause of death, as it was completely encysted, and must have long since ceased to cause irritation. The small fragments of bone and the great lesion of the lumbar vertebra are the pathological fact which alone could endanger the patient's life. This lesion of the vertebra the surgeons had no means of repairing, nor could it have been repaired save by the processes of nature. The small fragments of bone (if they should prove to be such), widely disseminated in the adjacent tissues, certainly could not have been removed by any surgical operation. It was determined by the autopsy that the necessity did not exist for removing the ball, or, in other words, that had there been no other lesion it might have been carried for many years without causing death or even inconvenience. Still, it may be proper to inquire whether by a surgical operation the bullet could have been safely removed. If it had been arrested by the spine, or even lodged in the substance of the spinal column, possibly, with a bold and very extensive dissection, it might have been reached and extracted. It is questionable, however, whether the history of surgery furnishes any example of success under the circumstance now supposed; but the fact is that the bullet traversed the spine and lodged at a point some distance removed from it, passing miraculously through various vital structures which surround the anterior and lateral walls.

The front of the spine in the region traversed, and both of its sides presenting towards the interior of the belly, are literally covered by important blood vessels, arteries and veins, the most important nerves of the body, including the sympathetic and ganglionic system of nerves, also nerves of common sensation and motion, and by absorbents, including the great thoracic, through which nutrition from the alimentary canal is conveyed to the heart. The injury of almost any one of the foregoing, excepting the nerves of common sensation and motion, would inevitably destroy life, and in the midst of this plexus of arteries, veins, and lymphatics, the surgeon would have had to carry his knife in search of a ball the situation of which has only been revealed by the autopsy. There were no possible means of knowing the situation of the ball during life, as it gave no indications of its presence, nor could it possibly have been reached and recognized by any form of surgical probe. That death would have been immediate, and the inevitable result of any such daring adventure, is almost absolutely certain. However much we, individually or collectively, may have made ourselves liable to just criticism in the matter of diagnosis or prognosis, and whatever doubts may be entertained by medical men as to the propriety of the treatment in certain respects, I cannot believe that one intelligent surgeon will hereafter think that at any period in the progress of the case the ball, or the fragments of bone which it sent before it, could have been successfully removed; nor, indeed, that any serious attempt in that direction would not have resulted in speedy death. Viewing the case in the light of our present knowledge, I am prepared to affirm that surgery has no resources by which the fatal result could have been averted. This was the sad consolation which I felt justified in giving to the grief-stricken wife and family, and which all my associates believe we can give to an afflicted people.

DR. BLISS'S SUMMONS TO TAKE CHARGE OF PRESIDENT GARFIELD.

IN reply to certain questions as to the manner in which he was summoned to take charge of President Garfield, Dr. Bliss has made the following statements, according to the daily press: —

The Secretary of War sent his carriage for me immediately after the shooting, with a message to take charge of the Presi-

dent's case until further orders. On arriving at the depot I was immediately conducted to the room where the President lay, and assumed charge of the case, feeling that I was there by proper authority. The history and conduct of the case is not pertinent until the following Sunday morning, when the President had fully reacted, had several hours of rest, was cheerful and competent to attend to any ordinary business, when I presented the matter of his professional attendance to him, Mrs. Garfield being present. I then explained to him fully the valuable professional assistance the large number of medical gentlemen had rendered up to that time, representing as they did the best medical talent in the city. His reply was, "Of course, doctor, it will not do to continue the large number of medical gentlemen in attendance; such a number of surgeons would be cumbersome and unwieldy." I said then, "Mr. President, it is your duty to select your medical attendants now." He replied: "I desire you to take charge of my case. I know of your experience and skill, and have full confidence in your judgment, and wish you to thank the doctors individually for their kind attendance." I thanked him, and replied that it would be necessary to select three or four medical assistants as counsel in the case. He replied: "I shall leave that entirely with you; you know what talent you require, and your judgment is best upon that point." I then selected in order the gentlemen who were immediately associated in the case, stating in each instance the reason for so doing. He said that was eminently satisfactory to him. I then turned to Mrs. Garfield and said: "If you desire to add one or more to the number selected I shall be happy to unite them to our counsel." Her reply was, "I would not add one to the number you have selected, and I want to say to you, doctor, that you shall not be embarrassed in any way in your future treatment of this case." Neither the President nor Mrs. Garfield, nor any member of the household from that time to the present, suggested the name of any other physician except the eminent counsel called from Philadelphia and New York. I desire to say at this time that Mrs. Garfield has conscientiously kept this promise to me throughout the entire case.

PREVENTING SPREAD OF CONTAGIOUS DISEASES.

WISCONSIN has recently passed a law to prevent the spread of contagious diseases, which makes any person suffering from small-pox, diphtheria, scarlet fever, and other contagious diseases, who willfully enters any public conveyance or public place, liable to a fine of fifty to three hundred dollars, or imprisonment for twenty to one hundred days. The same penalties are exacted of any one in charge of a child or irresponsible person who allows similar exposure. The conveyance of corpses into any city or town of the State is forbidden except when accompanied by certificate from a physician, stating cause of death; and, in case of decease from infectious diseases, a certificate must be shown from the health authority that proper precautions, by use of disinfectants or inclosure in airtight collins, have been taken. The penalties are the same as in the preceding case.

A similar regulation of the Iowa State Board of Health provides that bodies of patients dead from diphtheria, scarlet fever, and typhus or typhoid fever shall be placed in a wooden or metallic coffin, which can be inclosed by a tight wooden box closely wrapped in carbolized celloth or effective substitute. Bodies not dying from the diseases named may be transported without restriction from November 15th to March 15th, but the rest of the year are to be prepared as above described. Every body must be accompanied by a physician's certificate of death, transportation permit from the clerk of the local Health Board, and written certificate from the undertaker. The transportation of bodies dead from Asiatic cholera, yellow fever, and small-pox is absolutely prohibited. — *Sanitary Engineering*.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 18, 1881, TO SEPTEMBER 24, 1881.

REED, W., captain and assistant surgeon. Assigned to duty with Light Battery A, Second Artillery, ordered to leave Washington Barracks, D. C., on September 20th, and march to Yorktown, Va. S. O. 165, Department of the East, September 16, 1881.

TAYLOR, A. W., first lieutenant and assistant surgeon. Assigned to duty as medical officer to escort conducting Little Chief and his band from Department of the Missouri to Department of Dakota. On return trip to leave the command at Sidney, Nebr., proceed direct to Fort Leavenworth, Kans., and report to the Medical Director of the Department. S. O. 188, Department of the Missouri, September 16, 1881.

BOOKS AND PAMPHLETS RECEIVED. — Text-Book of Modern Midwifery. By Rodney Glisan, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Willamette University, and late President of the Oregon State Medical Society. With one hundred and thirty illustrations. Philadelphia: Presley Blakiston. 1881.

Transactions of the American Gynecological Society. Vol. V. For the Year 1880. Boston: Houghton, Mifflin & Co. 1881.

Remarkable Change in the Color of the Hair from Light Blonde to Black in a Patient while under Treatment by Pilocarpin.

Report of a Case of Pyelo-Nephritis, with unusually prolonged Anuria.

Case of Membranous Croup treated Successfully by Pilocarpin. By D. W. Prentiss, M. D. Philadelphia: Printed by J. B. Lippincott & Co. 1881. (Reprint.)

Bacteria: the Smallest of Living Organisms. By Dr. Ferdinand Cohn, Professor in the University of Breslau. Translated by Charles S. Dolley. Rochester, N. Y. 1881.

Convulsions due to Depression of Spinal Reflex-Inhibitory Centres, with special reference to the Convulsions of Apomorphine, Atropine, Strychnine, and other Poisons. By Edward T. Reichert, M. D. (Reprint.)

Ethylene Bichloride as an Anæsthetic Agent, with a Consideration of Ethylene Methylethylate, Ethylene Ethylate, Ethyl Nitrate, Ethylidene Bichloride. By Edward T. Reichert, M. D. (Reprint.)

Female Diseases the Result of Errors in Habit and Hygiene during Childhood and Puberty, with Remarks on the Treatment of Rachialgia with Iguir-Puncture (Piquelin's Cautery). By R. J. Nunn, M. D., Savannah, Ga. (Reprint.)

Sanitary Association of Lynn. Second Annual Report of the Executive Council.

Electro-Massage. By John Butler, M. D. (Reprint.)

Indigestion, Biliouness, and Gout in its Protean Aspects. Part I. Indigestion and Biliouness. By J. Milner Fothergill, M. D. New York: D. Appleton & Co. 1881.

The Applied Anatomy of the Nervous System, being a Study of this Portion of the Human Body from a Standpoint of its General Interest and Practical Utility, designed for Use as a Text-Book and a Work of Reference. By Ambrose L. Ranney, M. D. With numerous illustrations. New York: D. Appleton & Co. 1881.

Inaugural Address. By Reginald Harrison, F. R. C. S., President of the Liverpool Medical Institution.

Importance of the Early Recognition of Epilepsy. An Essay read before the Connecticut State Medical Society, May 26, 1881. By E. C. Seguin, M. D. (Reprint.)

A Second Contribution to the Study of Localized Cerebral Lesions. By E. C. Seguin, M. D. (Reprint.)

Sarcoma of the Choroid, Ciliary Body, and Iris. By J. S. Pratt, M. D., Brooklyn, N. Y., and Charles S. Bull, M. D., New York. (Reprint.)

— The American Surgical Society held its first annual meeting on the 13th, 14th, and 15th of September at the Oriental Hotel, Coney Island. Owing to the absence of an unusually large number of prominent surgeons in Europe this year, the attendance was not as full as it probably will be at future sessions.

Original Articles.

THE VITAL STATISTICS OF MASSACHUSETTS
FOR 1880.¹

BY CHARLES F. FOLSOM, M. D.

BETWEEN the census years 1875 and 1880 the increase of the population was 131,173, or 63,388 less than in the preceding period of five years, a fact largely due to the extreme industrial depression just gone by. With an increase of population to 1,783,085 from 1,651,912 in 1875, there were recorded in 1880, 41,247 births, 15,538 marriages, and 35,292 deaths, or 3922 more births, 1736 more marriages, and 3191 more deaths than in the previous year. The excess of living births over deaths was 8925, showing a natural increase of the population exceeding that of 1879 by 431.

The rates for the year to 1000 of population are: births 24.80; marriages 8.71; deaths 19.79; excess of births over deaths 5.01, showing a natural increase of the population much below the average, the rates of excess of birth-rate over death-rate for thirty years, in periods of five years, beginning with 1851, being 10.1; 11.6; 4.7 (8.3 excluding the years most influenced by the war); 7.9; 6.8; 5.6.

BIRTHS.

The birth-rate for 1880 is, although slightly higher than for the previous two years, 2.23 per 1000 lower than the average for thirty years or than any other years except 1863, 1864, 1865, 1878, and 1879, the decrease being most marked in those counties where there is the least concentration of foreign laborers; the birth-rate, too, is largest in the large towns, varying from nearly 30 per 1000 in towns of 50,000 population and over, to 16.94 in those of 2000 and under. By seasons, 23.3 per cent. of the births were in the first quarter of the year; 24.6 in the second; 26.3 in the third; 25.8 in the fourth; the same figures for a period of fifteen years being 23.03, 23.43, 26.75, and 26.79. There were 105.9 births of males to 100 of females, which is also the average for twenty-five years. The still-births of males are to those of females as 138 to 100, or for twenty-five years 149 to 100.

As regards parent-nativity, Barnstable County, at one extreme, shows five births of native parents to one of foreign; at the other, in Suffolk County, one third more is of foreign parentage than of native. Of the 778 illegitimate births Suffolk County has one half, although containing only one fifth of the population of the State.

MARRIAGES.

The marriage-rate is greater than for any other year since 1874, but 1.68 per 1000 less than the average for thirty years, and .17 less than the average of the three years most influenced by the war. It is nearly 2 per 1000 greater in the sixteen large towns than in the rest of the State, and generally speaking increasing with the concentration of the population. As usual, the greatest number of marriages, 1857, was in November, the least, 799, in March. The average relation of the seasons was maintained very closely,

21 per cent. of the marriages being in the first quarter, 25.82 in the second, 22.20 in the third, 30.98 in the fourth. The average age of 15,501 men married during the year was 28.9 years; of 13,121 men marrying for the first time 26.5 years; of 15,185 women married, 25.1 years; of 13,956 women marrying for the first time, 23.8 years. There were 12,119 bachelors married to maids, 702 bachelors to widows, 1531 widowers to maids, 807 widowers to widows. The youngest person married was 13 years old, the oldest 82.

DEATHS.

The number of deaths in 1880 (namely, 35,292) was considerably in excess of that of any year of the previous quarter of a century. The rate per 1000 of the population (19.79) was the greatest since 1876, was .53 greater than the average for thirty years, and .57 more than the rate of the last quinquennial. It was exceeded only seven times since 1850, including the two years most influenced by the war. The death-rate was considerably greater than for either of the previous three years, but 1.03 less than the average for the five years 1871-1875. In the last decennial it was exceeded four times, 1872, 1873, 1875, and 1876. Four years, 1871 and 1877-1879, showed lower rates, and in 1874 the percentage was the same as in 1880. Although these rates depend very largely upon the number of births, and therefore upon the number of infants in the population, the mortality of children under one year of age being from one fifth to one fourth of the total number of deaths, yet they are also largely influenced by various epidemics, which are chiefly fatal among children under five, their mortality being from one third to two fifths of the whole. The year has been, therefore, one of less than the average good health, and considerably lower than the previous three years in that respect. The very fatal epidemic of diphtheria has continued, with even a moderate increase over 1879; the diarrhoeal diseases of infants have caused much greater mortality than for the preceding two years, the infectious diseases generally have risen to a higher number, and pneumonia has been excessively fatal. The greater number of deaths in 1880 has been recorded at nearly all ages, but to the greatest extent in infants and young children.

The death-rates of the several counties were: Norfolk and Franklin 16.1; Berkshire 16.4; Plymouth 16.8; Hampshire and Middlesex 18.1; Worcester 18.9; Barnstable 19.0; Hampden 19.9; Essex 20.2; Bristol 21.4; Dukes and Nantucket 21.8; Suffolk 23.4; of the larger cities, Fall River 26.3; Holyoke 24.0; Boston 23.7; Gloucester and Salem 23.2; Lowell 22.0; New Bedford 21.9; Lawrence 21.6; Worcester 20.9; Chelsea 20.5; Lynn 19.5; Springfield 19.0; Taunton 18.6; Cambridge 18.0; Somerville 17.0; Newton 15.8; of the sixteen cities 22.1, and of the rest of the State 18.6; of towns of 20,000 to 30,000 population 20.95; of those of 10,000 to 20,000, 17.88; 5000 to 10,000, 18.34; 4000 to 5000, 17.48; 3000 to 4000, 16.90; 2000 to 3000, 16.99; 1000 to 2000, 16.71; less than 1000, 19.85.

The greatest monthly number of deaths (3581) was in August; July, September, December, March, April, October, May, November, January, and February following to 2497 in June; by quarters the percentages were 28.6 per cent. in the third, 24.5 in the fourth, 23.5 in the first, 23.4 in the second.

The deaths of females exceeded those of males in

¹ An abstract from the advanced sheets of the Thirty-Ninth Report to the Legislature of Massachusetts, relating to the Registry and Return of Births, Marriages, and Deaths in the Commonwealth for the Year Ending December 31, 1880. Prepared under the direction of the Secretary of the Commonwealth. Boston. Rand, Avery & Co., Printers to the Commonwealth.

1880 by 426 as compared with 514 in 1879. In 14 deaths the sex was not reported.¹ The death-rate of males has exceeded that of females in the four census years 1865-1880 by 2.1, .9, 1.3, and 1.0, the averages of the four years being, for males 20.8 and for females 19.5 per 1000 living. From the age of 20 upwards, and in the total number for all ages, the absolute number of deaths of females in the State is greater than that of males, especially during the ages from 20 to 30, while the opposite fact is true in the early years of life, which is most marked in infancy. The infant mortality was 20.1 of the whole, that of children under five years of age 34.6.

The average age at death varies very much in the different counties, dependent very largely upon the numbers of persons dying in the early years of life, and, consequently, upon the character of the population. The improvident and very poor, who have the largest families, show also the greatest infant mortality, which diminishes the average duration of life enormously, and they also are themselves exposed to causes of early death. As would be expected, therefore, the lowest average age at death for a period of thirty years is, in Suffolk County, 23.34, the highest in Dukes and Nantucket, 46.31, followed in order by Franklin, 38.58, Barnstable, 36.97, Plymouth, 36.24, Hampshire, 35.16, Berkshire, 33.61, Norfolk, 30.95, Worcester, 30.82, Bristol, 30.03, Essex, 29.30 (which is very nearly the same as that of the State, 29.35), Hampden, 27.94, Middlesex, 27.86.

CAUSES OF DEATH.

Of the 35,292 deaths reported in 1880 in the State, the causes of death failed to be certified in 745, or 2.13 per cent., leaving 34,547 in which the facts required by law were ascertained. The deaths reported with causes not specified diminish from year to year in number, and still more in their proportion to all the deaths reported, having dropped from 1464 in 1868 quite progressively to 775 in 1879, except that for 1872 and 1873 there was a rise. Of the 745 unspecified causes of death in 1880, there were 108 deaths from hemorrhage, 86 from tumor, 34 from inflammation, and 517 in which the returns give not even a statement as to any of supposed causes of death. As compared with the population, the unspecified causes of death in 1880 were .42 per 1000, while they were .41 in 1879, and 1.06 in 1868.

There is a decided increase in zymotic and local diseases over the previous year, the constitutional diseases having been far less fatal than in 1879. The deaths from violence, also, were less numerous. Leaving out of consideration the unspecified causes of death, the "zymotic diseases"—those commonly considered to represent the sanitary condition of places—were 2.3 per cent. less than the average proportion for ten years; the constitutional .7 less, but also less than for either of the previous three years. The local diseases were 6.0 higher than the average per cent., developmental diseases 2.6 less, and violent deaths .5 less than the average.

The most destructive nine so-called zymotic diseases,

or infection-diseases, caused a much larger number of deaths than in 1878 or 1879, although in comparison to the population, far less than in any of the previous years except 1871, and at a less rate per 1000 of population even than in that year. Whooping-cough and scarlet fever were much less fatal than common, and show a marked reduction as compared with 1879. The other prominent "infection-diseases" caused a larger number of deaths than in the previous year, the advance being most marked in cholera infantum and measles, but also very great in typhoid fever, 245 more deaths from the last-named disease having occurred than in 1879, and more than for any one year since 1875. There was also a marked increase in diphtheria and croup, making 1880 the third year in mortality from that cause. From the nine diseases the total number of deaths in 1880 was 381 less than the average for ten years, in spite of a largely increased population.

The constitutional diseases, less fatal in 1880 than usual, continue to show an increasing rate from cancer and decreasing mortality from consumption,—a fact which may be largely due to more accurate certifying of causes of death and better diagnosis.

The principal local diseases all caused more deaths than in 1879, and, with the exception of pleurisy, more than in any previous year. The increase has been most striking in bronchitis (chiefly in infants and very young children), and in Bright's disease and peritonitis (due, to a great extent, to more accurate diagnosis). Pneumonia has increased at a faster rate than the population, as have also apparently heart diseases. The increase from "convulsions," an obscure term, is not so great in proportion as the population; while insanity, apoplexy, and paralysis together mark a strikingly larger number of deaths.

In developmental diseases it is gratifying to find the obscure expression "teething" less from year to year, and that the latter years show a more favorable record in the decenniad than the earlier as regards still-born, "infantile," premature deaths, and deaths from child-birth.

The violent deaths caused in 1880 the least mortality of the decenniad; and this was most marked in the suicides and deaths by drowning, while the homicides were quite below the average. The deaths from poison were in great excess, and from railroad accidents more than in any other of the ten years except 1871.

The order of fatality of the twelve causes producing the greatest number of deaths places consumption easily at the head of the list as usual. Pneumonia is second, as it was the previous two years, and in 1874 and in 1875; it was third in 1872, 1873, 1876, and 1877, always a leading source of mortality in our State. Cholera infantum, from having steadily fallen from the second place in 1872 and 1873, the third in 1874 and 1875, the fourth in 1876 and 1877, fifth in 1878, and sixth in 1879, has risen in 1880 to the third. Heart disease, not always an exact term, was, as last year, fourth, having been only sixth to eighth in 1878 and the preceding six years. Diphtheria stands fifth, having declined from the second place in 1876 and 1877, and third in 1878 and 1879; if croup were included with it the deaths would be 2391 instead of 1769, and its place would be third. Old age is sixth, being fourth or fifth previously since 1872. Paralysis is now for the fourth year seventh. Cancer has risen from tenth, eleventh, and twelfth places to eighth, as it was also in 1879. "Cephalitis" was ninth in 1880; bronchitis,

¹ A comparison of the United States census of 1880, the excess of females over males being 18,962,000, 24,945,000, or 8,983,000, as compared with 18,943,000, 24,945,000, or 8,983,000, in 1870, and 18,943,000, 24,945,000, or 8,983,000, in 1860. The rate of increase of the population was in 1880 very nearly the same as in 1870, 18.7 per cent., 19.7 per cent., as compared with 19.7 per cent. in 1870, and 19.7 per cent. in 1860.

as in 1879, eleventh. Typhoid fever showed an extraordinary decline from the fourth place in 1872, sixth in 1873, seventh in 1874, eighth in 1875 and 1876, ninth in 1877 and 1878, to *thirteenth* in 1879, and has now risen again to tenth.

In infancy and early childhood the diarrhoeal diseases of the hot months, diphtheria, pneumonia, and obscure diseases ("convulsions" and "cephalitis"), largely of the central nervous system and of the digestive organs, prevailed. From five to ten, infectious diseases were most fatal, obscure brain troubles and pneumonia following. From ten to fifteen consumption and typhoid fever appear as prominent causes of death. From fifteen to twenty consumption caused nearly one half of all deaths, and heart disease is prominent. From twenty to thirty consumption caused more than one half of all the deaths, and childbirth is fifth in order. In the next four decades of life pulmonary consumption, although first in order, occupies a position of progressively less importance. Pneumonia is second, and heart disease third. Typhoid fever becomes of less importance, Bright's disease, cancer, and apoplexy of more. Childbirth is the *sixth* from thirty to forty, and then ceases to be a leading cause of death. Over seventy, old age, pneumonia, paralysis, apoplexy, and heart diseases are the prominent five causes of death.

The deaths in 1880 between the ages of ten and fifteen were 611 as compared with 616 in 1879; at all other ages the deaths were more. Under the age of five they were 2051 more. From five to ten the excess was 51; 28 from fifteen to twenty; 313 from twenty to thirty; 177 from thirty to forty; 90 from forty to fifty; 226 from fifty to sixty; 277 from sixty to seventy; 143 from seventy to eighty; 336 for the ages of eighty and over.

DIPHTHERIA.

Thirty pages of the report are devoted to an analysis of the 18,714 deaths from diphtheria (including croup) in this State during the ten years ending in 1880, by years, months, ages, sex, and population, with the death record from that cause for each city and town in the State. There were 9249 deaths of males, 9459 of females; 747 in 1871; 753 in 1872; 745 in 1873; 913 in 1874; 1880 in 1875; 3294 in 1876; 3178 in 1877; 2517 in 1878; 2293 in 1879; 2394 in 1880; 2337 in November; 2307 in December; 2109 in January; 2098 in October; 1611 in February; 1560 in March; 1350 in April; 1269 in September; 1225 in May; 1045 in June; 916 in July; 887 in August.

The deaths under five years of age were 65 per cent. of those at all ages, and from five to ten they constituted 25 per cent.; 90 per cent. of the deaths occurred in children under ten years of age, or 95 per cent. under the age of fifteen, the decline from that age onward being progressive and quite marked. As compared with the population at the several ages, there was an annual average mortality of 69.96 per 10,000 under five years of age; of 28.33 from five to ten years; of 6.74 from ten to fifteen; of 1.52 from fifteen to twenty; and from .82 to .39 for all other ages.

The analysis of the deaths from diphtheria and croup for the ten years indicates a sudden rise in 1874, chiefly in Berkshire and Franklin counties, corresponding to the beginning of the severe epidemic in the northwestern part of the State, with independent lesser foci in Bristol, Middlesex, and Hampden, while the deaths

from that cause were less than the average of the previous three years in Barnstable, Essex, Dukes and Nantucket, Norfolk, Plymouth, Suffolk, and Worcester. In 1875 the epidemic in Berkshire and Franklin counties continued, and there was a marked rise in every other county in the State except the islands, where no deaths were reported from diphtheria or croup. In 1876, the epidemic had decidedly moderated in Franklin County and less so in Barnstable, while the increase in the rest of the State except the islands was very great, causing 3294 deaths, or 116 more than in the next year, from which time there has been a decline, Suffolk County alone having a greater number of deaths in 1880 than in any previous year.

Following the different towns in the list, it is seen that the mortality varied greatly from year to year in some; that in many it could hardly be said that there was any real epidemic; that the excessive mortality occurred in one season as in Florida, in two as in Nantucket, or scattered over any or nearly all of the ten years, and that contiguous towns were often visited by the disease with very different degrees of fatality. In the northern part of Berkshire County the epidemic was much more severe than in the southern part, while the opposite fact is true of the towns forming the Connecticut valley. The extremely small towns of Florida and Conway had the highest death-rates in Berkshire and Franklin counties, Easton (population, 3898) in Bristol, Haverhill (11,628) in Essex, Holyoke (16,260) in Hampden, Ware (4142) in Hampshire, Pepperell (1927) in Middlesex, Sharon (1330) in Norfolk, Plymouth (755) in Plymouth, Chelsea (20,737) in Suffolk, Spencer (5451) in Worcester. The variations in the death-rates (0 to 34.96) and in the duration of the prevalence of the disease are excessive.

Leaving out the two very small counties, Dukes and Nantucket, the highest rates from diphtheria and croup are in rocky, bleak Essex, forming our northeast coast, and Hampden at the lower part of the valley of the Connecticut, largely on alluvial deposit; the most densely populated county of Suffolk, with the highest mortality from all causes in the State, comes next, followed by Berkshire, where the general conditions of health are the most favorable; Middlesex in the north and Bristol at the south are side by side in the table, as are Franklin, high up in the interior of the State, and Barnstable, the extreme cape. In the cities and towns, some of the decennial rates per 1000 by the census of 1875, representing annual average rates per 10,000, are (1) Florida 34.96; (329) Sheffield 45 (two small towns in the extreme north and south of Berkshire County); (6) Holyoke 22.82; (7) Nantucket 21.87; (8) Haverhill 20.24; (9) Williamstown 20.09; (15) Marblehead 17.72; (21) Gloucester 17.25; (22) Lynn 17.18; (36) Lowell 15.88; (37) Hull 15.82; (41) Waltham 15.45; (12) Lawrence 15.41; (14) Salem 15.26; (50) New Bedford 14.64; (52) Pittsfield 14.35; (58) Brookline 13.93; (68) Milton 13.15; (74) Beverly 12.79; (75) Plymouth 12.56; (77) Somerville 12.44; (80) Princeton 12.23; (81) Boston 12.21; (87) Winchester 11.71; (90) Fitchburg 11.64; (93) Springfield 11.43; (94) Dalton 11.37; (95) Cambridge 11.31; (101) Northampton 11.16; (104) South Abington 10.99; (108) Wayland 10.76; (109) Worcester 10.73; (111) Lenox 10.30; (113) Manchester 10.25; (114) Brockton 10.20; (123) Fall River 9.66; (130) Rockport 9.15; (146) Andover 8.44; (158) Winthrop 7.97; (163) Belmont 7.74; (168) Newburyport 7.58;

(176) Lexington 7.19; (179) Dedham 6.95; (187) Medford 6.49; (199) Woburn 6.27; (200) Revere 6.21; (201) Natick 6.20; (211) Concord 5.61; (227) Mattapoisett 5.14; (237) Duxbury 4.90; (242) Clinton 4.72; (248) Leominster 4.61; (256) Petersham 4.16; (261) Nahant 3.92; (267) Barnstable 3.72; (268) Provincetown 3.67; (296) Stockbridge 2.39; (300) Dunstable 2.21; (313) Great Barrington 1.59; (322) Wenham 1.10; (330) Lincoln 0.

The least average mortality is in the 83 small towns of less than 1000 inhabitants, namely 5.61; in those of 1000 to 2000 (98) it was 7.29; in 49 of 2000 to 3000, 8.02; in 33 of 3000 to 4000, 10.98; in 23 of 4000 to 5000, 9.49; in 30 of 5000 to 10,000, 11.30; in 12 of 10,000 to 20,000, 14.22; in 5 of 20,000 to 30,000, 13.65; in 3 of 30,000 to 40,000, 14.75; in 4 of 40,000 to 50,000, 11.96; in 1 of 341,919 (Boston), 12.21; in the State, 11.33.

The average of the death-rates of the towns having in their population the greatest proportion of young children was higher than in those having fewer of them; but there were many exceptions to that rule, and the town having the largest proportion of children under five years of age had a low death-rate from diphtheria and croup (5.26) while the town having the smallest proportion of children under five years of age had a rate of 21.87.

After the epidemic of diphtheria and croup, which reached its highest point in 1863, the deaths from that cause declined steadily from 8.17 per cent. of the total mortality to 2.5 in 1870, rising slightly to 2.7 in 1871. In 1875 the annual increase was great; and in the next two years the epidemic was at its greatest height, from which time there has been a steady decline to 6.78 per cent. in 1880. Diphtheria appeared first in our death-returns under that name for the first time in 1858, although it prevailed earlier in our State, and has been known to the world for at least twenty centuries. Many authorities consider it as the severe form of what has been known for many years as the disease "membranous croup." The two diseases are at least confused in practice, and are considered in the Report as belonging together.

REPORT ON PROGRESS OF THERAPEUTICS.

BY ROBERT AMORY, M. D. (HARV.), LONGWOOD, BROOKLINE.

BENZOIC ACID IN POLYARTHRITIS RHEUMATICA.

SENATOR,² in confirmation of his observations with the use of this drug, remarks that benzoic acid or benzoate of soda has no remedial action of any value in chronic cases of arthritic rheumatism, nor in the subacute non-febrile attacks. Of twenty-two acute cases, however, in which he used this medicinal agent solely, one was relieved in two days, twenty in less than four days, and one in not less than eleven days, and none of these cases had any relapse or complication. Though it is the experience of the unprejudiced general practitioner that there are certain cases in which almost any simple method of treatment apparently produces a relief early in the attack, and to such a surprising degree that he is often led to believe that these exceptional cases would do well even without medicinal treatment, yet Senator, who was at one time rather

skeptical of the value of salicylic acid in rheumatism, seems to believe that the favorable result in the above twenty-two cases was clearly due to the administration of benzoic acid, and he was further convinced of this fact by another small group of cases, four in number, in which the use of salicylic acid had produced no remedial action, and yet afterwards its discontinuance and the administration of benzoic acid produced a rapid cure. In another group of six cases the use of benzoic acid was not followed by relief of symptoms, while the salicylic produced a beneficial effect. Fourteen cases were also treated by salicylic acid and benzoic acid together, in which he was inclined to give the preference to the use of the former. He recommends that benzoic acid, which can be given in very large doses (fifteen grammes, or four hundred and thirty grains, per diem), should be given in those cases in which salicylic acid has failed to give any relief.

BENZOIC ACID IN RHEUMATISM.

Senator³ finds that this remedy will speedily abbreviate an attack of articular rheumatism, provided it is unattended with fever and is not subacute; in these cases it seems to have but slight effect. No complication or relapse follows either this acid or its soda salt (benzoate of soda) after producing relief to rheumatic pains. He gives ten or twelve grammes of the acid and twelve to fifteen grammes of the benzoate of soda.

BROMIDE OF POTASSIUM IN INFANTILE DENTITION.

M. Peyraud⁴ recommends this drug for relief to the painful and troublesome processes of infantile dentition, and employs the following prescription:—

℞ Bromide of potassium	2-3 grammes.
Honey	15-20 grammes.
Water	q. s.

After the solution has taken place heat and evaporate to a consistency of honey, adding alcohol to preserve the mixture. By rubbing this upon inflamed gums the mucous membrane is attacked and denuded, the hyperæmic circulation is diminished, the inflammation reduced, and the projecting points of the teeth will gradually pierce the gum, and the contemporaneous inflammation of the mouth will be subdued.

The internal use of this drug will likewise, in the author's experience, prevent or abate the convulsions incidental to teething infants. He also recommends the use of the bromide in dental caries, which it arrests, and acts as a substitute for the arsenical preparations commonly used by dentists. Into a little cyst of the eyelid M. Peyraud injected subcutaneously a strong solution of the bromide, which was followed by the complete disappearance of the cystic tumor.

M. Joffroy,⁵ basing his treatment on the ground that there is a hypersensibility of the mucous membrane of the larynx in the so-called spasm of the glottis after diphtheria, employed bromide of potassium in daily amounts of two grammes to overcome this hyperæsthesia. In two cases where asphyxia was threatened after tracheotomy had been performed, the spasm seemed controlled by the bromide, and death apparently was averted. He cautions against the use of this agent where there are complication of bronchitis or threatening paralysis of the glotto-pharyngeal and laryngeal muscles.

² Quoted from page 290.

³ *Zeitschrift für klin. Med.*, t. i. p. 244, Centralblatt für klin. Med., May 1, 1880.

⁴ *Zeitschrift für klin. Med.*, t. i.

⁵ *Journal de Thérapeutique*, 10 Juin, 1880.

⁶ *Journal de Thérapeutique*, October, 1879.

JABORANDI AND PILOCARPIN.

In an abstract of a paper by Dr. Erich Harnach and Dr. Hans Meyer,¹ of Strasbourg, contained in *New Remedies* for November, 1880, an assumption is made that there are two alkaloids contained in jaborandi. According to these authors, the alkaloid pilocarpin can be subdivided chemically; one of these subdivided elementary alkaloids has a physiological action closely simulating that of atropine. Calling this substance jaborine, he says of it that it is more soluble in ether, but less so in water, than the true pilocarpin, and the chloroplatinate of jaborine is more easily soluble in alcohol than is the case with pilocarpin; moreover, the jaborine salts are non-crystallizable.

What interests us therapeutically more closely is the fact that jaborine, like atropine, paralyzes the cardiac plexus of the pneumogastries. Jaborine is easily formed from pilocarpin, especially in the concentration of its acid solutions, or by heating a mixture of pilocarpin and hydrochloric acid in a sealed tube, or even by heating pilocarpin itself. Langley, in *Journal of Physiology*, has observed that the application of an extract of jaborandi leaves produced irritation in the terminal of the pneumogastric nerve of a frog's heart, while the application of pilocarpin produced paralysis just in the same way as that of atropine; in this effect pilocarpin closely resembles nicotine, but during the process of preparing his sample of pilocarpin jaborine was formed, and to this substance should be attributed the paralyzing effect of the drug, for if a mixed pilocarpin and jaborine be locally applied the effects of the latter predominate in producing a cardiac paralysis. Our authors found that the commercial fluid extract of jaborandi is free from jaborine, but on evaporating the alcoholic and acidulated solution of an extract, as, for instance, when attempting to separate pilocarpin, a notable quantity of jaborine will be formed.

This discovery, therefore, of Messrs. Harnach and Meyer may be of great therapeutical importance in the application of pilocarpin to the treatment of diphtheria. Undoubtedly, from the experience of many competent practitioners, this drug has a direct remedial effect upon the pseudo-membrane, whilst, on the other hand, some physicians have found the tendency to a general constitutional collapse from cardiac paralysis a serious contra-indication to the use of pilocarpin in this dread disease. If, therefore, the sialagogue effects of jaborandi can be obtained without cardiac sedation a great step forward may be made.

PILOCARPIN IN DIPHTHERIA.

Dr. George Guttman, of Cronstadt² writes that promising from the action of this drug upon bronchial catarrh that the same moistening of the mucous membrane would follow in use in membranous deposits upon the larynx with producing inflammatory action, he employed pilocarpin in sixty-six cases of diphtheria (rach-enbraune); fifteen of these exhibited the worst symptoms of diphtheria, of which at least two thirds, according to previous experience, would have died; thirty-three bad cases had an extensive membrane, the others being slight. He gave pilocarpin to all, and in the first cases associated this treatment with quinine and gargles only; they recovered in periods, as a rule, varying from

twenty-four hours to three days; of the fifteen worst cases, two recovered in nine and eleven days, the rest in two to five days. All patients who came early under treatment, while the pseudo-membrane was still loosely adherent, without exception, were cured in twenty-four hours. The doubt that these cases were not truly diphtheritic is not to be raised, since they were examined with the utmost care, and in the worst cases the contagion could be distinctly traced. Under the action of pilocarpin not only were the membranes and infiltration dissolved in the salivary flow, but also the violent inflammatory condition yielded to its influence, the deeply reddened, dry mucous membrane soon became moist, pale red, and in every respect of normal appearance. In two cases of violent tonsillitis in which the passage was so much reduced on account of swelling that water could scarcely be swallowed, the swollen condition disappeared after the use of pilocarpin and simultaneously also the inflammatory symptoms. In the administration of the remedy Dr. Guttman recommends the addition of pepsin to combat the gastric catarrh usually associated, and presents the following formula:—

R̄ Pilocarpin muriat	gr. $\frac{1}{3}$ to $\frac{2}{3}$.	
Pepsinæ	gr. j. to $\frac{1}{4}$.	
Acid hydrochloric	gtt. ij.	
Aque destillatæ	3 iijss.	M.

Sig. A teaspoonful hourly for children.

R̄ Pilocarpin muriat	gr. jss.	
Pepsinæ	gr. xxx.	
Acid hydrochloric	gtt. iij.	
Aque destillatæ	3 viij.	M.

Sig. A teaspoonful half hourly for adults.

He has never observed any undesirable effects of the drug even when it has been continued until complete recovery, possibly because he directed a small amount of generous wine to be given after each dose.

The attention of the readers of this journal is called to the experience of Dr. Vogel with the use of pilocarpin in diphtheria reported last winter.

Dr. Lax³ has also tried the effects of this drug upon diphtheria during a recent epidemic. He had sixteen cases, six of which had local application of a four per cent. solution of argentic nitrate, and used a gargle of chlorate of potassium; four of these children recovered and two died, the latter being bad cases. The remaining ten were treated by pilocarpin, six of these cases being very serious and two were expected to die any night; yet all made a good recovery. Increased secretion of salivary and mucous secretions caused large masses of false membrane to be expelled by the mouth and nose, respiration becoming freer, fever diminishing, and appetite improving. The children improved visibly in three to five days after the appearance of a labial herpes which was in each case the precursor of a recovery. The same formula recommended by Dr. Guttman was employed by Dr. Lax.

It would add largely to the value of remedies in diphtheria if practitioners would record whether their cases successfully treated by this or any other drug were under observation during the approach or at the close of an epidemic of diphtheria, as we all know that during the latter portion the cases of diphtheria are milder, and show a tendency to spontaneous recovery unless the treatment be too harsh. According to the best statistics which are at hand, namely, those of our own city of Boston, two thirds of all reported cases recover, and the remaining one third end fatally.

¹ Liebig's *Annal.* d. Chem., 204, 67.

² Berlin. Klin. Wochn.: Practitioner, June, 1881.

³ Aertzl. Intelligenzbl. Med. Chir. Rundschau, December, 1880; Practitioner, May, 1881.

ANTAGONISM OF Pilocarpin and Muscarine, OF ATROPIA AND ACONITIA, AS INFLUENCED BY TEMPERATURE OF THE SEASON, BY SYDNEY RINGER.¹

Dr. Ringer having noticed in October a different result in the study of the action of these drugs as opposed to each other upon the character of cardiac pulsations from the results of his observation during the preceding July, subjected some frogs to various temperatures during the succeeding winter, and tried the effects of a local application of the drugs upon the muscular structure of their hearts, and concluded:—

(1.) The antagonism of pilocarpin and extract of muscaria on the frog's heart varies in different months.

(2.) In the summer months pilocarpin always strongly antagonizes extract of muscaria, but in the winter months there is often no antagonism, and even when it occurs it is generally slight.

(3.) This difference is due to temperature, for if in the winter months frogs are kept for several days at 60° F., the antagonism becomes well marked, and, indeed, as strong as in the summer months.

(4.) This seasonal difference in the antagonism of these two agents suggests that in summer and winter, respectively, there is a difference in the composition of the protoplasmic molecules of the cardiac structure of the frog's heart.

We must not, however, lose sight of the fact that in hibernating animals during hibernation the rapidity of absorption by imbibition may, and probably is, very much retarded in cold-blooded animals; therefore it is not impossible that Dr. Ringer's observations should be qualified by this factor, and by it the negative effects of the drugs might be explained. This is the more probable if we study in the same light the results of his observations on the antagonism of atropia and aconitia under the influence of temperature, for here he says, "that the antagonism is well marked in the warm months, and is absent in the ventricle (which is the larger mass of muscular tissue) in the cold months." Pantelejeff² finds that the "antagonism of atropine for quinine on the frog's heart is affected by the time of year. In summer frogs quinine arrests the heart in diastole, and atropia causes the heart at once to resume its pulsations. In winter frogs quinine arrests the heart much more slowly, whilst atropine, instead of obviating, actually increases this arrest." Perhaps this latter apparent exception to our criticism may be caused by the mechanical effects of the local application of a substance to the cardiac substance. It is hardly proper to compare this method of experimentation by local application of substances to a frog's heart with that of clinical experience, or to the more crucial experiments of a proper natural administration of medicinal substances to healthy, warm-blooded animals. Therefore without the slightest endeavor to detract from Dr. Ringer's experiments, a little skepticism may provoke a more extended experimentation. Physiological experiments with drugs used upon cold-blooded animals without clinical observation and comparison by the bedside should be mistrusted.

— Dr. H. Augustus Wilson has been appointed as attending physician to the Philadelphia Presbyterian Hospital in the place of Dr. De F. Willard, who lately resigned.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. A. L. MASON.

REPORTED BY DR. WITHINGTON, HOUSE PHYSICIAN.

CHRONIC ULCER OF THE STOMACH; VENOUS THROMBOSIS; PULMONARY EMBOLISM; AUTOPSY.

JOHN S., aged twenty-eight, single, born in Ireland, a marble-polisher by trade, entered the hospital April 9th. He had been in good health till about a year before, when he began to feel weak and tired. Soon after he began to vomit after nearly every meal. The vomiting occurred usually about four hours after the ingestion of food, and was preceded by nausea and by a dull pain in the epigastrium. The vomitus was of a dark brown color. After a month or so the vomiting became less frequent, but the symptom continued until two months before admission, causing great pallor and emaciation. For the last six months he has been confined to bed. Though the vomiting has stopped, the pain still continues, and is of a dull character. Six weeks before entrance he had oedema of both legs, which after two weeks began to diminish, but returned a fortnight ago in the left leg. There has been slight palpitation of the heart with dyspnoea of late.

The patient's appearance was one of extreme anaemia; lips almost colorless. The left leg was oedematous throughout its whole extent, and was in marked contrast to the right one, which, like the rest of the body, was considerably emaciated.

Auscultation showed a moderate amount of oedema at the base of both lungs. A loud murmur in the first sound of heart in second left interspace; also heard to apex apparently anemic; loud venous hum in the neck; no apparent enlargement of the liver or spleen; percussion tympanitic in abdomen, extending well over the hepatic region; the urine was pale, acid, without albumen; specific gravity 1010. Soon after entering patient vomited for the first time in two months; no blood in the vomitus.

Two or three days later the tympanitic resonance in the neighborhood of the stomach became more marked with considerable epigastric tenderness; the appetite was very poor. An examination of the blood was made and the average of four counts gave 1,127,500 red corpuscles to the cubic millimetre; the white corpuscles not increased.

April 14th he began to fail rapidly without any special symptoms, the heart sounds remaining of fair strength. During the night the breathing suddenly became rapid and labored. He tossed about trying to get his breath and died at 3.30 A. M., April 15th.

Autopsy, twelve hours after death. The heart was distended by rather fluid blood; very anemic, with fatty degeneration marked in inter-ventricular septum and in papillary muscles; the lungs on section showed great oedema; at the secondary division of the pulmonary artery on the right, an embolus, dense and very adherent, wholly occluded the vessel at this point; left lung extremely oedematous throughout, with emboli in the smaller arteries; the stomach was enormously distended with undigested food; at the pyloric end was a crescent-shaped ulcer about three inches long, the middle of the crescent coming just behind the pyloric orifice.

¹ *Trans. of the Assoc. of Phys.*, Vol. III., No. 2.
² *Proc. of the Acad. Sci.*, 1880, p. 476.

The ulcer was deep with sharply defined, clean-cut, indurated border. It had pierced the muscular and serous coats of the stomach and gone into the pancreas, which was adherent to the stomach over the seat of the ulcer; it had also touched the upper edge of the liver; along the base of the ulcer were a few little vessels filled with thrombi; there was no stricture of the pylorus, which freely admitted two and a half fingers; the muscular coat at the pyloric end was hypertrophied; there was thrombosis of the left iliac vein extending as far down as the vein was followed; this thrombus also extended around into the right iliac vein and a short distance down that vessel. Spleen and liver not abnormal.

Remarks. In spite of the youth of this patient, the extreme emaciation and cachectic appearance, with the phlegmasia alba dolens, were suggestive of cancer. The tendency to coagulation of the blood in cachectic patients, especially in the subjects of tuberculosis and cancer, rarely in chlorosis, and quite independently of the puerperal condition, has often been remarked. Trousseau says: "In cases in which the absence of any appreciable tumor made me hesitate as to the nature of a disease of the stomach my doubts were removed, and I knew the disease to be cancerous, when phlegmasia alba dolens appeared in one of the limbs. So great, in my opinion, is the semeiotic value of phlegmasia in the cancerous cachexia, that I regard this phlegmasia as a sign of the cancerous diathesis as certain as sanguinolent effusion into the serous cavities."¹

**INTERSTITIAL NEPHRITIS; PYELITIS; SUPPURATION
OF RETRO-PERITONEAL GLANDS; AUTOPSY.**

Alfred P., a French cook, aged forty-eight, entered the hospital April 27th. He had considered himself perfectly well until within three weeks, when he had had severe headache, dizziness, and vomiting. The vomiting has occurred soon after eating and has followed nearly every meal. A week previous to entrance epistaxis. Patient uses no liquor; temperature 100° F.; pulse 88.

The appearance of the patient is somewhat anæmic but he is in good flesh; no œdema; nothing abnormal heard in chest; urine pale; reaction alkaline; specific gravity, 1007; albumen one half per cent.; sediment contained pus and bladder epithelium with crystals of triple phosphate; no casts found.

April 28. The headache is relieved but he has vomited three times since entrance; no blood in vomitus; epigastric tenderness marked.

April 30th. Has vomited quite frequently; says milk never agreed with him even when diluted with lime-water; the epigastric pain has increased in intensity and spread down upon the abdomen where it is now very severe; he is unable to refer the pain to any particular spot; rubs his hands all over the abdomen but chiefly to the right of umbilicus; slight retraction of left testicle is noticed.

May 1. Vomitus dark-colored; no blood; a spontaneous dejection; suppression of urine since yesterday; says he feels a little better.

May 2. Suppression continues; abdominal pain still severe; is slightly delirious this morning; after sitting up in bed a few minutes he turned on to his side and died almost immediately. After death one and one half ounces of urine were withdrawn from the bladder.

Examination revealed nothing further than on the previous occasion.

Autopsy, twenty-eight hours after death. Pericardium adherent to the left ventricle; valves sufficient; slight atheroma of aorta; considerable hypertrophy of the left ventricle, also of the right; weight of heart twenty ounces; consistency and color good; slight interstitial myocarditis and slight fatty change in the papillary muscles; spleen weighed eight and three fourths ounces; old adhesions to diaphragm and neighboring organs; considerable increase of trabeculae; splenic artery somewhat atheromatous in places; in separating the intestines a small amount of pus was found, which proceeded from the chain of glands at the right of the spine; kidneys both small, cortical portion reduced to a minimum; capsule quite adherent; on being stripped off it left an irregular surface; pelvis of left kidney injected; the mucous surface of both ureters uneven and covered with an abundance of pus which extended down into the bladder.

There was nothing in the lungs or brain to account for the sudden death.

Remarks. This case had been regarded as one of interstitial nephritis, but the increasing abdominal pain, dysuria, and retracted testicle pointed to calculous disease of the pelvis. The suppuration of the retro-peritoneal glands in connection with pyelitis is unusual, and the pain which resulted made the use of morphine, in doses of from one sixteenth to one eighth of a grain, necessary. No ill effects from this drug were apparent.

Recent French writers have reported cases of interstitial nephritis with sudden fatal termination, which appeared to be due to syncope without disease of the cardiac valves.

DIPHTHERIA.

CASE I. Henrietta F., aged seventeen, table girl, entered hospital April 30th. Has had sore throat for three days, constantly growing worse. Marked dysphagia, chills, headache, almost complete aphonia.

Both tonsils much swollen, encroaching considerably on passage of fauces; both tonsils covered with dark brownish membrane over their whole surface. [Patient has been having throat painted.] Temperature 103.2° F. Pulse 120.

She was put at once upon the following treatment (adapted from Guttman):—

R7	Pilocarpin nitrat.	.	.	.	.	.	ss.
	Pepsin	.	.	.	.	.	ss.
	Acid. hydrochlor. dil.	.	.	.	.	.	gtt. iii.
	Aquæ	.	.	.	.	.	ad Oss.

Give half an ounce every hour. Immediately after each dose of this medicine to have half an ounce of sherry. Throat atomized every two hours with glycerine and lime water equal parts. An ice-bag about throat. Cracked ice *ad libitum*. To be fed every two hours with liquid food.

May 1st. Right tonsil as before. Left tonsil is more swollen, and the membrane upon it has extended upwards; is not stained as it was yesterday. Patient passed a comfortable night, and the pulse is of good quality. As the ice-bag makes her feel chilly a poultice is substituted. The former medicine is continued, with the addition of twenty minims of chloride of iron every three hours.

May 2d. Right tonsil still enlarged, but membrane has come off, leaving only a spot as large as a split pea at the top. On the left tonsil the membrane is

¹ Trousseau's Clinical Medicine. Sydenham edition. Vol. v., pp. 288, 289.

very extensive, running down as far as can be seen. At the upper half it is black, and there is a well-defined line of demarkation all around it. Patient thinks she has expectorated more in the last two days than before. No sweating. Pulse good.

May 3d. The membrane noted yesterday on left tonsil has much diminished from the periphery on all sides. No new deposit. No diminution in size of tonsil. Odor of breath still remains foul. Some enlargement and tenderness externally at the angle of the jaw. Pulse 90, of good strength. Appetite small; patient comfortable.

Patient is not wakened at night for her medicine; she takes it probably eighteen to twenty times in the twenty-four hours. Each dose contains a little more than one twenty-fourth of a grain of pilocarpin, so that she averages about five sixths of a grain in the twenty-four hours.

May 4th. Right tonsil clear, except for one spot the size of a pin-head. Left tonsil has irregular pieces scattered over it, less in amount than yesterday. At the bottom of the tonsil is the largest piece, about the size of a pea. *r. m.* The membrane on the left tonsil has increased since morning, and extends as far down as can be seen.

May 5th. Left tonsil has cleared off very largely during the night; there remain only a few spots scattered over it. A small deposit on the left side of uvula. Pilocarpin omitted. Sherry reduced to half an ounce every three hours. Iron reduced to three times a day. Poultice about neck omitted. Atomizing continued.

May 6th. Tonsils clear. Atomization omitted. Sherry stopped. Allowed to have her clothes.

May 8th. About her room, much improved.

May 9th. Throat remains clear. Right tonsil still enlarged; patient says it is habitually so. Discharged, *well*.

CASE II. Edward T., aged nineteen, negro, entered the hospital on May 19th, the fifth day of his disease, which had been constantly increasing in severity. He had had all the usual symptoms of diphtheria, including swelling of the glands about the angle of the jaw. No discharge from the nose. Anorexia. Coated tongue. No vomiting. On examination the next morning both tonsils were found much swollen and covered with a dirty, grayish, sloughing membrane, the extent of which was very great. The opposing surfaces of the tonsils met, and with the uvula (which was enlarged and had a white patch) nearly closed the passage of the fauces. The pharynx could hardly be seen. Odor very offensive. Great tenderness at each angle of jaw.

The patient was put on treatment nearly identical with that in the previous case.

May 21st. The membrane has disappeared a little from the sides on the right tonsil, but in a vertical direction is as extensive as before. Left tonsil not much changed. The swelling is less on each side, and the passage of the fauces freer. Membrane seen on pharynx. In the afternoon the pulse remains good. There has been some sweating and somewhat increased expectoration.

May 22d. Uvula very oedematous; no deposit on it. No change in membrane on the tonsils, except that that on the right looks more dirty and sloughing. A thick deposit on the posterior wall of pharynx. Patient says that last evening something burst on left side of throat, discharging chiefly blood. No sign can be

seen to-day of an abscess, on account of the great amount of irregular membranous deposit.

May 23d. Right tonsil much clearer; left still has a good deal of sloughy membrane. At lower part of left tonsil there is a swelling distinct from the rest of the tonsil, about the size of a cherry. Oedema of uvula as before, with a few patches on it. Does not sweat very much. Expectoration very free. On this account, together with a slight weakening of the pulse, the pilocarpin was omitted at night. Other treatment continued.

May 24th. Pulse strong. Glands at the angle of jaw much diminished. Exudation on tonsils and uvula much less. Still considerable swelling of left tonsil and uvula. Patient swallows well, though he reports regurgitation through the nose several times yesterday. Pilocarpin not resumed. Sherry changed to whisky. Poultice to neck omitted.

May 25th. Looks much brighter. Speaks more distinctly. Swallows readily. Swelling diminished. The lower anterior part of left tonsil is quite free, but the remainder is still well covered, and a thin deposit extends forwards upon the anterior palatine arch. Uvula as before, but smaller. Right tonsil has rather a larger area of membrane to-day, but it is thin. All the membrane is smoother and lighter colored than before.

May 26th. There remains behind the uvula at left side a small area of dark-colored, thick, uneven membrane. The rest of the pharynx is clear. Tonsils and uvula have thin white deposits as yesterday. Patient looks bright. Whisky reduced to half an ounce every three hours.

May 28th. Hardly any swelling remains. The parts which had membrane are nearly clear, with only a thin deposit in spots, around which the mucous membrane looks red and healthy.

May 30th. General condition very good. Patches on tonsils and uvula faintly visible.

June 3d. Membrane has wholly gone. Tonsils still look ragged. Patient up and about.

June 6th. Discharged, *well*.

CASES III and IV. Two other mild but undoubted cases of diphtheria were treated by pilocarpin in the same manner.

The first, Mary L., twenty-one, single, entered on the fourth day of the disease, May 26, with membrane upon both tonsils, of which the right was much enlarged. She had herpes labialis, and also three peculiar spots of herpes of size varying from a ten-cent piece to a quarter on the left side of the neck. She was put at once on the treatment. The next day the left tonsil was nearly clear of membrane, though considerably excavated. Right tonsil as before. The pilocarpin was continued without any depressing effect on the pulse till June 1st. The membrane on the right tonsil gradually melted away from the periphery, and later from spots in the centre of the deposit, until June 4th, when it had substantially disappeared, and the patient sat up.

Bella McA., aged nineteen, single, entered with a fading eruption of measles, which had appeared five days before, and with a sore throat of four days' duration. There was at that time a fringe of membrane all about the edge of the uvula, with a thin deposit on the anterior palatine arch. The next day, May 28th, the uvula was more swollen. The deposit had increased, involving the bottom of the left tonsil (size of a pea);

also the right posterior pillar of the fauces, whence it extended a little upon the right tonsil.

In the next two days this membrane diminished, and on June 1st the uvula and tonsils were clear, but there was a patch of the size of a pea on the posterior wall of the pharynx behind the uvula. Two days later the throat was entirely clear. In this case the pilocarpin was given till May 31, then omitted, but resumed the next day on the appearance of membrane in the pharynx, and finally discontinued June 3d, when this last deposit had disappeared.

CASE V. Jennie H., aged four, an inmate of the Pine Street Home, entered the hospital May 16th, with scarlet fever, of which there had been a number of cases in that institution recently. As the eruption faded she failed to improve in a corresponding measure. The temperature remained elevated, and she was restless and fretful, especially at night. The urine revealed nothing abnormal.

May 19th. There was moderate enlargement of the glands at the angle of the jaw, with some tenderness. The throat was reddened, but no membrane could be discovered, and the voice was clear. There began to be a thick and very abundant discharge from the nostrils. Moderate amount of cough. Physical signs in the chest of bronchitis. Vomiting from time to time.

Almost daily examination for the next few days failed to reveal any membrane in the throat. The symptoms continued without amelioration.

May 25th the swelling of the glands had become extreme, and extended backwards behind the sterno-mastoid, especially on the left side. The discharge from the nose still continued abundant and offensive. Inspiration was free, but expiration was interrupted, causing a sound like grunting. Both tonsils were enlarged, but no membrane was visible.

May 26th. For the first time membrane was visible, the posterior pharynx was covered with a dirty deposit; none on the tonsils, which were enlarged and reddened; swelling of neck considerable, especially behind the sterno-mastoid; no difficulty in swallowing; voice clear; tongue slightly coated; pulse 140, and of fair strength.

In addition to the treatment, which had hitherto been mainly expectant, the throat was sprayed with lime-water every two hours. She was given sherry, one half drachm, every hour.

In the next three or four days the glandular swelling subsided; otherwise the symptoms remained unchanged; a good deal of membrane was visible; the odor was not so offensive. The throat was cleansed once or twice a day by placing the child on the side while a stream of water from a fountain syringe was conducted back into the fauces on the upper side of the mouth, and allowed to run out on the lower side. The nares were also syringed. Both of these measures brought away a considerable amount of nasty mucus, but no membrane. The amount of stimulant was varied with the pulse and general condition, at one time being a drachm of sherry every hour.

May 30th. A sharp attack of conjunctivitis came on in each eye, which subsided after two or three days, the eyes being kept well washed with warm water.

June 3d. The child maintains fair strength, though it eats but little; the nasal discharge remains profuse; less membrane is visible than a few days ago.

June 4th. A ragged aperture, as large as a silver five-cent piece, is seen about a quarter inch outside the edge of the right pillar of the fauces; this perfora-

tion extends through, apparently, into the pharynx; the walls of the opening have a sloughy character; the spot now occupied by this orifice in the soft palate yesterday presented no peculiar appearance, so that it seems probable that the perforation occurred from behind forward. The child was now given five drops of the tincture of the chloride of iron every three hours with twenty drops of brandy every hour instead of the sherry. There is no longer any vomiting, but there is reluctance to take any food or medicine or to be disturbed.

June 7th. For the last day or two the patient has looked a little brighter; the pulse is feeble but the child's strength seems fair; the nasal discharge is much diminished; the perforation before noted on the soft palate is now more ragged and sloughy, and there are two small foramina visible outside the left palatine arch, where the mucous membrane looks soft and boggy; air enters the lungs freely, but râles are heard in the front of the chest on each side. The amount of brandy is increased to twenty-five drops every hour.

June 9th. The patient shows great aversion to swallowing, the iron is therefore reduced to five drops three times a day, but she is fed with a teaspoonful of milk every half hour. The perforations before noted on the left side of the soft palate have become blended into one large, ragged opening extending through to the pharynx. There is also an extension of the sloughing process on the right of the uvula.

The urine, which of late has been passed mostly upon the napkin so that no examination has been made for some time, is now retained, requiring the use of the catheter. When first examined the urine was normal, but is now of a specific gravity of 1010, pale, and contains a trace of albumen; the sediment consists of free blood corpuscles, considerable pus, and fine and coarsely granular casts with uric acid crystals. The catheter had to be resorted to a number of times after this.

June 10th. Alimentation by the mouth proving inadequate on account of the child's disinclination to swallow, she was put upon nutritive enemata three times a day in addition to what she could be induced to take by the stomach. The enemata were for the most part well retained.

June 12th. A foul-smelling discharge appears from both ears, which accordingly are syringed with warm water daily. The discharge from the nostrils has nearly ceased, but on giving the douche to the throat some of the water runs out at the nose bringing with it mucus tinged with blood. On inserting the tube to one nostril a large piece of membrane was washed out of the other side. This was the case with nearly every subsequent washing. The fluid as it ran from the mouth contained a large amount of viscid mucus of an offensive odor. The child's strength remains good.

June 14th. The temperature, which has been normal for a few days, is beginning to rise, and the child seems more fretful; pulse 140, of fair strength; a new deposit of membrane is seen on the left tonsil. The pilocarpin treatment was now begun, each dose containing one forty-eighth of a grain; brandy, two drachms, was added to each euema, with half a drachm by mouth every two hours.

June 15th. The spot of membrane seen yesterday has cleared off, but flakes are still removed in washing out the nostrils. The enemata are not well retained. She takes, however, half a drachm of brandy by mouth every hour.

June 16th. This morning she was much weaker, having passed rather a restless night; the pulse was faint; pilocarpin omitted; the discharge from the ears and nose continued tetid. She sank rapidly during the forenoon, and died at one o'clock p. m. Air entered the lungs freely to the last, and the cause of death was apparently exhaustion.

OFFICIAL BULLETINS OF THE PRESIDENT'S CASE.¹

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 22, 1881, 8.30 A. M. {

The President has not vomited since yesterday afternoon, and this morning has twice asked for and received a small quantity of fluid nourishment by the mouth. He slept more quietly during the night, and this morning his general condition is more encouraging than when the last bulletin was issued. Pulse 101, temperature 98.4°, respiration 18.

12.30 p. m. The President has continued this morning to retain liquid nourishment taken by the mouth as well as by enema. There has been no recurrence of the vomiting and no nausea. The parotid swelling is not materially smaller, but continues painless. It has caused for a day or two an annoying accumulation of viscid mucus in the back of the mouth, but this symptom has now much abated. At present his pulse is 104, temperature 98.4°, respiration 18.

6.30 p. m. The President has continued to take nourishment in small quantities at stated intervals during the entire day, and has had no return of nausea or vomiting. The nutrient enemata are also retained. The wound is looking well, and the work of repair is going on in all portions exposed to view. The pus discharged is healthy. At present his pulse is 110, temperature 100.1°, respiration 19.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 23, 1881, 8.30 A. M. {

The President slept the greater part of the night, but awoke at frequent intervals. He has taken since last evening a larger quantity of liquid food by the mouth than in the corresponding hours of any day during the past week. The use of nutrient enemata is continued at longer intervals. The parotid swelling is unchanged. Pulse 100, temperature 98.4°, respiration 18.

12.30 p. m. The President continues to take by the mouth and retain an increased quantity of liquid food. At the morning dressing the wound looked well, and the pus was of a healthy character. The mucus accumulations in the back of the mouth on account of the parotid swelling are less viscid, and now give but little trouble. At present his pulse is 104, temperature 99.2°, respiration 18.

6.30 p. m. The President has continued to take liquid food by the mouth at regular intervals during the day, and has had no recurrence of gastric disorder. The parotid swelling remains unchanged. In other respects the symptoms show some improvement over his condition yesterday afternoon. Pulse 104, temperature 99.2°, respiration 19.

To LOWELL, Minister, London:—

The President's condition is more encouraging than it was at this time last night. During the last twenty-four hours he has swallowed ten ounces extract of beef and eighteen ounces of milk, retaining and digesting both. He has twice asked for food, which he has not done before for several days. Pulse and temperature are both somewhat lower. The swelling of the parotid gland has not specially changed. Its long continuance at present stage increases the fear of suppuration. At this hour (11 o'clock) the physicians report that the President has rested quietly the entire evening.

BLAINE, Secretary.

WASHINGTON, D. C., August 24, 1881.

To DR. D. HAYES AGNEW, Philadelphia, Pa.:—

Subject of removal of President from the White House is being seriously considered. We desire your immediate presence. Answer.

D. W. BLISS.

8.30 p. m. The President passed a very good night, awaking at longer intervals than during several nights past. He continued to take liquid food by the mouth with more relish, and in such quantity that the enema trial was suspended for the present. No change has yet been observed in the parotid swelling. The other symptoms are quite as favorable as yesterday. Pulse 100, temperature 98.5°, respiration 17.

12.30 p. m. The President continues to take liquid food by

the mouth as reported in the last bulletin. His temperature has risen slightly since that time. In other respects his condition is about the same. Pulse 104, temperature 99.2°, respiration 17.

6.30 p. m. Shortly after the noon bulletin was issued an incision was made into the swelling on the right side of the President's face for the purpose of relieving the tension of the swollen parotid gland, and of giving vent to pus, a small quantity of which was evacuated. He has taken a larger quantity of liquid food by the mouth to-day than yesterday, and has been entirely free from nausea. His temperature this afternoon is however, higher than yesterday at the same hour, and his pulse somewhat more frequent. Pulse 108, temperature 100.7°, respiration 19.

To LOWELL, Minister, London:—

The President has not gained to-day. He has had a higher fever than is usual with his febrile rise. In the afternoon an incision was made in the swollen parotid gland by Dr. Hamilton. The flow of pus therefrom was small. The one favorable symptom of his swallowing liquid food with apparent relish, and digestion has continued, but the general feeling up to midnight is one of increased anxiety.

BLAINE, Secretary.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 25, 1881, 8.30 A. M. {

The President slept most of the night. He has taken liquid food by the mouth at stated intervals and in sufficient quantity, so that the enemata have not been renewed. No modification of the parotid swelling has yet been observed. His general condition is much the same as at this time yesterday. Pulse 106, temperature 98.5°, respiration 18.

9.15 A. M. The subject of the removal of the President from Washington at the present time was earnestly considered by us last night and again this morning. After mature deliberation the conclusion was arrived at by the majority that it would not now be prudent, although all agree that it will be very desirable at the earliest time at which his condition may warrant it. We are, moreover, unanimously of the opinion that at no time since the injury has the President exhibited any symptoms of malaria.

12.30 p. m. Since the issue of this morning's bulletin a rise in the President's temperature similar to that which occurred yesterday morning has been observed. His pulse is somewhat more frequent. From the incision in the parotid swelling a few drops of pus were discharged this morning. The size of the swelling has not diminished. In other respects his condition has not perceptibly changed. Pulse 112, temperature 99.2°, respiration 19.

6.30 p. m. There has been little change in the President's condition since the noon bulletin was issued. The frequency of his pulse is now the same as then. His temperature has risen somewhat, but is not so high as yesterday evening. There has been a slight discharge of pus during the day from the incision in the parotid swelling, but it is not diminished in size. No unfavorable change has been observed in the condition of the wound. He has taken by the mouth a sufficient supply of liquid food. At present his pulse is 112, temperature 99.8°, respiration 19.

To LOWELL, Minister, London:—

The President has lost ground to-day. Some of his symptoms this afternoon and evening are of the gravest character. The condition of the swollen gland and of the pulse and temperature suggest serious and alarming complications. His mind at intervals has been somewhat beclouded and wandering. His strength fails, but he still swallows liquid food of a nourishing character, and apparently digests it. On this one fact rests the hope that is still left of a reaction.

BLAINE, Secretary.

EXECUTIVE MANSION, {

WASHINGTON, D. C., August 26, 1881, 8.30 A. M. {

The President slept most of the night, awakening at intervals of half an hour to an hour. On first awakening there was, as there has been for several nights past, some mental confusion, which disappeared when he was fully roused, and occasionally he muttered in his sleep. These symptoms have abated this morning, as on previous days. At present his temperature is slightly above the normal, and his pulse a little more frequent than yesterday morning. Pulse 108, temperature 99.1°, respiration 17.

12.30 p. m. At the morning dressing of the President it was observed that pus from the parotid swelling had found its way spontaneously into his right external auditory meatus, through which it was discharging. Some pus was also discharging through the incision made into the swelling. His wound looks as well as it has done for some time past. His pulse and tem-

¹ Continued from page 299.

perature are at present higher than at the corresponding hour for some days. He continues to take, by the mouth, the liquid food prescribed; nevertheless we regard his condition as critical. Pulse 118, temperature 100°, respiration 18.

6.30 p. m. The President's condition has not changed materially since the last bulletin was issued. He continues to take by the mouth the liquid food prescribed, and occasionally asks for it. Since yesterday forenoon, commencing at 11.30 o'clock, the enemata have again been given at regular intervals, as a means of administering stimulants as well as nutrition. They are retained without trouble. At present his pulse is 116, temperature 99.9°, respiration 18.

To LOWELL, Minister, London: —

While the President has made no gain to-day his loss of ground has been less in the judgment of his physicians than was feared last night. In this aspect there is a slight feeling of encouragement, or at least a ray of hope. The adverse symptoms are still manifest, and the one favorable indication of swallowing and digesting liquid food continues. Two or three times during the day he has asked for nourishment. He has spoken intelligently and voluntarily, and throughout the day his mind has been less affected than yesterday. The expected relief to the parotid swelling from the discharge through the ear has not been realized. The situation is one of great gravity and danger.

BLAINE, Secretary.

EXECUTIVE MANSION, }

WASHINGTON, D. C., August 27, 1881, 8.30 A. M. }

The President slept from half an hour to an hour or more at a time through the night. He continues to retain the liquid food administered by the mouth and the stimulating enemata, nevertheless his pulse has been more frequent since midnight, and he is evidently feebler this morning than yesterday. Pulse 120, temperature 98.4°, respiration 22.

12.30 p. m. There has been no improvement in the President's condition since the last bulletin was issued. He continues to retain the liquid food administered by the mouth as well as the enemata. At the morning dressing the parotid swelling appeared about the same as yesterday. No material change has been observed in the wound since morning. The temperature has risen about a degree, and the pulse has fluctuated somewhat. At present, pulse 120, temperature 99.6°, respiration 22.

6.30 p. m. The President's symptoms show slight amelioration this afternoon. His pulse is somewhat less frequent and his temperature lower. Moreover the mental disturbance described in yesterday morning's bulletin has disappeared. The parotid swelling has discharged a little pus by the opening spontaneously formed into the ear, as well as by the incision made, but is not perceptibly smaller. The liquid food given by the mouth and the enemata continue to be retained. Pulse 114, temperature 99°, respiration 22.

To LOWELL, Minister, London: —

There is a somewhat more hopeful feeling to-night in regard to the President. The regular evening bulletin was more favorable, and the good indications have continued. His pulse is lower, being now 114. His mind is entirely clear. He has shown positive appetite, asking for milk toast, a small quantity of which he was permitted to eat. This is the first time for many days that he has swallowed anything but liquid food. A slight increase in his respiration is the only adverse symptom reported at this hour — 10.30 p. m.

BLAINE, Secretary.

EXECUTIVE MANSION, }

WASHINGTON, D. C., August 28, 1881, 8.30 A. M. }

The amelioration of the President's symptoms announced in last evening's bulletin continued during the night, and since midnight some further improvement has been observed, the pulse progressively diminishing in frequency. The stomach has continued to retain the liquid nourishment administered, and last night he asked for and ate a small quantity of milk toast. Stimulating and nutrient enemata continue to be retained. There has been no mental disturbance during the night or this morning. At present his pulse is 100, temperature 99.4°, respiration 17.

12.30 p. m. At the morning dressing of the President several yellowish points were observed just below the ear over the swollen parotid, and an incision being made about a teaspoonful of healthy-looking pus escaped. There was also some discharge of pus through the two openings into the ear and incisions mentioned in previous bulletins. The wound looks rather less indolent than it has been doing for several days past. Since the morning bulletin there has been some rise of temperature, but little increase in the frequency of pulse, and in other respects no material change has occurred. Pulse 104, temperature 99.5°, respiration 18.

6.30 p. m. The improvement in the President's condition declared yesterday afternoon is still maintained. He continues to take willingly the liquid food given by the mouth and is apparently digesting it. The stimulants and nutrient given by enemata are also retained. At the evening dressing an increased quantity of healthy-looking pus was discharged from the suppurating parotid. The appearance of the wound has not perceptibly changed since the morning dressing. But little rise in temperature or pulse has taken place since noon, and the pulse is perceptibly stronger than at this time yesterday. Pulse 110, temperature 99.7°, respiration 20.

To LOWELL, Minister, London: —

The favorable indications in the President's case have continued since the dispatch of last night. The respiration has grown better, and at this hour (2 p. m.) is nearly normal. The condition of the swollen parotid has visibly improved. A slight increase of fever is observable, but was not unexpected. His mind continues clear. The possibilities of recovery in the judgment of his surgeons have increased and are increasing.

(Signed)

BLAINE.

To LOWELL, Minister, London: —

The condition of the President at 10 o'clock continues as favorable as could be expected. Within the past thirty hours his improvement has given great encouragement to the attending surgeons. He swallows an adequate supply of liquid food, the parotid swelling discharges freely and gives promise of marked improvement. His mind is perfectly clear. He has perhaps a little more fever than was anticipated and his respiration is somewhat above normal. The general feeling is one of hopefulness. Two or three days more of improvement will be needed to inspire confidence.

BLAINE, Secretary.

EXECUTIVE MANSION, }

WASHINGTON, D. C., August 29, 1881, 8.30 A. M. }

The President's symptoms this morning are as favorable as yesterday at the same hour. He slept, awakening at intervals, the greater part of the night. At these intervals he took and retained the liquid nourishment administered. His mind continues perfectly clear. Pulse 100, temperature 98.5°, respiration 17.

12.30 p. m. At the morning dressing of the President's wound an additional point of supuration was recognized in his swollen face, which, being incised, gave exit to some healthy-looking pus. Two other openings on the exterior of the swelling are likewise discharging, but though less tense, the tumefaction (swelling) has not materially diminished in size. Nothing new has been observed in the condition of the wound. The usual daily rise of temperature has not materially changed since morning. Pulse 106, temperature 98.6°, respiration 18.

6.30 p. m. The daily rise of the President's temperature began later this afternoon than yesterday, but rose eight tenths of a degree higher. The frequency of his pulse is now the same as at this hour yesterday. He has taken willingly the liquid food prescribed during the day, and had besides, during the morning, a small piece of milk toast. At the evening dressing a pretty free discharge of healthy pus took place from the parotid swelling, which is perceptibly diminishing in size. The wound manifests no material change. Pulse 110, temperature 100.5°, respiration 18.

To LOWELL, Minister, London: —

The President had a good night and is having a good day. At this hour (2 p. m.) his pulse is 103, showing a decrease from the forenoon. For many days past the pulse has shown a decided increase by this time in the afternoon. His respiration is normal. All other symptoms are reported by his surgeons to be favorable.

BLAINE, Secretary.

To LOWELL, Minister, London: —

At 10.30 to-night the general condition of the President is favorable. Late in the afternoon his pulse rose to 112 and his temperature to 100°, both a little higher than the surgeons expected. The pulse has now fallen to 103, and the fever is subsiding. The parotid swelling is steadily improving, and is at last diminishing in size. Apprehensions of serious blood poisoning grow less every hour.

BLAINE, Secretary.

EXECUTIVE MANSION, }

WASHINGTON, D. C., August 30, 1881, 8.30 A. M. }

The President slept the greater part of the night, awakening at intervals, and retaining the liquid nourishment administered. His general condition this morning is about the same as at the same hour yesterday. Pulse 102, temperature 98.5°, respiration 18.

12.30 p. m. At the morning dressing another small incision was made in the lower part of the swelling on the right side of

the President's face, which was followed by a free discharge of healthy-looking pus. A similar discharge took place through the other openings. The swelling is perceptibly smaller and looks better. The wound remains in an unchanged condition. There has been little rise of temperature since morning, but the pulse is more frequent. In other respects the condition is about the same. Pulse 116, temperature 98.9°, respiration 18.

6.30 P. M. The President has passed comfortably through the day. He has taken the usual amount of nourishment by the mouth, with stimulating enemata at stated periods. His rise of temperature this afternoon is a degree less than yesterday at the same time, and his pulse is less frequent than at noon to-day. The parotid swelling has been discharging more freely and is continuing to diminish in size. Pulse 109, temperature 99.5°, respiration 18.

To LOWELL, Minister, London:—

The President's condition has not materially changed since my last dispatch. Another incision was made this morning in the parotid gland with very satisfactory results. Pus flows freely and the swelling grows less. The pulse at this hour (2 P. M.) is lower than during the forenoon, as yesterday. But on both days it is higher than his other good symptoms would seem to warrant. It is now 110; at noon it was 116.

BLAINE, Secretary.

EXECUTIVE MANSION, 10.30 P. M.

To LOWELL, Minister, London:—

The President, if not rapidly advancing, is at least holding his own. His fever is less than last night and his swollen gland steadily improves. His pulse continues rather high, running this evening from 110 to 114. Perhaps the best indication in the case is that the President himself feels better, and his mind being now perfectly clear he readily compares one day's progress with another.

BLAINE, Secretary.

EXECUTIVE MANSION,

WASHINGTON, D. C., August 31, 1881, 8.30 A. M. }

The President has passed a tranquil night, and this morning his condition is quite as favorable as yesterday at the same hour. Pulse 109, temperature 98.4°, respiration 18.

12.30 P. M. At the dressing of the President this morning the parotid swelling was found to be discharging freely. It looks well, and has materially diminished in size. The wound remains in about the same state. His general condition is evidently more favorable than at this hour yesterday. Pulse 95, temperature 98.4°, respiration 17.

6.30 P. M. The President has passed a better day than for some time past. He has taken his food with increased relish, and the afternoon rise of temperature did not occur. At the evening dressing the fluid used to wash out the parotid abscess found its way into the mouth, which it did not do this morning, showing that an opening into the mouth had spontaneously occurred. The abscess is discharging freely and the swelling continues to diminish. There is some increase in the discharge of pus from the wound. Pulse 109, temperature 98.6°, respiration 18.

To LOWELL, Minister, London:—

The President has had less fever this evening than upon any previous evening since he was wounded. His temperature at 6 o'clock was normal. The entire day has been most encouraging in all his symptoms. Hereafter I shall send but one report daily.

BLAINE, Secretary.

EXECUTIVE MANSION,

WASHINGTON, D. C., September 1, 1881, 8.30 A. M. }

Towards 9 o'clock last evening the President had some feverishness, and his pulse ranged from 108 to 116. This condition, which was unaccompanied by rigors or sweating, had subsided by midnight, and did not interfere with his sleep. He had, on the whole, a good night, and this morning his condition is fully as favorable as yesterday at the same hour. Pulse 100, temperature 98.1°, respiration 17.

12.30 P. M. At the morning dressing of the President the abscess of the parotid was found to be discharging freely. It looks well and continues to diminish in size. The state of the wound remains the same. His general condition is not materially different from what it was at this hour yesterday, except that the pulse is somewhat more frequent. Pulse 108, temperature 98.6°, respiration 18.

6.30 P. M. The condition of the President has not materially changed since my last bulletin, except that there has been a noticeable rise of temperature this afternoon. It having been reported in my last bulletin that the morning's bulletin had been misinterpreted, we would state that the President has had

no rigors for several weeks. At present his pulse is 108, temperature 99.8°, respiration 18.

To LOWELL, Minister, London:—

The President continues to do well in his eating and digestion, and the swollen gland steadily improves; but in the past twenty-four hours he has made no substantial progress in his general condition. In the judgment of his physicians he still holds the ground gained on Sunday and Monday last. His pulse and temperature to-day have shown marked increase over the record of yesterday. The weather has been exceedingly warm and sultry, and this may account in part for the adverse changes noted. Even in the September climate of Washington such an oppressive day as this has been is rare.

BLAINE, Secretary.

EXECUTIVE MANSION,

WASHINGTON, D. C., September 2, 1881, 8.30 A. M. }

The President slept well during the night, and this morning his condition is in all respects as favorable as yesterday at the same hour. Pulse 100, temperature 98.4°, respiration 17.

12.30 P. M. The President's condition has not materially changed since the morning bulletin was issued. Pulse 100, temperature 98.7°, respiration 18.

6.30 P. M. The President has passed a comfortable day, and this evening appears better than for some days past. He has taken a larger proportion of nutriment by the mouth, and manifested greater relish for it. His pulse shows some improvement as regards frequency and strength. The parotid abscess continues to improve. The wound shows as yet little change. This evening his pulse is 104, temperature 99.4°, respiration 19.

EXECUTIVE MANSION,

WASHINGTON, D. C., September 3, 8.30 A. M. }

The President was somewhat more restless than usual during the early part of the night, but slept better after 1 A. M. This morning his general condition does not differ materially from what it was at the same hour yesterday, except that there is a slight increase in the frequency of the pulse. Pulse 104, temperature 98.6°, respiration 18.

12.30. The President's condition has not materially changed since the morning bulletin was issued. Pulse 104, temperature 98.4°, respiration 18.

6 P. M. The President has done well during the day, and has taken, with some relish, a sufficient quantity of nutriment. The parotid swelling continues to discharge freely and to diminish in size. The wound shows no material change. Altogether, his general condition exhibits some improvement over yesterday. Pulse 102, temperature 99.6°, respiration 16.

To LOWELL, Minister, London:—

In the judgment of the surgeons, the President has gained to-day. The change is not great, but it is in the right direction and against the adverse influence of a very oppressive day. His appetite is improving, and his pulse, temperature, and respiration have all been better than might have been expected in such excessive heat. The President will probably be removed to Long Branch early next week to escape the malarious influence of the Washington climate at this season.

BLAINE, Secretary.

EXECUTIVE MANSION,

WASHINGTON, D. C., September 4, 1881, 8.30 A. M. }

The President vomited once late last evening and once about an hour after midnight. Notwithstanding this disturbance he slept well most of the night, and this morning has taken food by the mouth without nausea, and has retained it. His pulse is somewhat more frequent, but in other respects his condition is about the same as at this hour yesterday. Pulse 108, temperature 98.4°, respiration 18.

12.30 P. M. The President's condition has not changed materially since the last bulletin was issued, and there has been no further gastric disturbance. Pulse 106, temperature 98.4°, respiration 18.

6.30 P. M. The President has passed a comfortable day. He has taken his food with some relish, and had no return of the irritability of the stomach reported in the morning's bulletin. The parotid swelling continues to improve, and is now so far reduced that the contour of his face is restored. The wound shows no material change. The rise of temperature this evening has been very slight, but his pulse was more frequent throughout the day than yesterday, or the day before, and he showed more fatigue after the dressing. Pulse 110, temperature 99°, respiration 18.

To LOWELL, Minister, London:—

Last night the President did not rest well, and twice during the night his stomach was so disturbed that he vomited. Dur-

ing the day he has been better, and has swallowed his usual quantity of food and retained it. His pulse, however, has been higher than for the two preceding days. His surgeons do not think he has lost ground, but he certainly has not gained since last night's dispatch. At this hour, 10.30, he is quietly sleeping.

BLAINE, *Secretary*.

EXECUTIVE MANSION, }

WASHINGTON, D. C., September 5, 1881, 8.30 A. M. }

The President was somewhat restless during the early part of the night, but slept well after midnight. He has taken by the mouth and retained the nutriment prescribed. This morning his pulse is less frequent than yesterday. His temperature is a degree above normal. Pulse 102, temperature 99.5°, respiration 18.

12.30 P. M. The President's condition has not changed materially since the last bulletin was issued, except there is some increase in the frequency of the pulse. He has taken with some relish the nourishment administered by the mouth, and had no return of gastric irritability. Pulse 114, temperature 99.5°, respiration 18.

6.30 P. M. No material change has taken place in the condition of the President since morning. The parotid abscess continues to improve, and the wound remains about the same. The pulse is somewhat less frequent than at noon. At present it is 108, temperature 99.8°, respiration 18. Should no untoward symptoms prevent, it is hoped to remove the President to Long Branch to-morrow.

TO LOWELL, *Minister, London* :—

This has been the hottest day of the season and the heat has told upon the President. His pulse and temperature have been higher than for several days past. In other respects there has been no special change, either favorable or adverse. It is expected that he will be removed to Long Branch to-morrow. It is hoped that the sea air will strengthen him.

BLAINE, *Secretary*.

LONG BRANCH, N. J., September 6, 1881, 6.30 P. M.

Since the last bulletin was issued the President has been moved from Washington to Long Branch. He was more restless than usual last night, being evidently somewhat excited by anticipations of the journey. This morning at 5.30 his pulse was 118, temperature 99.8°, respiration 18. We left Washington with the President at 6.30 A. M. Owing to the admirable arrangements made by the Pennsylvania Railroad Company, and to the ingeniously-arranged bed designed by Mr. T. N. Ely, the fatigue incident to the transportation was reduced to a minimum. Nevertheless, as was anticipated, some signs of the disturbance produced by the journey have been exhibited since his arrival by rise of temperature and increased frequency of pulse. At present his pulse is 124, temperature 101.6°, respiration 18.

TO LOWELL, *Minister, London* :—

The President left Washington at half-past six this morning and reached Long Branch at twenty minutes past one. He seemed to bear the journey well, though the heat was very oppressive. After his arrival he was for several hours restless, showed signs of fatigue, and complained that his back had a bruised feeling. His pulse rose to 124 and his temperature to 101.1. At this hour (10.30) he is sleeping, and his fever is abating. His surgeons regard his symptoms as the necessary result of the journey, and expect a favorable change within the next two days. The fever is in part attributed to the excitement he felt at the prospect of coming. He earnestly desired to leave the White House, and his weary eyes welcomed the sight of the sea. The developments of the next sixty hours are awaited with solicitude.

BLAINE, *Secretary*.

LONG BRANCH, N. J., September 7, 1881, 9 A. M.

The President slept the greater part of the night, awakening, however, as often as it was necessary to give nourishment, which he took very well. The fever reported in last evening's bulletin had subsided by 11 P. M. This morning his temperature is normal, and he appears to have quite recovered from the fatigue of yesterday's journey. At the morning dressing the parotid abscess was found to be doing well. The visible parts of the wound looked somewhat better. Pulse 106, temperature 98.4°, respiration 18. The next bulletin will be issued at 6 o'clock this evening.

6 P. M. Notwithstanding the exceptional heat of the weather, the thermometer in his bedroom rising to 94 at 3.30 this afternoon, there was a breeze most of the day, so the President was comparatively comfortable. He has taken his nourishment regularly, and has slept at intervals during the day. At 12.15 P. M. his pulse was 114, temperature 98.4°, respiration 18. Since then there has been some rise of temperature, though less than yes-

terday, and the pulse has somewhat diminished in frequency. At the evening dressing the appearance of the wound was favorable. At present his pulse is 108, temperature 101°, respiration 18.

TO LOWELL, *Minister, London* :—

The President has not gained in the last twenty-four hours. His fever increased considerably during the afternoon, his temperature reaching 101°. He takes food without nausea, but without appetite, and has not improved in strength. The day is said to be as hot as was ever known at Long Branch. Cooler weather is reported from the West, and lower temperature, with relief to the President, is hoped for to-morrow.

BLAINE, *Secretary*.

LONG BRANCH, N. J., September 8, 1881, 8 A. M.

At the morning examination, made at 8 o'clock, the President's pulse was 104, temperature 98.7°, respiration 18. He was restless and wakeful during the early part of the night, but after 12, midnight, slept well until morning. His general condition appears more encouraging.

6.30 P. M. At 12 M. to-day the President's temperature was 98.4°, pulse 94, respiration 17. At the evening dressing, 5.30 P. M., his temperature was 99.1°, pulse 100, respiration 18. He has taken a liberal amount of food, both solid and fluid, with apparent relish. By special request of the President, it has been made our duty to say in this public way to Surgeon-General J. K. Barnes, Surgeon J. J. Woodward, and Dr. Robert Reyburn, that in dispensing with their services as his medical attendants he was actuated only by a wish to relieve them of labor and responsibility which in his improved condition he could no longer properly impose upon them. Both the President and Mrs. Garfield desire to express to these gentlemen, personally, and in the same public manner, their high appreciation of the great skill and discretion which they have so constantly exercised as associate counsel in the management of his case up to the present time.

LONG BRANCH, N. J., September 9, 1881, 8.30 A. M.

At the examination of the President at 8 A. M. the temperature was 98.5°, pulse 100, respiration 17. The conditions of the parotid gland and wound are improving. He was somewhat wakeful in the night, but not restless, and slept sufficiently. The enemata and stimulants have been suspended during the past thirty-six hours. On the whole the past twenty-four hours give evidence of favorable progress.

6 P. M. At the examination of the President at 12 M. to-day the temperature was 98.4°, pulse 100, respiration 17. At the evening dressing at 5.30 P. M. the temperature was 98.8°, pulse 100, respiration 18. It is believed, without referring to the records, that this is the first day since the development of the traumatic fever that the temperature, pulse, and respiration have been so nearly normal and uniform throughout the entire day.

TO LOWELL, *Minister, London* :—

The medical reports are all favorable to-day—morning, noon, and night. The President has not for many weeks done so well for so many consecutive hours. He has had very little fever. His respiration has been normal and his pulse has not exceeded 100. He slept without opiate and gained strength without stimulant. His nights are not so restful as could be desired, but in the twenty-four hours he gets sufficient sleep. The weather, though not excessively warm, continues sultry and oppressive. Much is hoped from the clear, bracing air which may be expected here at this season.

BLAINE, *Secretary*.

LONG BRANCH, N. J., September 10, 1881.

At the examination of the President at 8.30 this morning, the temperature was 99.4°, pulse 104, respiration 18. He slept well during the night, awaking only at intervals of one half to one hour. There is a perceptible increase of strength, with an improved condition of the digestive apparatus. The tumefaction of the parotid has entirely disappeared, and the suppuration has greatly diminished. The wound continues to improve, and presents a more healthy appearance.

In reference to the retirement of Surgeon-General Barnes, Surgeon J. J. Woodward, and Dr. Robert Reyburn from the corps of physicians in attendance on President Garfield, which, if allowed to pass unnoticed, is calculated to reflect injuriously on the professional character of these gentlemen, it is stated that on the Saturday or Sunday preceding the removal of the President to Long Branch, the President communicated to Dr. Bliss the wish that Drs. Barnes, Woodward, and Reyburn should not accompany him there; that, on this information being conveyed to the gentlemen, the latter were reluctant to be left, and, in order to adjust the matter, they appealed to Dr. Agnew,

who effected a compromise by which Drs. Barnes, Woodward, and Reyburn were to accompany the President from Washington to Long Branch, and that their connection with the case should cease. In answer to these statements, I beg leave to say that I am entirely ignorant of any such transaction, and certainly never was asked to act as a referee in the settlement of any question of the kind. No one knowing the high personal and professional character of the three gentlemen in question would for one moment do them the great injustice to believe that they would desire to continue their connection with a case after receiving the information purported to have been made.

(Signed) D. HAYES AGNEW.

LONG BRANCH, N. J., September 10, 1881, 8.30 A. M.

There is a perceptible increase of strength, with an improved condition of the digestive apparatus. The tumefaction of the parotid has entirely disappeared, and the suppuration has greatly diminished. The wound continues to improve, and presents a more healthy appearance. Pulse 104, temperature 99.4°, respiration 18.

6 P. M. At the examination of the President at 12 to-day his pulse was 100, temperature 98.5°, respiration 18. At 5.30 this evening his pulse was 100, temperature 98.7°, respiration 18. The President has taken a greater amount of liquid, with some solid food, and with more relish than for several days. His general condition is quite as favorable as yesterday.

To LOWELL, Minister, London:—

After dispatch of last night the President had considerable increase of fever. Indeed, a rise of pulse and temperature every night has become a significant feature in his case. Through the day, and especially this afternoon, he has grown more comfortable. A cold easterly storm has prevailed since early morning without evil effect thus far on his condition. Secretary Windom had a brief interview with the President at noon. He found him much reduced in strength, but clear in his mind. He asked the Secretary about the success of the refunding of the public debt.

(Signed) BLAINE, Secretary.

LONG BRANCH, September 11, 1881, 9 A. M.

At the examination of the President at 8.30 A. M. his temperature was 99.8°, pulse 104, respiration 19. He was more restless, and the febrile rise was later than on the preceding night. He continues to take sufficient nourishment without gastric disturbance.

6 P. M. The President has passed a quiet day, although the temperature has been somewhat higher and his pulse more frequent than during the previous twenty-four hours. At the evening dressing quite a large slough of connective tissue was removed from the region of the parotid gland. He continues to take a sufficient quantity of nourishment, and enjoys it. At the noon examination the temperature was 100°, pulse 110, respiration 20. At the evening dressing his temperature was 100.6°, pulse 110, respiration 20.

To LOWELL, Minister, London:—

The President had an increase of fever last night, and was very restless until 5 o'clock A. M. During the day he has been somewhat better, but his pulse, temperature, and respiration have been higher for the entire twenty-four hours than on any preceding day since he reached Long Branch. His other symptoms are not reassuring, and his general condition gives rise to anxiety.

BLAINE, Secretary.

LONG BRANCH, September 12, 1881, 9 A. M.

The President passed an unusually good night, his sleep being uninterrupted, except occasionally, to enable him to take nourishment. The suppuration from the parotid gland has almost entirely ceased; the opening from which the pus discharged is rapidly healing. The cough is less, and the expectoration materially diminished. The temperature is 98.4°, pulse 100, respiration 18.

6 P. M. The President has experienced since the issue of the morning bulletin further amelioration of symptoms. He has been able to take an ample amount of food without discomfort, and has had several refreshing naps. At the noon examination the temperature was 99.2°, pulse 106, respiration 20. At 5.30 P. M. the temperature was 98.6°, pulse 100, respiration 18.

To LOWELL, Minister, London:—

The President slept well last night and his condition to-day is not so comfortable and more favorable. During my absence for a short time Dr. Agnew and Dr. Hamilton will send you a daily report.

BLAINE, Secretary.

To LOWELL, Minister, London:—

In the absence of Mr. Blain the attending physicians have requested me to inform you of the President's condition. He

has during the day eaten sufficient food with relish, and has enjoyed at intervals refreshing sleep. His wound and the incisions made by the surgeons all look better, the parotid gland has ceased suppuration, and may be considered as substantially well. He has exhibited more than his usual cheerfulness of spirits. His temperature and respiration are now normal, and his pulse is less frequent and firmer than at the same hour last evening. Notwithstanding these favorable symptoms, the condition of the lower part of the right lung will continue to be a source of anxiety for some days to come.

MACVEAGH.

LONG BRANCH, N. J., September 13, 1881, 8.30 A. M.

At the examination of the President at 8 A. M. to-day his temperature was 99.4°, pulse 100, respiration 20. He passed a comfortable night, sleeping most of the time, and on the whole his condition this morning is encouraging, and gives promise of a good day.

6 P. M. At the examination of the President at 12 M. to-day the temperature was 98.8°, pulse 100, respiration 20. At the evening dressing, at 5.30 P. M., temperature was 98.4°, pulse 100, respiration 20. The President was placed in a semi-recumbent position upon an invalid chair at 11 A. M., and remained one half hour without fatigue or discomfort. The wounds are making the usual favorable progress and his general condition is reassuring.

To LOWELL, Minister, London:—

There has been no material change in the President's condition during the last twenty-four hours. He was moved, at his own request, this forenoon from his bed to an extension chair, in which he remained for half an hour, and he has been less inclined to drowsiness during the day than usual. The weather is now very favorable, and the physicians think they discover signs of a slight improvement in his symptoms. They expect him to pass a very comfortable night.

MACVEAGH.

LONG BRANCH, N. J., September 14, 9 A. M.

At the examination of the President at 8.30 this morning, the temperature was 98.4°, pulse 100, respiration 19. He passed the night comfortably, sleeping sufficiently. He is bright and cheerful this morning, and has taken fruits and his first meal for the day with relish.

At the examination of the President at 12 M., to-day, his temperature was 98.8°, pulse 104, respiration 20. At the evening dressing at 5.30 P. M. the temperature was 99.2°, pulse 112, respiration 21. The President was placed on the invalid chair in a semi-recumbent position about 12 M., and remained one hour and a half, sleeping a part of the time. He was not fatigued by the transfer or change of position, and his general condition this evening is as favorable as usual, notwithstanding a slight febrile rise.

To LOWELL, Minister, London:—

There is an increase, this evening, in the President's temperature, pulse, and respiration, but it is so slight as not necessarily to indicate that the condition of the blood is producing any new complications. The trouble in the right lung is not increasing, and is causing him less annoyance. He has taken adequate nourishment, and his sleep has been natural and refreshing, so that, if he has gained nothing, he has, probably, lost nothing during the day.

MACVEAGH.

LONG BRANCH, N. J., September 15, 9 A. M.

At the morning dressing, at 8.30 to-day, the President's temperature was 98.4°, pulse 100, respiration 20. He passed the night comfortably, sleeping until 3 A. M., when he was awake for a period of two hours, during which time the pulse rose to 120, but without the marked elevation of temperature which has characterized the febrile disturbance heretofore. After this time he slept until morning. More nourishment was given during the night than for several nights past. In reviewing the case of the President since his arrival at Long Branch, it may be said that, in spite of the various septic accidents which have for several weeks and do still complicate his case, he has certainly not retrograded, but, on the contrary, has made some progress towards convalescence.

5.30. The President has passed a quiet day, sleeping a little; has coughed occasionally, the expectoration being less purulent. A greater variety of nourishment has been taken without discomfort. He was placed upon the invalid chair, and remained forty-five minutes in a position a little more elevated than on previous occasions. At 12 M. to-day his temperature was 98.5°, pulse 102, respiration 21. At the evening dressing, 5.30 o'clock, the temperature was 99.2°, pulse 104, respiration 21.

To LOWELL, Minister, London:—

The President's condition does not appear to have undergone any material change to-day, all his symptoms continuing sub-

stantially the same as yesterday, except that the expectoration from the right lung has been rather less difficult and less profuse. He is still very weak, and this weakness is due to the condition of the blood. While it continues grave anxiety must also continue.

MACVEAGH.

LONG BRANCH, N. J., September 16, 1881, 9 A. M.

At the examination of the President at 8.30 this morning the temperature was 98.6°, pulse 104, respiration 21. The febrile rise during the night was not as pronounced as it usually has been. There was at times considerable acceleration of pulse. He, however, slept comparatively well, and took stimulants and nourishment as directed. The cough was somewhat more troublesome during the first part of the night, and the expectoration rather more purulent. The discharge from the wound is less abundant, and not quite as healthy in appearance. The pulse, however, has more volume, and his general condition does not seem to have materially changed in any respect.

6 P. M. At the examination of the President at noon to-day, the temperature was 99.8°, pulse 116, respiration 21. At the evening dressing, at 5.30 P. M., the temperature was 98.6°, pulse 104, respiration 22. A slight febrile rise occurred at 11 A. M., and had entirely subsided at 2 o'clock, P. M. The condition of the wound remains unchanged. The cough has not been so frequent or persistent, but the sputa still remain purulent. Nourishment and stimulants have been given in increased quantities without discomfort. Altogether, his general condition cannot be said to be improved.

TO LOWELL, Minister, London:—

There has been no very marked change in the President's condition, but it is not at this hour (10.30 P. M.) reassuring. The different symptoms are almost all slightly aggravated. The temperature and the pulse have fluctuated more than usual, and the respiration is rather more frequent, while the character of the discharges continue to be unsatisfactory. There is, therefore, a sensible increase of anxiety.

MACVEAGH.

LONG BRANCH, N. J., September 17, 1881, 9 A. M.

At the morning examination and dressing of the President the temperature was 99.8°, pulse 108, and respiration 21. The fluctuations of the pulse during the night varied from 116 to 130. The temperature during this time not deviating much from normal. He slept quite well, taking nourishment at proper intervals. His cough was not troublesome, and the expectoration moderate. The discharge from the wound is more healthy, and the color of the granulations slightly improved.

At the examination of the President at 12 M., to-day, the temperature was 102°, pulse 120, respiration 24. At 11.30 A. M. he had a severe chill, lasting half an hour, followed by perspiration.

6 P. M. Since the noon examination there has been a gradual fall of temperature, with diminished frequency of pulse and respiration, so that, at the evening examination, the temperature was 98°, pulse 102, respiration 18. He has slept most of the time during the afternoon, and has taken his nourishment at proper intervals. The cough has been less frequent than usual.

TO LOWELL, London:—

The President had a severe chill this forenoon, lasting for half an hour, and followed by considerable fever and perspiration. Since then there has been a gradual decrease in pulse, temperature, and respiration, and he has slept most of the time. There has been no gain in strength nor any evidence of repair, and the situation is now, probably, more grave and critical than at any time heretofore.

MACVEAGH.

TO LOWELL, London:—

The President passed a comparatively quiet and comfortable day, but this evening he had another chill, of less duration than that of yesterday, but sufficient to increase the very great anxiety already existing. He has also been slowly growing weaker, and his present condition excites the gravest apprehensions.

MACVEAGH.

LONG BRANCH, N. J., September 18, 1881, 9.30 A. M.

At the examination of the President at 8.30 A. M., the temperature was 98°, pulse 102, respiration 18. There was no perceptible febrile rise during the night, the pulse ranging from 102 to 112. The cough was less troublesome than on previous nights, and the expectoration unchanged. He is able to take nourishment and stimulants required, without gastric disturbance, nor has there been evidence of mental aberration during the night.

6 P. M. The President, though quite weak, has passed a very quiet day. There has been no recurrence of chill nor mental

disturbance. At 9 A. M. a slight febrile rise took place and began to subside at 11 o'clock, at which time the temperature was 100°, pulse 116, respiration 20. There has been no increase of cough or change in the character of the expectoration. At the evening examination, 5.30 P. M., the temperature was 98.4°, pulse 102, respiration 20.

LONG BRANCH, N. J., September 19, 1881, 9 A. M.

The condition of the President this morning continues unfavorable. Shortly after the issue of the evening bulletin he had a chill lasting fifteen minutes. The febrile rise to lowing continued until 12 midnight, during which time the pulse ranged from 112 to 130. The sweating that followed was quite profuse. The cough, which was troublesome during the chill, gave him but little annoyance the remainder of the night. This morning at 8 A. M. the temperature was 98.8°, pulse 106 and feeble, respiration 22. At 8.30 another chill came on, on account of which the dressing was temporarily postponed. A bulletin will be issued at 12.30 P. M.

12.30 P. M. The chill from which the President was suffering at the time the morning bulletin was issued lasted about fifteen minutes, and was followed by a febrile rise of temperature and sweating. He has slept much of the time, but his general condition has not materially changed since. Temperature 98.2°, pulse 104, respiration 20.

6 P. M. Though the gravity of the President's condition continues, there has been no aggravation of symptoms since the noon bulletin was issued. He has slept most of the time, coughing but little and with ease. The sputa remains unchanged. A sufficient amount of nourishment has been taken and retained. Temperature 98.4°, pulse 102, respiration 18.

TO LOWELL, Minister, London:—

The President had another chill of considerable severity this morning, which, following so soon after the chill of last evening, left him very weak indeed. His pulse became more frequent and feeble than at any time since he recovered from the immediate shock of the wound, and his general condition was more alarming during the day. His system has reacted to some extent, and he passed the afternoon and evening comfortably. At this hour he is resting quietly, and no disturbance is expected during the night. There has been, however, no gain whatever in strength, and there is, therefore, no decrease of anxiety.

MACVEAGH.

ELBERON, N. J., September 19, 1881, 11.30 P. M.

The President died at 10.35 P. M. After the bulletin was issued at 5.30 this evening the President continued in much the same condition as during the afternoon, the pulse varying from 102 to 106, with rather increased force and volume. After taking nourishment he fell into a quiet sleep about 35 minutes before his death, and while asleep his pulse rose to 120, and was somewhat more feeble. At 10 minutes after 10 o'clock he awoke complaining of severe pain over the region of the heart, and almost immediately became unconscious and ceased to breathe at 10.35.

D. W. BLISS,

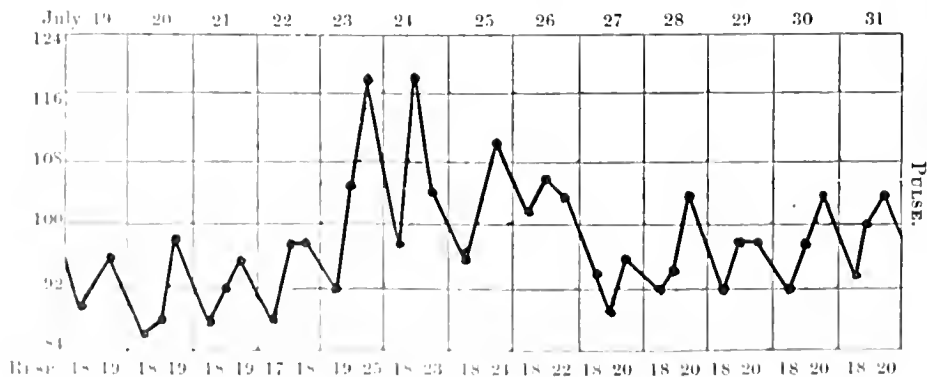
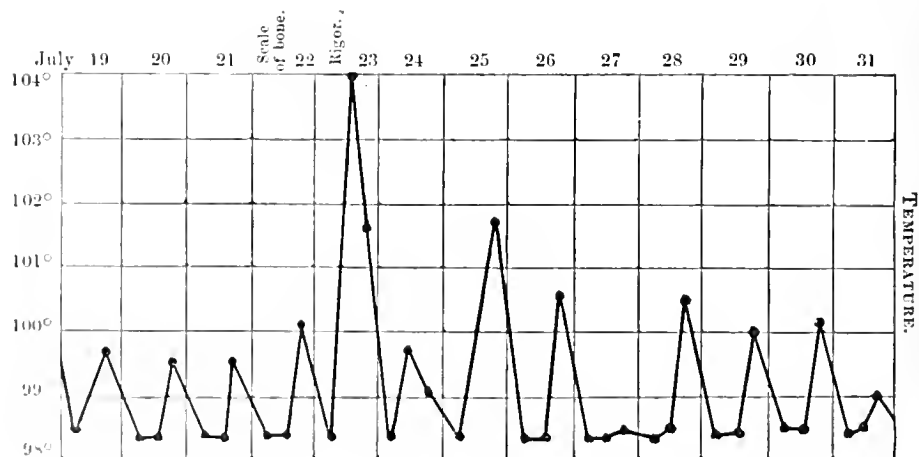
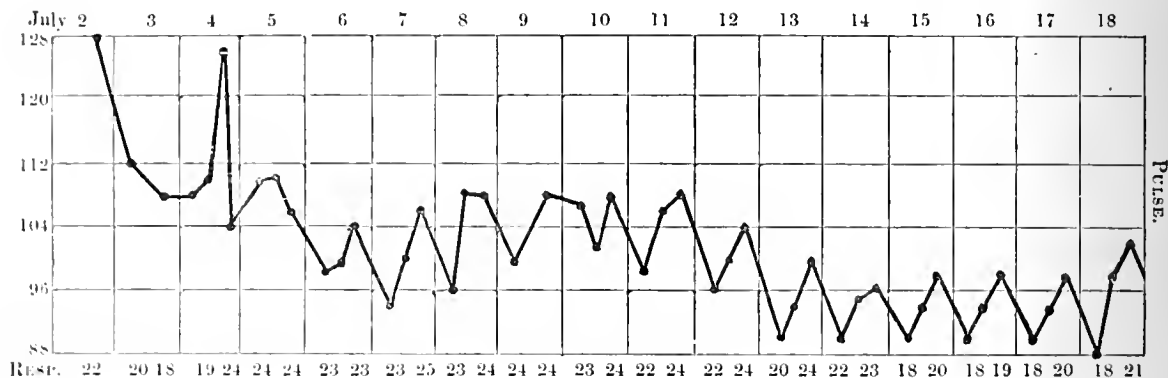
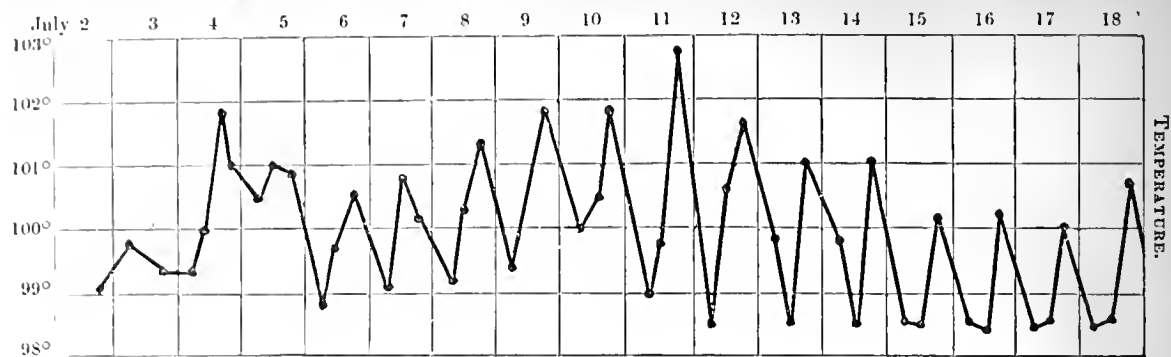
FRANK H. HAMILTON,

D. HAYES AGNEW.

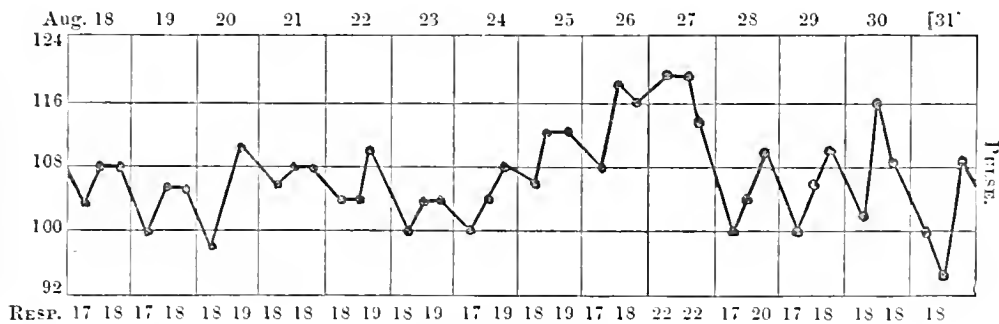
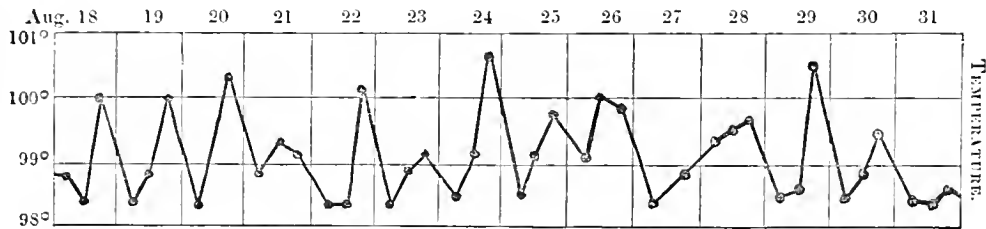
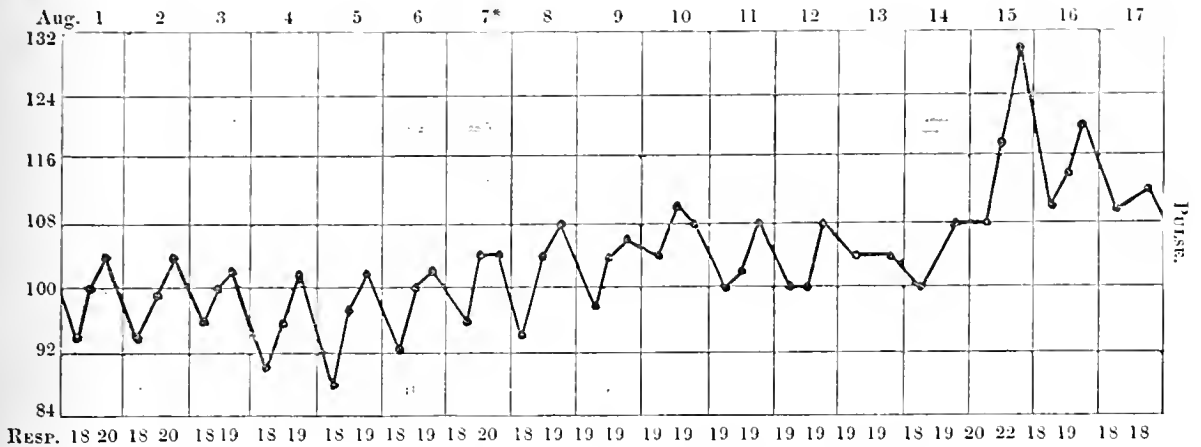
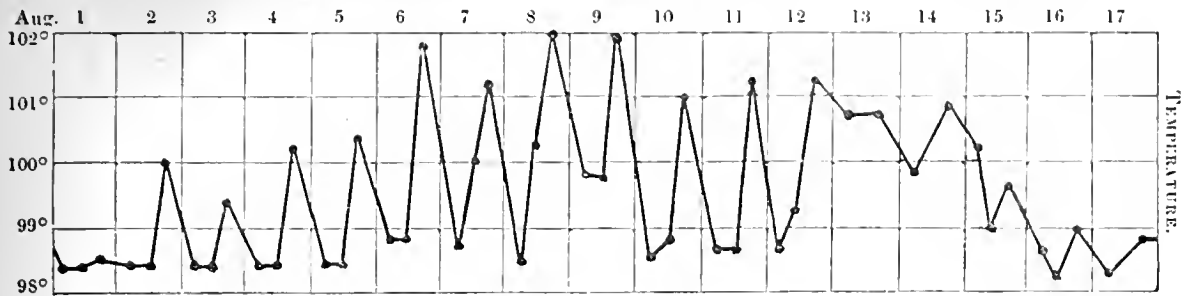
LONG BRANCH, N. J., September 20, 11 P. M.

By previous arrangement a post-mortem examination of the body of President Garfield was made this afternoon in the presence and with the assistance of Drs. Hamilton, Agnew, Bliss, Barnes, Woodward, Reyburn, Andrew H. Smith, of Elberon, and Acting-Assistant Surgeon D. S. Lamb, of the army medical museum, Washington. The operation was performed by Dr. Lamb. It was found that the ball, after fracturing the right eleventh rib, had passed through the spinal column, in front of the spinal canal, fracturing the body of the first lumbar vertebra, driving a number of small fragments of bone into the adjacent soft parts, and lodging just below the pancreas about two inches and a half to the left of the spine, and behind the peritoneum, where it had become completely encysted. The immediate cause of death was secondary hemorrhage from one of the mesenteric arteries adjoining the track of the ball, the blood rupturing the peritoneum, and nearly a pint escaping into the abdominal cavity. The hemorrhage is believed to have been the cause of the severe pain in the lower part of the chest complained of just before death. An abscess cavity, six inches by four in dimensions, was found in the vicinity of the gall bladder, between the liver and the transverse colon, which was strongly inter-adherent. It did not involve the substance of the liver, and no communication was found between it and the wound. A long suppurating channel extended from the external wound between the loin muscles and the right kidney, almost to the right groin. This channel, now known to be due to the burrowing of pus from the wound, was supposed during life to have been the track of

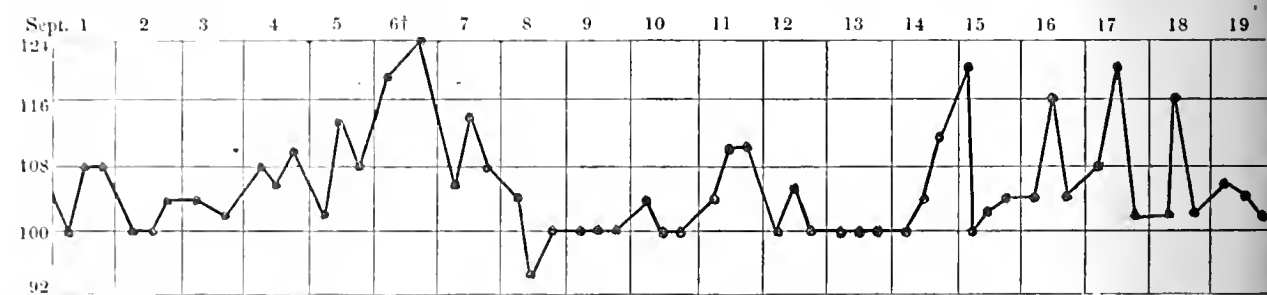
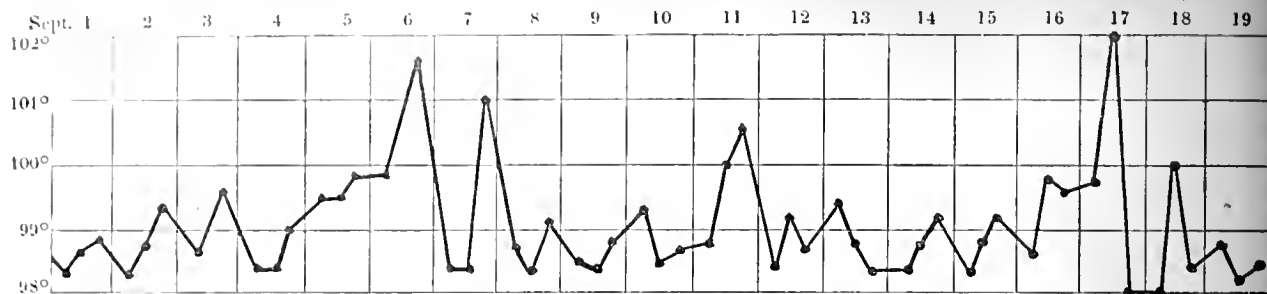
VARIATIONS OF TEMPERATURE, PULSE, AND RESPIRATION FROM JULY 2 TO SEPTEMBER 19, 1881.



VARIATIONS OF TEMPERATURE, PULSE, AND RESPIRATION FROM JULY 2 TO SEPTEMBER 17, 1881.



VARIATIONS OF TEMPERATURE, PULSE, AND RESPIRATION FROM JULY 2 TO SEPTEMBER 19, 1881.



Resp. 17 18 17 19 18 16 18 18 18 18 18 18 18 17 18 18 18 19 20 18 18 20 20 19 21 20 21 22 21 18 18 20

* Removed to Long Branch.

the ball. On an examination of the organs of the chest evidences of severe bronchitis were found on both sides, with broncho-pneumonia of the lower portions of the right lung, and, though to a much less extent, of the left. The lungs contained no abscesses and the heart no clots. The liver was enlarged and fatty, but free from abscesses; nor were any found in any other organ except the left kidney, which contained, near its surface, a small abscess about one third of an inch in diameter. In reviewing the history of the case in connection with the autopsy, it is quite evident that the different suppurating surfaces, and especially the fractured spongy tissue of the vertebrae, furnish a sufficient explanation of the septic condition which existed.

D. W. BLISS,
J. K. BARNES,
J. J. WOODWARD,
ROBERT KLYBURN,
FRANK H. HAMILTON,
D. HAYES AGNEW,
ANDREW H. SMITH,
D. S. LAMB.

Recent Literature.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M. D., etc. Part IX. Philadelphia: J. B. Lippincott & Co. 1881.

The ninth part of Professor Duhring's *Atlas of Skin Diseases* has appeared. It consists of four admirably-executed plates: two of eczema rubrum, one of pemphigus, and one of ecthyma. Eight times already have we expressed our ever-increasing admiration of this remarkable series of representations of cutaneous affections, nothing even approaching which has ever yet been offered to the world, if we, perhaps, except the works of F. Hebra and H. C. Hebra in the *Vienna Atlas*. We need not labor to what we have previously written in the *Journal* upon this subject, but we can reassert and confirm it, and the fact that the present number completes the series leads us to take this final opportunity to once more recommend the work.

To briefly summarize, then: it is, as stated, the best atlas of the kind. It is good consistently, from the first to the final plate, not, as is usually the case, steadily degenerating after the first number issued to draw subscriptions. It portrays the cases which it is the lot of the physician to encounter, not the wonderment-provoking monstrosities of the specialty. The accompanying text is, of course, excellent, as might be expected, coming from the author of *Diseases of the Skin*, the best book ever published upon this subject for English-speaking physicians.

This concluding number contains a complete list of contents, and Dr. Duhring's classification of diseases of the skin is also appended. The work is *par excellence* the atlas to study and to purchase. E. W.

The Care of Infants. By JOHN A. KEATING, M. D., Lecturer on Diseases of Children at the University of Pennsylvania, etc. Philadelphia: Henry C. Lea's Son & Co. 1881.

This little "guide" has been written by the author at the request of "some young mothers who have placed themselves and their children under his guidance," and who have urged him "to give them a little book."

To such we have no doubt it will prove a great help and comfort, and will supply a want which all young mothers must at times experience, namely, for concise and practical directions in black and white, so to speak, upon questions liable to arise daily, and a knowledge of which, the author rightly says, only lengthy visits of the physician would enable him to impart. To these the instructions will come with an authority which only the family physician possesses in virtue of the confidence and trust placed in him. This little book, however, possesses many merits entitling it to a wider circle of readers, which we have no hesitation of predicting for it.

Medical and Surgical Journal.

THURSDAY, OCTOBER 6, 1881.

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HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

A REORGANIZATION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

WE are glad to note the attempt to infuse new life into the dormant sections of the Suffolk District Medical Society. This Society, being the representative of the Massachusetts Medical Society in Boston, should represent it worthily; to this end it should be the exponent of the best medical work and thought in the district. Being free from the reproach of exclusiveness, its field of usefulness should be more extended than that of other medical societies, and its meetings should furnish evidence of a high standard of professional attainments, and afford a field of impartial and trenchant criticism, so essential to the preservation of such a standard. In this way only can the Society become an educator and fulfill the acknowledged end of its existence — medical improvement. In the present multiplicity of subjects the general transactions of a society naturally fail to represent fully the separate special interests of the individual members, and experience elsewhere has proved the sectional plan of work to be the one best adapted to secure such interest and participation.

Some years ago the Suffolk District Society was divided into eight sections, in the hopes that the individual interest in the Society might be increased. Hitherto this has not been the case, the other medical societies having assumed, perhaps naturally, from their restricted membership, a more important position in the minds of many. Another cause of failure was the too extreme subdivision of the sections, the body of the profession not being large enough to justify this. Some months since the sections of surgery and clinical medicine and pathology each held an experimental meeting. The unanimous opinion of those present was in favor of continuing these meetings during the coming winter. The committee of supervision of the general Society, believing the time ripe for another attempt to awaken the interest of the members, recommended to the Society that the number of general meetings be reduced to four annually, in order that a better opportunity might be given for sectional work. The report of the committee was adopted. During the coming Society year the two sections previously mentioned, and that of obstetrics and gynecology, will meet at such intervals as the members may determine. Membership may be acquired by simply notifying the secretary of the general Society of the section or sections which one wishes to join.

We heartily sympathize with this movement, and

wish it entire success. There is a strong feeling among the younger portion of the profession that the need for the existence of so many medical societies has passed away, and that the Suffolk should become the most important and representative, if not the only one. There is a certain amount of justice in the charge that hitherto the other societies have monopolized the best material, and closed their doors against some of those who should benefit by it. It is no justification to plead that the transactions are published; *virtu voce* is as needful for the busy practitioner as for the student. One with large opportunities for observation owes a duty to his less favored brother practitioner as well as to the student, a duty not always recognized as fully as it might be.

That worthless material and perhaps unpleasant criticism can only be excluded by a restricted membership is an argument, which has all the defects of its merits; a medical society may more profitably and successfully crush out the bad by the preponderance of good, and honest criticism, however aggressive, is less dangerous than its repression.

The success of this movement in the Suffolk District Society depends on the amount of legitimate interest aroused and work done in these several sections. There is the best opportunity there for free discussion and criticism. A common interest should stimulate these, but the impulse must be general, and those who wish the Suffolk District Medical Society to advance must put their own shoulders to the wheel, and not content themselves with approving the efforts of their neighbors. There must be a consensus of hearts and hands based upon a persistent rather than a spasmodic determination to accomplish the desired result.

THE ISLE OF WIGHT.

THE sanitary condition of the Isle of Wight has been for some time viewed with suspicion by those knowing something about it. Both the water supply and the drainage of various parts of the island to which invalids — and among these many Americans — are accustomed to resort, have been regarded as defective. Dr. Ballard, the well-known English health officer, has recently reported the results of an investigation undertaken at the request of the Local Government Board, results confirmatory of the most unfavorable suspicions entertained. It is well that our countrymen seeking for health or pleasure should be on their guard in visiting this favorite resort until the evils complained of shall have been corrected. It is not worth while to go so far to get typhoid fever, a disease which can be indulged in at many spots, otherwise not unattractive, much nearer home.

From a late number of the *London Practitioner* we select some remarks upon the condition of the island, and Dr. Ballard's report:—

"To the tourist and health-seeker alike the Isle of Wight — the so-called Garden of England — is, perhaps, the most fascinating resort in Great Britain. Whatever would tend to derogate from this view of the island should be regarded as much as a general as

a local calamity. Yet, strange to say, so heedless are the inhabitants and their representatives of this matter that they would appear to have entered into an unavowed but not less real conspiracy to damage the reputation of the island both as a pleasure and a health resort in the opinion of outsiders.

"The Local Government Board, having resolved to subject the sanitary administration of the island to investigation, delegated the task of inquiry to Dr. Ballard. This gentleman's report on the subject has now been made public, and it is of a nature which will cause all thoughtful persons to reflect before they enter upon the perilous course (for such it would appear to be) of visiting this island either for pleasure or for health. The island, it would appear, for sanitary purposes, is placed under the supervision of nine several sanitary authorities, each separate from, and acting independently of, the others, recognizing no common interest, and possessing no means of coördination. The result of such an organization (if the term organization may be applied to what on the face is an obvious disorganization) is that the sanitary affairs of the island are in the utmost state of confusion, and that the authorities, who should be responsible for keeping the island free from those accidental sources of impurity which necessarily accompany houses and communities, have done nothing of the sort, or done so only in the incompletest fashion, and that the island has become defaced by conditions detrimental in the highest degree to its own inhabitants, and peculiarly detrimental to the health and well-being of visitors. There would seem to have happened in the Isle of Wight that which has happened too often in health resorts elsewhere, that the inhabitants, satisfied with the advantages they derive from their topographical position, advantages here apparently sealed by the approval of royalty, have held themselves absolved from careful attention to those subsidiary conditions of wholesomeness which attach to the regulations of buildings and the provisions for the ordinary conditions of domestic life. Let us endeavor to illustrate these points from Dr. Ballard's description of the state of the several sanitary districts into which the island is divided.

"Enteric fever claims attention equally in the rural districts of the island as in other districts, and Dr. Ballard's report shows that there is no part of the island to which the visitor can go without exposing himself to peril in consequence of the shortcomings of its sanitary authority. In fact, it would almost appear as if the sanitary authorities of this beautiful spot had determined (however unintentionally) that from being known as the Garden of England, the Isle of Wight should become known as the Midden-land of Southern England."

CONTRIBUTION TO MALARIA IN NEW ENGLAND.

WE learn that eight or ten cases of intermittent fever of unquestionable local origin have been observed in Millbury, in this State. Millbury, as our

readers know, is a pleasant manufacturing town of about 5000 inhabitants, situated on the Blackstone River, not far from Worcester.

COMPULSORY RETURNS OF TYPHOID FEVER.

THE Boston Board of Health have notified the physicians of the city that hereafter typhoid fever, in addition to small-pox, scarlet fever, typhus fever, and diphtheria, will be regarded as falling within the meaning of Chapter 26 of the General Statutes. The return of all cases of typhoid to the Board is therefore compulsory under penalty of the usual fine.

This step has doubtless been hastened by the rather unusual frequency of typhoid in this city and elsewhere this summer. In itself it should cause no alarm to householders. It is so proper that typhoid fever should be classed with the other diseases whose return is compulsory that it is only surprising this was not done before. There is no disease whose spread may be more easily controlled by suitable precautions and supervision, at the same time that there is no disease more constantly and regularly amongst us.

MEDICAL NOTES.

—The seventh annual meeting of the Tri-State Medical Society will be held in St. Louis, October 25, 26, 27, 1881. The headquarters of the association will be at the Lindell Hotel, and the sessions will be held in the ladies' ordinary of the hotel. Three sessions will be held each day. Each session will be called promptly. The rule limiting papers to twenty-five minutes will be strictly enforced. Time for discussion will be given after each paper, or series of papers. A social entertainment will be given if there is time, — not otherwise.

PHILADELPHIA.

—The various medical and dental schools in this city began their preliminary lectures September 5th; the regular winter session will open October 3d. During the summer extensive alterations have been going on at Jefferson; the classical front with its Corinthian pillars is a thing of the past. The college now comes out with a new face of ornamented brick, to match the adjoining laboratory building erected some years ago. It is said that the additional room gained by the change in the front will increase the seating capacity of each of the two large lecture halls by about one hundred. An additional dissecting room has also been obtained by building another story on the back of the college. Opportunity has been taken to improve the ventilation, which was greatly needed. All of the schools in Philadelphia anticipate larger classes this winter than last one, and a goodly number of students are already in the city.

—The Board of Health (so called) of this city have earned the reputation of devoting the greater part of their intellectual energy and valuable time to

the discussion of questions of mainly personal interest (the medical members being in the minority). The contractors for street-cleaning having for a long time notoriously slighted or neglected the duties for which they were paid, the Board of Health has made some spasmodic efforts to have the work done, but apparently without much effect. The streets are so dirty in many places as to directly invite disease, and it would defy Hercules to restore them to a condition creditable to Philadelphia. In the mean time zymotic disease is ever with us. Small-pox is again on the increase; after existing here for nearly two years it still claims its weekly quota of deaths, no efficient steps having been taken towards stopping its course. It seems to be the prevailing belief among our city fathers that all that is needed to check an epidemic of small-pox is free vaccination. This is encouraging to the friends of vaccination, but it is hardly the whole duty of a sanitary board in the premises. It is really not surprising that the epidemic continues, since there is no satisfactory and systematic plan in use for the disinfection of clothing and bedding or the destruction of fomites; there is no isolation and quarantining of the sick; there is no house-to-house visitation, and no penalty for communicating the disease. To make matters worse, the appropriation for public vaccination for the year is about exhausted, and unless some special appropriation can be obtained vaccination will have to be stopped just at the beginning of winter. On account of this recent increase of the number of cases of small-pox, a committee of the County Medical Society, at its meeting, September 14th, was appointed to confer with the Board of Health, in order to offer and to devise some plan for restricting the further progress of the disease.

— The Philadelphia County Medical Society is in a very flourishing condition. It has about three hundred members. A new standing committee on Clinical Pathology has just been appointed which proposes to hold monthly meetings. At the first meeting, held September 21st, the following papers were read and discussed: Dr. Lewis on the Treatment of Varicocele by Excision of Redundant Scrotum, the operation being illustrated by patients; Dr. Eskridge presented a specimen of Cancer of the Esophagus and Mediastinum involving Heart and Great Vessels; Dr. Mills exhibited patients with Neuritis; Dr. Breen reported a Case of Abscess of the Liver, with a specimen; Dr. Leffmann showed a new mode of Detecting Albumen (by using powdered glacial phosphoric acid); and Dr. Roberts initiated a very interesting discussion on Gonorrhoea. At the first meeting of the whole Society this fall Dr. C. Seiler read a paper on the Use of the Galvano-Cautery, and exhibited his own battery and the ingenious method of using it.

— Registration of practitioners is going on still; about 1075 have thus far recorded their names and shown their authority to practice. The health office gives the number of persons practicing midwifery as about 1300; it is estimated that there are altogether about 1700 doctors in this city. We are anxious to see if any one has the courage to prosecute a physician,

illegally practicing, in order to determine the constitutionality of the law itself, of which there are some doubts.

— A large general hospital is to be built in the southern part of the city under the auspices of the Roman Catholic Church; it will be called the St. Agnes Hospital, and will prove a welcome addition to our list of hospitals, as their capacity has been severely tested this fall.

— Our errant colleagues, delegates to the International, have all returned, and appear to have greatly enjoyed their reception in London.

CHICAGO.

— This city is having an experience with typhoid fever such as it has not had before for many years. The last half of 1880 witnessed a large increase in cases of this disease over former years, but this year has been very much worse than last. Cook County Hospital, with three hundred and fifty beds, which usually at this season has not more than half a dozen contains now between seventy and eighty cases. At the same time last year the number in the wards was not more than fifteen or twenty.

— The readers of the *JOURNAL* are aware from the public prints and from accurate reports in your own columns of the continuance of small-pox among us. It seems next to impossible to eradicate it. Most faithful and persistent have been the efforts of the Health Department in following up the cases, as fast as they are discovered, by systematic vaccinations of all the people in the neighborhood. But many cases have been secreted till they have spread the contagion to large numbers of people; in several instances they have only been discovered by a physician being applied to for a death certificate. A few years ago the city council passed an ordinance requiring the Health Department, in every instance of this disease, to remove the patient to the Small-Pox Hospital. This season it has become impossible to carry out this law, and so it is to a large degree a dead letter. Many patients are treated at their homes.

Miscellany.

THE AMERICAN EDITION OF HOLMES' SURGERY.

SOME remarks on the prospective American edition of Holmes' Surgery contained in a London letter which appeared in the *JOURNAL* of September 8th, page 237, as we are informed by the publishers, does them much injustice, which, had it been brought to his notice, the lamented writer of the letter, we are sure, would have been anxious to correct. It seems that the English publishers of Holmes' System of Surgery (Messrs. Longman & Co.) are likewise its owners, that they were informed of the intention of Messrs. Henry C. Lea's Son & Co. to publish an American edition of the work, and that an offer was made for the purchase of the woodcuts, and a further sum was tendered in consideration of the republication. Messrs. Henry C. Lea's Son & Co. are advocates of an international copyright.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 17, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	688	349	37.79	22.38	6.25	7.85	2.62
Philadelphia.....	846,984	345	136	23.19	10.14	2.03	.87	5.80
Brooklyn.....	566,689	242	131	36.78	18.60	9.92	7.02	.83
Chicago.....	503,304	263	151	51.33	19.01	6.08	4.87	5.32
Boston.....	362,535	180	84	37.22	24.44	8.89	5.00	1.11
St. Louis.....	350,522	161	76	28.57	8.70	4.97	2.48	2.48
Baltimore.....	332,190	171	85	35.09	12.87	14.04	4.09	2.34
Cincinnati.....	255,708	112	59	27.68	14.29	3.57	8.93	5.36
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	85	43	37.65	15.29	10.59	3.53	3.53
Pittsburgh.....	156,381	102	47	51.96	11.76	5.88	3.92	5.88
Buffalo.....	153,137	147	84	53.74	37.41	5.44	3.40	4.08
Milwaukee.....	115,578	48	34	27.08	25.00	—	12.50	—
Providence.....	104,857	36	15	33.33	13.89	16.67	2.78	—
New Haven.....	62,882	31	7	16.13	3.23	3.23	6.45	6.45
Charleston.....	49,999	43	18	13.95	6.98	—	2.32	6.98
Nashville.....	43,461	25	10	24.00	12.00	—	4.00	4.00
Lowell.....	59,485	25	13	36.00	20.00	12.00	8.00	4.00
Worcester.....	58,295	15	12	66.67	20.00	20.00	6.67	6.67
Cambridge.....	52,740	18	8	27.78	11.11	11.11	16.67	—
Fall River.....	49,006	39	22	17.95	7.69	—	2.56	5.13
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	15	7	60.00	33.33	6.67	—	—
Springfield.....	33,340	—	—	—	—	—	—	—
Salem.....	27,598	19	7	36.84	26.32	—	—	10.53
New Bedford.....	26,875	9	3	44.44	22.22	—	22.22	11.11
Somerville.....	24,985	6	3	16.67	—	16.67	—	—
Holyoke.....	21,851	5	3	20.00	20.00	—	—	—
Chelsea.....	21,785	6	4	33.33	16.67	—	—	—
Taunton.....	21,213	6	1	33.33	—	33.33	—	—
Gloucester.....	19,329	10	4	40.00	20.00	10.00	—	—
Haverhill.....	18,475	5	2	20.00	20.00	—	—	—
Newton.....	16,995	7	3	57.14	28.57	—	—	—
Newburyport.....	13,537	5	1	—	—	—	—	—
Fitchburg.....	12,405	2	1	—	—	—	—	—
Twenty-three Massachusetts towns.....	175,668	57	17	33.33	22.81	—	1.75	5.26

Deaths reported 2928 (no report from New Orleans); 1440 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1061, diarrhoeal diseases 531, consumption 335, diphtheria and croup 185, lung diseases 150, typhoid fever 102, small-pox 67, malarial fevers 60, scarlet fever 39, whooping-cough 30, cerebro-spinal meningitis 18, puerperal fever 15, measles eight, erysipelas five, typhus fever one. From *small-pox*, Chicago 35, Pittsburgh 19, Philadelphia 10, New York two, St. Louis one. From *malarial fevers*, New York 17, Brooklyn and St. Louis 10, Chicago and District of Columbia five, Baltimore and Buffalo four, Philadelphia and Cincinnati two, New Haven one. From *scarlet fever*, New York 13, Brooklyn and Pittsburgh six, St. Louis four, Philadelphia three, Baltimore two, Chicago, Cincinnati, Buffalo, Milwaukee, and New Bedford one. From *whooping-cough*, New York seven, Chicago six, Baltimore five, Brooklyn, Boston, and Newton two, Philadelphia, St. Louis, Pittsburgh, Providence, Cambridge, and Fall River one. From *cerebro-spinal meningitis*, New York five, Worcester three, Chicago and Lynn two, Philadelphia, St. Louis, Pittsburgh, Buffalo, Fall River, and Chelsea one. From *puerperal fever*, St. Louis three, Chicago, Boston, and Buffalo two, Philadelphia, Cincinnati, District of Columbia, Lynn, Pittsfield, and Plymouth one. From *measles*, Chicago two, New York, Boston, Cincinnati, District of Columbia, Pittsburgh, and Buffalo one. From *erysipelas*, Chicago, Baltimore, Pittsburgh, Buffalo, and Pittsfield one. From *typhus fever*, Gloucester one. Few deaths occurred in New York and two in Buffalo from direct effects of cold heat.

One case of small-pox was reported in Brooklyn, 45 in Pittsburgh, deaths 142 in Boston; scarlet fever eight, diphtheria 10, in Milwaukee. Diphtheria is still endemic in Buffalo.

In French's latest census of Massachusetts, with a population of

1,021,061 (population of the State 1,783,086), the total death-rate for the week was 21.03 against 24.81 and 26.74 for the previous two weeks.

For the week ending August 27th in 149 German cities and towns, with estimated populations of 7,840,235, the death-rate was 26.8. Deaths reported 4037; under five 2283; pulmonary consumption 478, diarrhoeal diseases 377, acute diseases of the respiratory organs 203, diphtheria and croup 128, scarlet fever 102, whooping-cough 66, typhoid fever 55, puerperal fever 18, measles and *roteln* 17, small-pox (Dresden) one. The death-rates ranged from 13.6 in Mannheim to 45.1 in Posen; Königsberg 29.9; Breslau 43; Munich 38; Dresden 26.4; Berlin 27.8; Leipzig 24; Hamburg 22.6; Hanover 24.6; Bremen 14.6; Cologne 30.9; Frankfurt 16.4; Strassburg 27.9.

The English returns for the week ending August 27th have not been received.

For the week ending September 3d in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 17.4. Deaths reported 2542; diarrhoea 185, scarlet fever 113, whooping-cough 62, measles 51, fever 36, small-pox (London) 22, diphtheria 19. The death-rates ranged from 13 in Brighton to 25.4 in Leicester; Birmingham 14.3; London 16.2; Leeds 17.8; Bristol 18.4; Manchester 19.4; Sheffield 20.3; Liverpool 22.7. In Edinburgh 18.2; Glasgow 21.2; Dublin 16.6.

For the week ending September 3d in the 21 chief towns of Switzerland, population 479,934, there were 52 deaths from diarrhoeal diseases; acute diseases of the respiratory organs 15, typhoid fever eight, whooping-cough seven, diphtheria and croup two, measles one, small-pox one. The death-rates were Geneva 25; Zurich 16.2; Basle 18.1; Bern 30.4.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
September, 1881.																				
Sun., 11	30.013	62	66	59	97	90	93	93	93	N	NE	N	10	7	1	R	O	O	—	—
Mon., 12	29.981	61	67	57	95	93	93	94	94	NW	NE	SW	2	6	10	R	O	F	—	—
Tues., 13	30.076	63	81	54	88	81	81	73	73	W	W	W	7	7	11	C	C	C	—	—
Wed., 14	30.278	59	70	51	82	85	93	87	87	NW	E	SE	6	10	7	C	O	O	—	—
Thurs., 15	30.422	59	65	53	81	81	91	84	84	NE	NE	NE	12	20	10	O	F	F	—	—
Fri., 16	30.465	60	65	57	87	73	81	80	80	E	E	NE	12	12	10	O	O	O	—	—
Sat., 17	30.401	60	66	56	78	70	94	81	81	N	E	SE	6	10	1	F	C	C	—	—
Week.	30.234	60	81	51				85											18.25	.78

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

REPORTED MORTALITY FOR THE WEEK ENDING SEPTEMBER 24, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	705	370	34.47	18.87	7.38	7.66	2.55
Philadelphia.....	846,984	340	147	21.77	7.06	3.53	3.82	3.53
Brooklyn.....	566,689	319	161	32.29	14.11	10.66	6.89	1.25
Chicago.....	503,304	284	133	48.24	9.51	9.51	5.99	10.21
Boston.....	362,535	197	78	36.04	17.26	7.11	6.60	7.11
St. Louis.....	350,522	153	60	32.68	8.50	3.92	2.61	1.31
Baltimore.....	332,190	156	76	37.18	11.54	11.54	.64	5.13
Cincinnati.....	255,708	93	41	12.90	2.15	—	6.45	7.53
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	90	39	36.67	17.78	2.22	8.89	5.56
Pittsburgh.....	156,381	101	44	55.45	12.85	10.89	2.97	10.89
Buffalo.....	155,137	107	50	50.65	35.51	7.48	3.74	1.87
Milwaukee.....	115,578	59	41	33.90	23.73	6.78	6.78	1.69
Providence.....	104,857	36	15	30.56	19.44	5.56	—	—
New Haven.....	62,882	23	9	17.39	—	—	—	8.70
Charleston.....	49,999	44	23	6.82	6.82	—	2.27	—
Nashville.....	43,461	20	8	20.00	10.00	—	15.00	—
Lowell.....	59,485	21	7	33.33	4.76	14.29	19.05	—
Worcester.....	58,295	22	15	36.36	27.27	4.55	4.55	—
Cambridge.....	52,740	18	8	44.44	22.22	—	—	11.11
Fall River.....	49,006	25	15	28.00	8.00	8.00	—	8.00
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	19	—	42.11	5.26	10.53	5.26	5.26
Springfield.....	33,340	—	—	—	—	—	—	—
Salem.....	27,598	10	6	40.00	30.00	—	—	—
New Bedford.....	26,875	7	—	28.57	—	—	—	28.57
Somerville.....	24,985	—	—	—	—	—	—	—
Holyoke.....	21,851	9	7	55.56	44.44	—	—	11.11
Chelsea.....	21,785	3	—	33.33	33.33	—	—	—
Taunton.....	21,213	—	—	—	—	—	—	—
Gloucester.....	19,329	5	4	20.00	20.00	—	20.00	—
Haverhill.....	18,475	1	0	—	—	—	—	—
Newton.....	16,995	6	—	50.00	16.67	16.67	—	—
Newburyport.....	13,537	8	2	25.00	—	—	25.00	—
Fitchburg.....	12,405	3	0	—	—	—	—	—
Twenty-three Massachusetts towns.	178,450	77	31	33.77	14.29	10.39	5.19	6.49

Deaths reported 2961 (no report from New Orleans): 1390 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1005, diarrhoeal diseases 424, consumption 390, diphtheria and croup 207, lung diseases 166, typhoid fever 128, malarial fevers 62, small-pox 55, scarlet fever 42, whooping-cough 34, cerebro-spinal meningitis 23, puerperal fever 14, erysipelas nine, typhus fever five, measles two. From malarial fevers, St. Louis 24, Brooklyn 10, District of Columbia eight, Baltimore six, Chicago four, Philadelphia three, Buffalo, New Haven, and Newburyport two, Nashville one. From small-

pox, Chicago 26, Pittsburgh 16, Philadelphia 12, New York one. From scarlet fever, New York 23, Brooklyn six, Philadelphia five, Pittsburgh three, Chicago, St. Louis, Cincinnati, District of Columbia, and Worcester one. From whooping-cough, Chicago, Boston, and Baltimore six, New York and Philadelphia three, Brooklyn, St. Louis, Buffalo, and Providence two, Nash- and Salem one. From cerebro-spinal meningitis, New York five, Lynn three, Philadelphia and Chicago two, St. Louis, Baltimore, Cincinnati, Pittsburgh, Buffalo, Milwaukee, Lowell, Cambridge, Newton, Bridgewater, and Holliston one. From puerperal fever, Boston and Lowell two, New York, Brooklyn.

Chicago, St. Louis, Cincinnati, District of Columbia, Pittsburgh, Cambridge, Fall River, and Lynn one. From *erysipelas*, New York four, Philadelphia, Brooklyn, Chicago, Boston, and Baltimore one. From *typhus fever*, Chicago three, New York two. From *measles*, New York, and Buffalo one.

Thirteen cases of small-pox were reported in New York, two in Brooklyn, two in St. Louis, two in Cincinnati, 17 in Pittsburgh, and two in Milwaukee; diphtheria 30, scarlet fever seven in Boston; diphtheria 11, scarlet fever five, in Milwaukee. Dy-entery still epidemic in Buffalo.

In 38 cities and towns of Massachusetts, with a population of 977,645 (population of the State 1,783,086), the total death-rate for the week was 22.99 against 21.03 and 24.81 for the previous two weeks.

For the week ending September 3d in 149 German cities and towns, with estimated populations of 7,936,736, the death-rate was 24.4. Deaths reported 3720; under five 2021; pulmonary consumption 433, diarrhoeal diseases 322, acute diseases of the respiratory organs 487, scarlet fever 118, diphtheria and croup 100, typhoid fever 93, whooping cough 67, puerperal fever 19, measles and *rotheln* 16, small-pox (Königsberg, Aachen) two,

typhus fever (Königsberg) two. The death-rates ranged from 10.4 in Weisbaden to 46.7 in Posen; Königsberg 24.4; Breslau 32.6; Munich 30.1; Dresden 25.3; Berlin 26; Leipzig 20.9; Hamburg 22.2; Hanover 19; Bremen 22.8; Cologne 25.1; Frankfurt 14.9; Strassburg 21.7.

For the week ending September 10th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 18.1. Deaths reported 2636; diarrhoea 140, scarlet fever 115, whooping-cough 67, measles 51, fever 43, small-pox (London) 27, diphtheria 16. The death-rates ranged from 12.6 in Brighton to 26.9 in Hull; Birmingham 14.5; Bristol 16.1; Leeds 16.3; London 16.7; Sheffield 17.5; Manchester 23.4; Liverpool 24.2; Edinburgh 18.0; Glasgow 28.0; Dublin 19.3.

For the week ending September 10th in the 21 chief towns of Switzerland, population 479,934, there were 42 deaths from diarrhoeal diseases; acute diseases of the respiratory organs eight, diphtheria and croup seven, typhoid fever five, whooping-cough four, small-pox none, measles none, scarlet fever none. The death-rates were Geneva 13.5; Zurich 17.6; Basle 17.6; Berne 24.6.

The meteorological record for the week in Boston was as follows:—

Date.	Barom-eter.	Thermom-eter.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
September, 1881.																				
Sun., 18	30.213	58	71	49	95	65	8	80		N	NE	NE	4	14	12	G	C	F	—	—
Mon., 19	29.910	63	76	54	88	52	87	76		N	N	W	10	9	10	O	F	C	—	—
Tues., 20	29.939	67	81	57	78	46	62	62		W	NW	NW	7	12	10	C	H	C	—	—
Wed., 21	30.143	56	64	52	74	62	78	71		NW	E	SE	6	8	9	C	C	F	—	—
Thurs., 22	30.182	61	68	50	74	63	73	70		S	S	S	8	13	10	F	O	O	—	—
Fri., 23	30.001	72	85	62	93	55	93	80		SW	SW	SW	15	15	6	O	F	F	—	—
Sat., 24	30.114	61	69	58	91	87	96	91		E	E	SE	6	9	8	G	O	O	—	—
Week.	30.072	64	85	49				76											2.37	.40

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 24, 1881, TO SEPTEMBER 30, 1881.

ALEXANDER, R. H., major and surgeon. Relieved from duty in Department of the East to take effect October 1, 1881, and granted leave of absence for three months, with permission to apply for one month's extension; at expiration thereof to report by letter to the Surgeon-General. S. O. 215, A. G. O., September 19, 1881.

HENSTINGTON, D. L., major and surgeon. Relieved from duty as attending surgeon at the Soldiers' Home, D. C., and to report in person to the Surgeon-General for duty as curator of the Army Medical Museum, and to take charge of the division of surgical records of the Surgeon-General's Office. S. O. 217, A. G. O., September 24, 1881.

KING, WILLIAM H., captain and assistant surgeon. When relieved by Assistant Surgeon Turrill to proceed to Governor's Island, New York Harbor, and report in person at those headquarters. S. O. 170, Department of the East, September 24, 1881.

DEWITT, C., captain and assistant surgeon. Now on leave of absence, to report in person to the Governor of the Soldiers' Home, D. C., for duty as attending surgeon at the Home. S. O. 217, C. S., A. G. O.

HELMANN, CHARLES, captain and assistant surgeon. Re-

lieved from duty at Fort Townsend, W. T., and assigned to duty at Vancouver Barracks, W. T., as post medical officer, relieving Assistant Surgeon Dickson. S. O. 135, Department of the Columbia, September 9, 1881.

SKINNER, J. O., captain and assistant surgeon. Relieved from duty at Fort Verde, A. T., and to proceed to Wilcox, A. T., for duty as acting medical purveyor in the field. S. O. 107, Department of Arizona, September 17, 1881.

GRAY, WILLIAM W., first lieutenant and assistant surgeon. Relieved from duty at Fort Canby, W. T., and assigned to duty at Fort Townsend, W. T. S. O. 135, C. S., Department of the Columbia.

BOOKS AND PAMPHLETS RECEIVED.—A Hand-Book of Vertebrate Dissection. By H. Newell Martin, D. Sc., and William H. Moale, M. D. Part I. How to Dissect a Chelonian. New York: Macmillan & Co. 1881.

Nature Series. Fashion in Deformity, as illustrated in the Customs of Barbarous and Civilized Races. By William Henry Flower, Hunterian Professor of Comparative Anatomy and Conservator of the Museum of the Royal College of Surgeons of England. With Illustrations. London: Macmillan & Co. 1881.

Refraction of the Eye. Its Diagnosis and the Correction of its Errors, with Chapters on Keratotomy. By A. Stanford Morton, F. R. C. S., Ed. Philadelphia: Presley Blakiston. 1881.

Legislation.

REGULATION OF THE PRACTICE OF MEDICINE IN THE UNITED STATES.¹

LITTLE has been done in this country until within a few years to exercise any control over the practice of medicine. Absolute freedom has been allowed every one who desired to take the responsibility of treating disease, even if he possessed no knowledge whatever. Indeed, it is a matter of record that the law has actually protected an individual from the results of his work on the plea of ignorance, thus showing an absence of evil intent. We give the more prominent of the laws which have been passed in different States. The California law resembles closely that of Illinois, a Board of Examiners being substituted for the Board of Health. The Vermont law resembles that of New Hampshire. Laws exist also in Alabama and Texas. A Medical Registry Law has lately been passed in Pennsylvania. Rather more active efforts are being made to enforce the New York Registry Law, but without results to record.

NEW YORK.

Chapter 513. An act entitled An Act to regulate the Licensing of Physicians and Surgeons. Passed May 29, 1880, three fifths being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:—

Section I. A person shall not practice physic or surgery within the State unless he is twenty-one years of age, and either has been heretofore authorized so to do, pursuant to the laws in force at the time of his authorization, or is hereafter authorized so to do as prescribed by chapter seven hundred and forty-six of the laws of eighteen hundred and seventy-two,² or by subsequent sections of this act.

Section II. Every person now lawfully engaged in the practice of physic and surgery within the State shall, on or before the first day of October, eighteen hundred and eighty, and every person hereafter duly authorized to practice physic and surgery, shall, before commencing to practice, register in the clerk's office of the county where he is practicing, or intends to commence the practice of, physic and surgery, in a book to be kept by said clerk, his name, residence, and place of birth, together with his authority for so practicing physic and surgery as prescribed in this act. The person so registering shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing such facts, and whether such authority is by diploma or license, and the date of the same, and by whom granted, which, if willfully false, shall subject the affiant to conviction and punishment for perjury. The county clerk to receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

Section III. A person who violates either of the two preceding sections of this act, or who shall practice physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than fifty dollars nor more than two hundred dollars for the first offense, and for each subsequent offense by a fine of not less than one hundred dollars nor more than five hundred dollars, or by imprisonment for not less than thirty days nor more than ninety days, or both. The fine when collected shall be paid, the one half to the person or corporation making the complaint, the other half into the county treasury.

Section IV. A person coming to the State from without the State may be licensed to practice physic and surgery, or either, within the State, in the following manner: If he has a diploma conferring upon him the degree of doctor of medicine, issued by an incorporated university, medical college, or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician or surgeon as said faculty may require. If his diploma and qualifications are approved by them, then they shall

indorse said diploma, which shall make it for the purpose of his license to practice medicine and surgery within this State the same as if issued by them. The applicant shall pay to the dean of said faculty the sum of twenty dollars for such examination and indorsement. This indorsed diploma shall authorize him to practice physic and surgery within the State upon his complying with the provisions of Section II. of this act.

Section V. The degree of doctor of medicine lawfully conferred by any incorporated medical college or university in this State shall be a license to practice physic and surgery within the State after the person to whom it is granted shall have complied with Section II. of this act.

Section VI. Nothing in this act shall apply to commissioned medical officers of the United States army or navy, or of the United States marine hospital service. Nor shall it apply to any person who has practiced medicine and surgery for ten years last past, and who is now pursuing the study of medicine and surgery in any legally incorporated medical college within this State, and who shall graduate from and receive a diploma within two years from the passage of this act.

Section VII. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

STATE OF NEW YORK,
Office of the Secretary of State. } ss.:

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

JOSEPH B. CAIR,
Secretary of State.

Chapter 746. An act relating to the examination of candidates for the degree of doctor of medicine. Passed May 16, 1872.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:—

Section I. The regents of the University of the State of New York shall appoint one or more Boards of Examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practice physic and surgery in this State.

Section II. Such examiners shall faithfully examine all candidates referred to them for that purpose by the chancellor of said university, and furnish him a detailed report in writing of all the questions and answers of each examination, together with a separate written opinion of each examiner as to the acquirements and merits of the candidates in each case.

Section III. Such examinations shall be in anatomy, physiology, materia medica, pathology, histology, clinical medicine, chemistry, surgery, midwifery, and in therapeutics, according to each of the systems of practice represented by the several medical societies of the State.

Section IV. The said reports of examinations and the annexed opinions of the examiners shall forever be a part of the public records of the said university, and the orders of the chancellor addressed to the examiners, together with the action of the regents, in each case, shall accompany the same.

Section V. Any person over twenty-one years of age, of good moral character, and paying not less than thirty-five dollars into the treasury of the university, and on applying to the chancellor for the aforesaid examination, shall receive an order to that effect, addressed to one of the Boards of Examiners, provided he shall adduce proofs satisfactory to the chancellor that he or she has a competent knowledge of all the branches of learning taught in the common schools of this State, and of the Latin language, and that he has diligently studied medicine not less than three years, under the direction of one or more physicians duly qualified to practice medicine, or has himself been licensed, on examination, by some medical society or college legally empowered to issue licenses or degrees in medicine.

Section VI. The regents of the university, on receiving the aforesaid reports of the examiners, and on finding that not less than five members of a board have voted in favor of a candidate, shall issue to him or her a diploma conferring the degree of doctor of medicine of the University of the State of New York, which degree shall be a license to practice physic and surgery.

Section VII. The candidate, on receiving said diploma, shall pay to the university the further sum of not less than ten dollars.

Section VIII. The moneys paid to the university, as aforesaid, shall be appropriated by the regents for the expenses of executing the provisions of this act.

Section IX. The regents may establish such rules and regulations, from time to time, as they may deem necessary to insure the faithful execution of the provisions of this act.

Section X. This act shall take effect immediately.

¹ For the North Carolina Medical Law see Editorial.

² This chapter follows the act.

ILLINOIS.

The following is a full copy of An Act to regulate the Practice of Medicine in the State of Illinois. Approved May 29, 1877. In force July 1, 1877:—

Be it enacted by the people of the State of Illinois, represented in the General Assembly: Section I. That every person practicing medicine, in any of its departments, shall possess the qualifications required by this act. If a graduate in medicine, he shall present his diploma to the State Board of Health, if such Board of Health shall be established by law, or Board of Examiners herein named, for verification as to its genuineness. If the diploma is found genuine, and if the person named therein be the person claiming and presenting the same, the State Board of Health, if such Board of Health shall be established by law, or the Board of Examiners, shall issue its certificate to that effect, signed by all of the members thereof, and such diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practice medicine in this State. If not a graduate, the person practicing medicine in this State shall present himself before said board, and submit himself to such examinations as the said board shall require; and if the examination be satisfactory to the examiners, the said board shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned.

SECT. II. In case a State Board of Health shall not be established by law, then each State Medical Society incorporated and in active existence on the first day of July, eighteen hundred and seventy-seven, whose members are required to possess diplomas or license from some legally-chartered medical institution in good standing, shall appoint, annually, a Board of Examiners, consisting of seven members, who shall hold their offices for one year, and until their successors shall be chosen. The Examiners so appointed shall go before a county judge and make oath that they are regular graduates or licentiates, and that they will faithfully perform the duties of their office. Vacancies occurring in a Board of Examiners shall be filled by the Society appointing it by the selection of alternates, or otherwise.

SECT. III. The State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, shall organize within three months after the passage of this act; they shall procure a seal, and shall receive through their secretary applications for certificates and examinations; the president of each board shall have authority to administer oaths, and the board take testimony in all matters relating to their duties; they shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing; they shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the board; they shall furnish to the county clerks of the several counties a list of all persons receiving certificates. In selecting places to hold their meetings, they shall, as far as is reasonable, accommodate applicants residing in different sections of the State, and due notice shall be published of all their meetings. Certificates shall be signed by all the members of the board granting them, and shall indicate the medical society to which the examining board is attached.

SECT. IV. Said State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, shall examine diplomas as to their genuineness, and if the diploma shall be found genuine as represented, the secretary of the State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, shall receive a fee of one dollar from each graduate or licentiate, and no further charge shall be made to the applicants; but if it be found to be fraudulent, or not lawfully owned by the possessor, the board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The verification of the diploma shall consist in the affidavit of the holder and applicant that he is the lawful possessor of the same, and that he is the person therein named. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer, if he have a seal. Graduates may present their diplomas and affidavits as provided in this act, by letter or by proxy, and the State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, shall issue its certificate the same as though the owner of the diploma was present.

SECT. V. All examinations of persons not graduates or licentiates shall be made directly by the board, and the certificates given by the boards shall authorize the possessor to practice medicine and surgery in the State of Illinois.

SECT. VI. Every person holding a certificate from the State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, shall have it recorded in the office of the clerk of the county in which he resides, and the record shall be indorsed thereon. Any person removing to another county to practice shall procure an indorsement to that effect on the certificate from the county clerk, and shall record the certificate, in like manner, in the county to which he removes, and the holder of the certificate shall pay to the county clerk the usual fees for making the record.

SECT. VII. The county clerk shall keep, in a book provided for the purpose, a complete list of the certificates recorded by him, with the date of the issue and the name of the medical society represented by the State Board of Health, if such Board of Health shall be established by law, or Board of Examiners issuing them. If the certificate be based on a diploma or license, he shall record the name of the medical institution conferring it, and the date when conferred. The register of the county clerk shall be open to public inspection during business hours.

SECT. VIII. Candidates for examination shall pay a fee of five dollars, in advance, which shall be returned to them if a certificate be refused. The fees received by the board shall be paid into the treasury of the medical society by which the board shall have been appointed, and the expenses and compensation of the board shall be subject to arrangement with the society.

SECT. IX. Examinations may be made in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

SECT. X. The State Board of Health, if such Board of Health shall be established by law, or Board of Examiners, may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes. In all cases of refusal or revocation the applicant may appeal to the body appointing the board.

SECT. XI. Any person shall be regarded as practicing medicine, within the meaning of this act, who shall profess publicly to be a physician and to prescribe for the sick, or who shall append to his name the letters of "M. D." But nothing in this act shall be construed to prohibit students from prescribing under the supervision of preceptors, or to prohibit gratuitous services in cases of emergency. And this act shall not apply to commissioned surgeons of the United States army and navy.

SECT. XII. Any itinerant vender of any drug, nostrum, ointment, or appliance of any kind, intended for the treatment of disease or injury, or who shall, by writing or printing, or any other method, publicly profess to cure or treat diseases, injury, or deformity by any drug, nostrum, manipulation, or other expedient shall pay a license of one hundred dollars a month, to be collected in the usual way.

SECT. XIII. Any person practicing medicine or surgery in this State without complying with the provisions of this act shall be punished by a fine of not less than fifty dollars, nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days, nor more than three hundred and sixty-five days, or by both such fine and imprisonment for each and every offense; and any person filing or attempting to file as his own the diploma or certificate of another or a forged affidavit of identification shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery; but the penalties shall not be enforced till on and after the thirty-first day of December, eighteen hundred and seventy-seven: *Provided*, That the provisions of this act shall not apply to those that have been practicing medicine ten years within this State.

[The Board of Health was established by law approved May 25, 1877, which took effect July 1, 1877.]

NEW HAMPSHIRE.

General Laws relating to the Practice of Medicine, Surgery, Dentistry, and Pharmacy.

Chapter I. Practice of medicine, surgery, and dentistry.

Section I. Physicians and surgeons not to practice without license from medical society. SECT. II. Medical societies to examine and license. SECT. III. Dentists not to practice without dental degree or license of New Hampshire Dental Society. SECT. IV. Society shall examine and license. SECT. V. License recorded, where. SECT. VI. Fees for licenses. SECT. VII. Penalty for practicing without lawful authority. SECT. VIII. Law not applicable, when.

Section I. It shall not be lawful for any person to practice medicine, surgery, or midwifery, unless such person shall have obtained a license from some medical society organized under

the laws of this State, stating that he is qualified in the branches of the medical profession named in said license.

SECT. II. Every medical society organized under the laws of this State, shall, at such time and in such manner as may be prescribed in its charter or by-laws, elect a board of censors, consisting of three members, who shall be elected for such term as may be prescribed in said charter or by-laws, which board shall have authority to examine and license persons to practice medicine, surgery, or midwifery.

The board shall issue licenses without examination to all persons who furnish evidence by diploma from some medical school authorized to confer degrees in medicine and surgery, when said board is satisfied that the person presenting such diploma has obtained it after pursuing some prescribed course of study and upon due examination.

Said board shall also have power, upon due notice and hearing, to revoke any license granted by said board, when improperly obtained, or when the holder has, by conviction for crime, or any other cause, ceased to be worthy of public confidence.

Such license or revocation shall be recorded by the clerk of said medical society.

SECT. III. It shall not be lawful for any person who is not duly authorized to practice medicine or surgery to practice dentistry, unless such person has received a dental degree from some college, university, or medical school authorized to confer the same, or shall have obtained a license from the New Hampshire Dental Society.

SECT. IV. Said dental society shall, at such time and in such manner as may be prescribed in its charter or by-laws, elect a board of censors, consisting of three members, who shall be elected for such term as may be prescribed by the society, which board shall have authority to examine and license persons to practice dentistry. The license shall be recorded by the clerk of said society.

SECT. V. No person receiving a license as herein provided shall be authorized to practice until he shall have procured the same to be recorded by the clerk of the court in the county where he resides, if a resident of this State; if not a resident of this State, in the county where he intends to practice.

Such licenses shall be recorded in a book provided for that purpose, and which shall bear the title and inscription of the medical and dental register of — county; and the fee for recording the same shall be fifty cents.

SECT. VI. Each person receiving a license upon examination shall pay for the use of the society granting the same the sum of five dollars; upon diploma one dollar.

SECT. VII. If any person shall practice medicine, surgery, midwifery, or dentistry, without being duly authorized as provided in this chapter, or after his license is revoked, he shall be punished by a fine of not more than three hundred dollars for each offense.

SECT. VIII. The provisions of the preceding sections shall not apply to persons who have resided and practiced their profession in the town and city of their present residence during all the time since January first, eighteen hundred and seventy-five, nor to physicians residing out of the State, when called into the State for consultation with duly licensed physicians, or to attend upon patients in the regular course of business.

Chapter 2. Sale of drugs and medicine.

Chapter 3. Advancement of anatomical and surgical science.

PENNSYLVANIA.

No. 55. An Act to regulate the Practice of Medicine, Surgery, and Obstetrics in the Commonwealth of Pennsylvania.

Section I. *Be it enacted, etc.:* That the standard qualifications of a practitioner of medicine, surgery, and obstetrics, or of any one who may attempt to practice, singly or jointly, medicine, surgery, or obstetrics, shall be and consist of the following, namely:—

A comprehensive and practical knowledge of human anatomy, human physiology, pathology, chemistry, materia medica, obstetrics, practice of medicine and surgery, and public hygiene, and a good moral character.

SECT. II. The possession of a diploma, regularly issued by a medical school acting under a charter from this or other State or country shall constitute the sufficient license for the person to whom such diploma is granted to practice, singly or jointly, medicine, surgery, or obstetrics, as set forth and empowered in said diploma: *Provided, however,* that a diploma that has been or that may hereafter be granted for a money consideration, or other article of value alone, or that has been or may hereafter be granted to any one who has not pursued the usual course of

studies required by a legally chartered medical school, shall not be considered as a sufficient qualification under this act.

SECT. III. Any practitioner who may not have a diploma, as provided for in section two of this act, and who may not be qualified, as hereinafter provided, shall have the privilege of applying to the prothonotary of the court of common pleas of the judicial district in which such applicant resides for an examination in the branches of medical science and art, set forth in section one of this act; whereupon it shall be the duty of such court to appoint a committee or committees, consisting each of three respectable practitioners of medicine of the school of practice recognized in this commonwealth, to which such applicant or applicants may profess to belong, and shall fix the time and place of holding such examinations.

Each of said applicants, before being admitted to examination, shall deposit with such committee the sum of fifteen dollars (\$15), which money shall be equally divided among them, for which they shall give a receipt; it shall be the duty of such committee or committees to convene at any time upon the call of an applicant or applicants for examination; it shall be the duty of such committee, when the said applicant is found to be qualified, as set forth in section one of this act, to grant to such applicant a certificate, and said certificate shall be the sufficient license for the person to whom it is granted to open an office in this commonwealth for the practice of medicine, surgery, or obstetrics; it shall further be the duty of such committee to appear before the clerk of such court and take an oath or affirmation that they have not taken and will not receive, directly or indirectly, any other compensation for instituting such examination than that which is herein provided.

SECT. IV. Any person who has attended one full course of lectures in any respectable school of medicine recognized by law, and has been a resident practitioner of medicine, surgery, or obstetrics in this commonwealth five years previous to the passage of this act, is hereby authorized to pursue the same. Any person who has been in the continuous practice of medicine, surgery, or obstetrics for ten years in this commonwealth shall be and is hereby authorized to pursue the same.

SECT. V. Any person who shall attempt to practice medicine or surgery, by opening a transient office within this commonwealth, or who shall, by handbill or other form of written or printed advertisements, assign such transient office or other place to persons seeking medical or surgical advice or prescription, shall, before being allowed to practice as aforesaid, appear before the clerk of the court of quarter sessions of the county wherein said practitioner shall attempt to practice, and shall furnish satisfactory evidence to such clerk that the provisions of this act have been complied with, and shall, in addition, take out a license for one year, and pay into the county treasury, for the use of such county, the sum of two hundred dollars therefor, whereupon it shall be the duty of such clerk to issue to such applicant a proper certificate of license, on payment of the fee of two dollars for his services: *Provided, however,* that the announcement of name, title, and place of business by card, or announcement of name, title, and place of business in newspaper or other periodical, shall be sanctioned as legitimate, and is so approved by this act.

SECT. VI. Any person violating the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction shall be sentenced to pay a fine not exceeding five hundred dollars, for the use of the county wherein such misdemeanor is committed, or imprisonment not exceeding one year, or both, at the discretion of the court; any person so convicted shall not be entitled to any fee for services rendered, and if a fee shall have been paid, the patient, or his or her heirs, may recover the same as debts of like amount are now recoverable by law.

Approved the 12th day of April, A. D. 1875.

AN ACT TO PROVIDE FOR THE REGISTRATION OF ALL PRACTITIONERS OF MEDICINE AND SURGERY.

Section I. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same:* That the prothonotary of each county shall purchase a book of suitable size, to be known as the medical register of the county (if such book has not been purchased already), and shall set apart one full page for the registration of each practitioner, and when any practitioner shall depart this life or remove from the county he shall make a note of the same at the bottom of the page, and shall perform such other duties as are required by this act.

SECT. II. Every person who shall practice medicine or surgery, or any of the branches of medicine or surgery, for gain, or shall receive or accept for his or her services as a practitioner of medicine or surgery any fee or reward, directly or indirectly, shall be a graduate of a legally chartered medical college or uni-

versity having authority to confer the degree of doctor of medicine (except as provided for in section five of this act), and such person shall present to the prothonotary of the county in which he or she resides or sojourns his or her medical diploma, as well as a true copy of the same, including any indorsements thereon, and shall make affidavit before him that the diploma and indorsements are genuine; thereupon the prothonotary shall enter the following in the register, to wit: the name in full of the practitioner, his or her place of nativity, his or her place of residence, the name of the college or university that has conferred the degree of doctor of medicine, the year when such degree was conferred, and in like manner any other degree or degrees that the practitioner may desire to place on record, to all of which the practitioner shall likewise make affidavit before the prothonotary, and the prothonotary shall place the copy of such diploma, including the indorsements, on file in his office for inspection by the public.

Sect. III. Any person whose medical diploma has been destroyed or lost shall present to the prothonotary of the county in which he or she resides or sojourns a duly certified copy of his or her diploma; but if the same is not obtainable, a statement of this fact, together with the names of the professors whose lectures he or she attended, and the branches of study upon which each professor lectured, to all of which the practitioner shall make affidavit before the prothonotary, after which the practitioner shall be allowed to register in manner and form as indicated in section two of this act, and the prothonotary shall place such certified statement on file in his office for inspection by the public.

Sect. IV. Any person who may desire to commence the practice of medicine or surgery in this State after the passage of this act, having a medical diploma issued or purporting to have been issued by any college, university, society, or association in another State or foreign country, shall lay the same before the faculty of one of the medical colleges or universities of this Commonwealth for inspection, and the faculty being satisfied as to the qualifications of the applicant and the genuineness of the diploma shall direct the dean of the faculty to indorse the same, after which such person shall be allowed to register, as required by section two of this act.

Sect. V. Any person who has been in the continuous practice of medicine or surgery in this Commonwealth since one thousand eight hundred and seventy-one without the degree of doctor of medicine shall be allowed to continue such practice, but such person shall, nevertheless, appear before the prothonotary of the county in which he or she resides, and shall present to him a written statement of these facts, to which the practitioner shall make affidavit; thereupon the prothonotary shall enter the following in the register, to wit: the name in full of the practitioner, his or her place of nativity, his or her place of residence, the time of continuous practice in this Commonwealth, and the place or places where such practice was pursued, to all of which the practitioner shall likewise make affidavit, and the prothonotary shall place the certified statement on file in his office for inspection by the public.

Sect. VI. Every practitioner who shall be admitted to registration shall pay to the prothonotary one dollar, which shall be compensation in full for registration, and the prothonotary shall give a receipt for the same.

Sect. VII. Any practitioner who shall present to the faculty of an institution for indorsement, or to a prothonotary, a diploma which has been obtained fraudulently or is in whole or in part a forgery, or shall make affidavit to any false statement to be filed or registered, or shall practice medicine or surgery without conforming to the requirements of this act, or shall otherwise violate or neglect to comply with any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction shall be punished for each and every offense by a fine of one hundred dollars, one-half to be paid to the prosecutor and the other half to be paid to the county, or be imprisoned in the county jail of the proper county for a term not exceeding one year, or both, or either, at the discretion of the court.

Sect. VIII. Nothing in this act shall be so construed as to prevent any physician or surgeon legally qualified to practice medicine or surgery in the State in which he or she resides from practicing in this Commonwealth, but any person or persons operating an office or appointing any place where he or she may meet patients or receive calls shall be deemed a sojourner, and shall conform to the requirements of this act.

Sect. IX. This act shall take effect on the first day of June, one thousand one hundred and eighty-one.

The *Medical Times* makes the following comments upon the above law:—

A weak point in this otherwise admirable law is, it appears to us, the fact that no limit of time is fixed for registry beyond which the penalty may be enacted for non-compliance. The act went

into effect on June 1st. Are all practitioners who failed to register on that day liable to fine and imprisonment? Hardly, we should think. But, on the other hand, how long are the ignorant, negligent, and criminally inclined to be permitted to neglect registration? Indefinitely? It looks like it. We venture also to wonder how the prothonotary is to know when any practitioner has "departed this life." Must he scan the daily papers for this purpose? But, on the whole, the act is a good one, and, fraught, we may hope, with advantage to the dignity and respectability of the profession and the health and safety of the community.

TEXAS.

Extract from Civil Code of the State of Texas, adopted by the legislature, to take effect from September 1, 1879.

Title LXXIII. Physicians. Article 3625. The presiding judges of the district courts of the several judicial districts of this State shall, as soon as practicable, severally appoint a board of medical examiners for their respective districts, which appointment shall be in writing and signed by the judge making the same, and delivered to the person appointed.

Art. 3626. Said board of medical examiners shall be composed of not less than three practicing physicians of known ability, who are graduates of some medical college recognized by the American Medical Association, and who are residents of the district for which they are appointed.

Art. 3627. The appointment of a member of a board of medical examiners shall continue for two years from the date of such appointment.

Art. 3628. The board shall, immediately after appointment, select one of their number president and one secretary, and adopt all necessary rules for the guidance and control of their meetings.

Art. 3629. Said board shall meet regularly, semi-annually, at some central point in their respective districts, to conduct examinations and grant certificates as hereinafter provided, and they shall give at least one month's public notice of the time and place of their meeting, by publication in at least one newspaper published in the district in which such meeting is to be held.

Art. 3630. Each and every one of such boards shall procure a seal as soon as practicable after their organization, which seal shall be impressed upon every certificate granted.

Art. 3631. Whenever a vacancy occurs in any of said boards, the same shall be filled by appointment by the judge of the district in which such vacancy occurs.

Art. 3632. It shall be the duty of said board to examine thoroughly all applicants for certificates of qualification to practice medicine in any of its branches or departments in this State, whether such applicants are furnished with medical diplomas or not, upon the following named subjects, to wit: anatomy, physiology, pathological anatomy and pathology, surgery, obstetrics, and chemistry; but no preference shall be given to any school of medicine.

Art. 3633. When the board shall be satisfied as to the qualifications of an applicant, they shall grant him a certificate to that effect, which certificate shall entitle the person to whom granted to practice medicine in any county in this State, when the same has been recorded as required by Article 3635.

Art. 3634. Any two of the members of such board of medical examiners may grant a certificate of qualification to an applicant, and any member of said board shall have authority to grant a temporary certificate to an applicant upon examination until the next regular meeting of the board, at which time the temporary certificate shall cease to be of force.

Art. 3635. The certificate provided for in the two preceding articles shall, before the person to whom it is granted is entitled to practice by virtue thereof, be recorded in the office of the clerk of the county court of the county in which such practitioner may reside or sojourn, in a well-bound book to be kept by the clerk for that purpose; and when so recorded the clerk shall certify thereon under his official seal the fact and date of such record, and shall return such certificate to the person to whom the same was granted, and shall be entitled to demand and receive for such service, from the holder of such certificate, the sum of one dollar.

Art. 3636. The board shall be entitled to demand and receive from each applicant examined the sum of fifteen dollars, whether a certificate be granted to such applicant or not.

Art. 3637. The provisions of this title shall not apply to the following persons: (1.) To those who may have been already qualified for the practice of medicine under an act entitled An Act to regulate the Practice of Medicine, passed May 16, 1873. (2.) To those who have been regularly engaged in the general practice of medicine in this State or in any of its branches or

departments for a period of five consecutive years prior to the first day of January, 1875. (3.) To females who follow the practice of midwifery strictly as such.

Art. 3638. No person, except those named in the preceding article, shall be permitted to practice medicine in any of its branches or departments in this State without having first obtained and recorded a certificate of qualification from some authorized board of medical examiners, as hereinbefore provided; and any person so offending shall be punished as provided in the Penal Code.

Extract from the Penal Code of the State of Texas:—

Title XII. Chapter three. Unlawful Practice of Medicine.

Article 396. If any person shall practice medicine in this State in any of its branches or departments, or offer or attempt to practice, without first having obtained a certificate of professional qualification from some authorized board of medical examiners, he shall be punished by a fine of not less than fifty nor more than five hundred dollars.

Art. 397. Each patient visited or prescribed for, or each day's offer to practice, shall constitute a separate offense under the preceding article.

Art. 398. If any person shall hereafter engage in the practice of medicine in any of its branches or departments, without having first filed for record with the clerk of the district court of the county in which such person may reside or sojourn a certificate of professional qualification from some authorized board of medical examiners, he shall be punished as prescribed in Article 396.

Art. 399. The provisions of this chapter shall not apply to any person who has been regularly engaged in the general practice of medicine, or in any of its branches or departments in this State, for five consecutive years prior to January 1, 1873; nor to any person who may have legally qualified himself to practice medicine under the provisions of an act entitled, Act to regulate the Practice of Medicine, passed May 16, 1873; nor to any female who may follow the practice of midwifery strictly as such.

Adopted and went into effect on September 1, 1879.

Medical Schools.

THE NEW YORK AND BROOKLYN MEDICAL SCHOOLS.

COLLEGE OF PHYSICIANS AND SURGEONS, MEDICAL DEPARTMENT OF COLUMBIA COLLEGE.

THE important changes announced at this college continue in operation. The spring session was then discontinued, and all the exercises of the school henceforth take place during one continuous session; so that, instead of a spring session and a succeeding winter session of five months' length, which formerly made up the collegiate year, this, since the collegiate year of 1880-81, consists of a single session of somewhat over seven months in length, which will commence upon the 3d of October and end during the first part of May. The only intermissions in the lectures will be for three days at Thanksgiving and one week at Christmas. Thus, for a "required" session of five months and an "optional" session of two and a half months, there is now substituted a "required" session of seven months. This session is not merely an extension of the winter session, with the same amount of stated exercises per week; but the number of didactic and other stated exercises each week has been diminished, at the same time that the course has been lengthened, for the purpose of allowing more time for laboratory and hospital work, recitations, and private study. This the faculty regards as a very valuable change, since, until last year, owing to the shortness of the session, the student's day was too crowded, for his good, with stated exercises.

The omission from the scheme of exercises of several didactic lectures a week will render it possible for the recitations conducted by the corps of exam-

iners to be held almost entirely during the daytime instead of in the evening, as previously.

After the first of May, beginning immediately at the close of the course of lectures, the examinations will occur, and the commencement exercises will henceforth be held about the middle of May, instead of at the end of February. As has been the case for some time at this school, all the examinations for the degree of M. D. will be conducted entirely in writing, and no candidate will be allowed to graduate until he shall have passed a satisfactory examination in each and all of the seven branches. The candidate is "conditioned" when the average merit of his thesis and examinations has been satisfactory, while in one or more branches he has been found deficient; in which case he can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular semi-annual examination. The candidate is "rejected" when the average merit of his thesis and examination has been unsatisfactory, and in this case he must be re-examined in all the seven branches, although the writing of a new thesis is rarely required.

The college authorities state that the prospects of the institution were never better than at present. The usual prizes are announced, and the award of the Alumni Association Prize will be made at the commencement, 1882. The next award of the Stevens Triennial Prize, which is open for universal competition, but which is given to no essay which does not include the results of original research, will be made in 1882, and the subjects (of which either may be chosen) are as follows:—

- (1.) Lesions of the Brain in Connection with the two Forms of Diabetes.
- (2.) Diphtheria in its Relations to Membranous Croup.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

The changes announced in the curriculum at this school consist mainly of a renunciation of the attempt at an *obligatory* course of three full sessions at the college, and of a return to the optional three years' course.

The faculty stated last year that for several years they had endeavored to induce students to attend three courses of lectures (passing their examinations in the elementary departments at the close of the second session), and that those who had followed this course had shown in their examinations a grade of qualification much higher than the standard usually attained by students under the old system.

The experience of the session of 1880-81 has led the faculty reluctantly to the conclusion that to persist in the requirement of attendance during three courses will be to incur a risk as regards the interests of the college, which they do not feel justified in assuming.

In announcing a return to their original requirements for graduation, the faculty desire to state that all the new additions to the curriculum will be retained. It is not proposed to recede in the least from these. Students will have the same opportunities for practical exercise in the different departments as those enjoyed by the class of 1880-81. For those who choose to attend during three sessions, the provisions as respects examinations in the elementary branches at the end of the second year, and an exclusive devotion to the practical departments during the third year, will be continued. To all students who are able to do

so, now, as hitherto, attendance during three years is strongly recommended; and from the number of those who have already matriculated with the expectation of attending three sessions, the faculty entertain a belief that not an inconsiderable proportion of future classes will voluntarily follow their example.

For the session of 1881-82, the requirements for graduation will be three years' pupilage, after eighteen years of age, and attendance upon two full courses of lectures, of which one course must be at the Bellevue Hospital Medical College.

The ordinary matriculation examination will consist of English composition, grammar, arithmetic (including vulgar and decimal fractions), algebra (including simple equations), and geometry (first two books of Euclid); but this examination will be waived in the case of those who have received the degree of A. B., those who have passed the freshman examination for entrance into any incorporated literary college, those who present certificates of proficiency in the subjects of the matriculation examination from the principal or teachers of any reputable high school, and those who have passed a matriculation examination at any recognized medical college, or at any scientific school or academy in which an examination is required for admission.

Students are expected to attend all the lectures, including clinics, for the first two years. During the third year they should attend all the clinics, but they may confine their attendance upon the didactic lectures to the branches upon which they are to pass their final examinations; by which means time can be obtained for practical work in the dissecting-room and the chemical and pathological laboratories, and for practical clinical exercises in medicine, surgery, and gynecology. Students are expected to attend regular weekly recitations, held by members of the faculty during each session, in the branches upon which they are to be examined at the close of the session, and for those who attend the full course of instruction at the college for three years the regular examinations at the close of each of the three sessions are obligatory.

Clinical instruction, in connection with the regular didactic courses, will remain as the distinguishing feature of the curriculum, beginning with the first course and continuing without interruption during the entire three years; and great advantages are claimed in this respect on account of the large amount of material at the command of the lecturers. The faculty remains substantially unchanged this year, and there will be the regular winter and spring sessions as heretofore.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

The University school continues its policy of endeavoring to keep its various departments as fully as possible up to the most modern ideas and methods of teaching and practice. Its building, which was erected at a cost of \$110,000, is the newest of any of the medical colleges, and is fitted up with the most approved appliances for instruction and practical study; while it has the same advantage as the Bellevue School of proximity to the great Bellevue and Charity hospitals. The comfort and health of the students are also a matter of solicitude on the part of the faculty, who do all that they can to secure to them "sound minds in sound bodies." The system of weekly examinations by the various professors, which was established four years

ago, has produced such good results in improving the preparation of the students for their work that they will be continued during this winter; while the method of written examinations for the degree of M. D. has been found to be so satisfactory both to the students and the professors that it is now adopted in all the departments. It is believed that this gives the student a much better opportunity to do justice to his knowledge than the plan of oral examinations. With a view to the establishment of a systematic, graduated scheme of tuition, students who have attended two full courses of lectures, and who have completed two years of study, may be admitted to examination in chemistry, anatomy, and physiology, and if successful, will be examined in practice, materia medica and therapeutics, surgery and obstetrics, at the expiration of their full course of study; but those who prefer it may have all their examinations at the close of their full term.

In order to stimulate the efforts of the students, three prizes, in addition to the Mott medals, are to be given by the faculty at the close of the present session, namely:—

I. A prize of five hundred dollars to the candidate whose general scholastic standing is the highest, as shown by the record of his final examination for the degree of M. D.

II. A prize of three hundred dollars to be awarded to the candidate who shall pass the best competitive examination in the seven general departments.

III. A prize of two hundred dollars will be awarded to the candidate who shall pass the second-best examination in the above competition.

The conditions being as follows:—

(1.) Each competitor must have attended two or more full courses of lectures in the University.

(2.) The faculty will select from the graduating class ten candidates, whose marks for the degree are the highest, and only these will be permitted to enter into the competition.

(3.) These examinations shall be conducted in public, and they may be oral or written, at the discretion of the faculty.

(4.) The candidate who receives the first-named prize for general scholastic standing shall not be allowed to compete for this prize or the following.

The collegiate year is divided, as before, into three sessions,—the spring session, the preliminary winter session, and the regular winter session,—the whole embracing a period of about seven and a half months. The spring session is devoted to clinical teaching, lectures on various "specialties," and recitations, and it extends for nearly three months after the close of the winter session; while the preliminary winter session occupies the two weeks preceding the opening of the regular session. The lectures in this term, both clinical and didactic, are the same in number and order as during the winter session, and are given by the professors of the regular and post-graduate faculties; the subjects of the lectures being introductory to those of the regular course. The post-graduate course consists of clinical lectures delivered during the winter and spring sessions by the several professors of the post-graduate faculty, in Bellevue and Charity hospitals and in the college.

LONG ISLAND COLLEGE HOSPITAL, BROOKLYN.

The faculty of this institution have carried out many changes during the last few years, and it is claimed that great progress has been made, so that the

course of study is believed to be as complete as any in the country. "In the Long Island College Hospital," says Prof. Jarvis S. Wight, in a late introductory lecture delivered at the school, "we divide our class of advanced students into as many sections as we have practical departments. One section is drilled one week in one department, and another week in another department, and so on through all the departments again and again. In the mean time every other section is going through the same process of rotation. The stethoscope and the tape-line are put into the hands of the student. He listens and measures; he studies the clinical facts of medicine and surgery on the living subject; and day after day he works the substance of these facts into his mental constitution. He observes, he thinks, he educates himself, — and this is the way doctors are made in these halls. In this place there is no royal road to the profession, any more than there is a royal road in the profession. And when men who have been well drilled in this kind of clinical medicine come up for their final examination we find that they have their professional house built on a rock, and that their work after they leave this place is honorable, salutary, and safe. . . . We have established a three years' course of recitations and lectures. During one half of the collegiate year the student is drilled in the elements of medicine by competent teachers. During the other half of the collegiate year the student hears lectures and is daily examined on what he learns. And when the student has mastered the elements of medicine he is taught clinical medicine in the way already described. This simple and efficient plan of instruction has been in operation in this school for a number of years. The success has been very encouraging. We began this system with only about five students. The number has increased from year to year, until we have now about fifty students pursuing a systematic three years' course of study."

The Long Island College Hospital was organized for the purpose of practically uniting a hospital and a medical school, and the founders have matured the plan and practically carried it out to an extent which they believe is unequalled by any other school in this country. The success of this plan, it is thought, depends mainly on two important factors: —

(1.) The hospital is under the immediate control of the regents and council of the college, and is therefore available at all times for practical instruction.

(2.) The courses of instruction are given in the hospital building, so that the student, without loss of time, is brought in direct contact with the patients.

The faculty claim that they are "thus able to make clinical teaching a *reality* in the only possible way in which it can be of practical value to the student, namely, by cultivating his faculties of observation *at the bedside*. Mere amphitheatre teaching must, from the very nature of clinical study, fail to accomplish work that can only be done in the wards of a hospital."

The collegiate year embraces a reading and recitation term (which begins this year September 28th), and a regular session (which begins January 25, 1882) and continues five months; but only the regular session is obligatory upon candidates for graduation. The students of the reading term are classified in three grades, each grade corresponding to one year's study.

Grade 1. Students who have studied one year, and attended the full reading and regular sessions, may be admitted to the regular examination on elementary

chemistry, osteology, normal histology, and materia medica.

Grade 2. Students who have attended both courses for two full years may be admitted to such of the above examinations as they have not already passed, and also to examination on descriptive anatomy, physiology, therapeutics, analytical chemistry, and general pathology.

Grade 3. Students who have passed successfully the examinations of grade one and two shall belong to the third grade. About one half the students now attend this full three years' graded course; but it is the intention of the council and faculty to make this course (which is at present voluntary and elective for the student) at an early period a *requirement* for graduation.

For the purpose of carrying out more fully the objects of clinical instruction, and thereby perfecting the system of *demonstrative* teaching, the faculty have adopted the plan of dividing the senior class into sections of ten or more, who accompany the clinical teacher in his daily hospital service; and by this plan of constant rotation of classes from the medical to the surgical wards of the hospital they believe that the student receives the largest possible amount of instruction daily in all the practical branches. This mode of teaching, it is claimed, is peculiar to the Long Island College Hospital. The faculty also adhere to daily class examinations, having found by experience that the plan of constant class-room drill encourages exact knowledge and habits of close attention; while in its practical results it is superior to the system of lectures alone.

The registrar of the college writes, "The outlook for our school is better to-day than ever before. We mean real reform in medical education, and time will vindicate us."

MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO.

THE regular term begins the first week in October and continues twenty weeks.

In the plan of instruction adopted in this institution, clinical teaching occupies an important and prominent position; the practical subjects presented in the didactic course being fully illustrated at the bedside. The Buffalo Hospital of the Sisters of Charity, and the Buffalo General Hospital, together with the cases presented at the college, furnish ample material for clinical instruction. In this respect few, if any, institutions in the country possess equal advantages. — equal, at least, in point of availability, since arrangements have been made by which all the clinical cases can be *seen* and *studied* by the class.

The following are the requisites for graduation: —

The didactic lectures are given in the college edifice, situated on the corner of Main and Virginia Streets. This is a commodious stone structure, conveniently and pleasantly situated, constructed with express reference to medical instruction, containing two large lecture rooms, museum, chemical apparatus, laboratory, etc., exclusively devoted to the Medical Department of the University.

In connection with the medical cases of the hospital, as well as in the didactic course of the college, particular attention will be paid to the subject of physical exploration.

The Buffalo Hospital of the Sisters of Charity is a large and modern institution; the professors in the college are the attending medical officers of the hospital during lecture session.

Twenty-one years of age; a good moral character; satisfactory evidence of having studied medicine for three years under the tuition of a regular practitioner or practitioners; dissection during one course, either at this or some other incorporated institution; two full course of lectures, the last having been at this institution, are the requisites for graduation

MEDICAL SCHOOLS OF PHILADELPHIA.

AMONG the world's great medical centres of modern times Philadelphia has for many years occupied an important and influential position. More than twenty thousand physicians have graduated in that city. To Philadelphia belongs the honor of having established the first medical school upon this continent. In 1765 the Medical Department of the University of Pennsylvania was organized by Drs. John Morgan and William Shippen, under the authority of the board of trustees of the university and the recommendation of the proprietary of the State. It was closely modeled upon the methods pursued at the University of Edinburgh, the trustees declaring that "their scheme of medical education was to have as extensive and liberal a plan as in the most respectable European seminaries, and that the utmost provision was made for rendering a degree a real mark of honor, the reward only of distinguished learning and abilities." In order to show how sincere were these strivings for higher medical education we quote the requirements that were then thought essential in order to obtain the degree of doctor in medicine. It was enacted "that all such students as have not taken a degree in any college shall, before admission to any degree in physic, satisfy the trustees and professors of the college concerning their knowledge of the Latin tongue, and in such branches of mathematics, natural and experimental philosophy, as shall be judged requisite to a medical education." Two grades of degrees in medicine were established. For the lower of these, that of bachelor of medicine, the student was required to serve a sufficient apprenticeship with some reputable physician; to have a general knowledge in pharmacy; to attend at least one complete course of lectures, and to follow the practice of a general hospital for one year. After having shown his fitness at a private examination, he was then admitted to a public examination for the bachelor's degree. To obtain the degree of doctor of medicine it was necessary that the applicant should have been a bachelor of medicine for at least three years, should have attained the age of twenty-four years, and should write and defend a thesis publicly in the college.¹

Owing to many circumstances beyond the control of the trustees and faculty, or the pressure of circumstances too powerful to be successfully resisted, the requirements for the degree in medicine, in the course of years, were gradually made less stringent by the authorities, but they have always succeeded in maintaining a relatively high standard among medical schools

of this country for the Medical Department of the University of Pennsylvania. In 1876 the term of study was extended from two years to three, and the course was graded. At the last session a further reform and great step in advance was made by reestablishing the preliminary examination, or requiring in lieu thereof the presentation of a certificate of graduation or an academical degree, as an evidence of fitness for entering upon the medical studies.

Jefferson Medical College was chartered in 1825, as the Medical Department of Jefferson College at Canonsburg, Penn. It has long outlived the parent institution, but continues to flourish under its university charter, the right to which it usually asserts once a year by granting honorary degrees of doctor of divinity, and more rarely of doctor of laws, to distinguished individuals recommended by the board of trustees, but no honorary degree in medicine is ever granted by Jefferson College, upon the occasion of the annual commencement. Jefferson College for many years has been in a most flourishing condition, and claims to have at the present time a larger number of living graduates than any other college in the country, and certainly has a larger number of students now in attendance upon the lectures than any other American college.

Both of the above-named institutions have large general hospitals connected with them which are well adapted to their purpose, commodious, clean and well ventilated, and furnished with the latest appliances for the treatment of the sick and maimed and for clinical teaching. In all, Philadelphia has twenty hospitals and at least ten dispensaries, and thirty-eight other charitable institutions with which infirmaries are connected; many of these are devoted to specialties. Before considering the curriculum of the schools more in detail, it is proper to devote some attention to the Pennsylvania Hospital, which has served a highly useful purpose, and taken an honorable part in the history and development of medical education in this country. In 1751, through the persistent efforts of some charitably disposed citizens, a charter was obtained from the proprietary for a hospital for "the sick poor and the reception and cure of the insane," which was opened in this city in 1752. This institution has always been characterized by the economical management of its funds, and the faithfulness of the officers charged with the administration of its important trusts. Upon its staff have been some of the most prominent physicians and surgeons in Philadelphia. Early in its existence the clinical material found in the wards was utilized for the benefit of science. Attracted to the hospital by its growing reputation, even before the establishment of the medical department of the university, students were found in attendance upon the practice of the house. Dr. John Pethergill presented, in 1762, a medical book to the hospital "for the benefit of the young students in physic, who may attend under the direction of the physicians;" this book afterwards was the nucleus of a library, which is now one of the great medical libraries of this country, the Medical Library of the Pennsylvania Hospital. The hospital, before the establishment of the regular schools, took "apprentices," as they were called, and subsequently gave them a certificate of attendance upon the practice of the house. At the present time free medical and surgical clinics are held twice a week for students from the University and Jefferson colleges and physicians, on Wednesday and Saturday from ten to twelve o'clock, and

¹ From an Address on Higher Medical Education the True Interest of the Public and of the Profession. By William Pepper, Professor of Clinical Medicine, University of Pennsylvania. Philadelphia 1877.

there is also a clinic to female students from the Woman's College, on Tuesday mornings throughout the winter session at the college. The insane department of Pennsylvania Hospital stands among the first of institutions of its kind. Its two large buildings are situated in about forty acres of ground in the western part of the city, and are under the care of Dr. Kirkbride and his able assistants.

The medical schools of Philadelphia at present are that of the University of Pennsylvania, Jefferson College, and the Woman's Medical College of Pennsylvania. The schools devoted to special departments of medicine are the Philadelphia School of Anatomy, the Pennsylvania School of Anatomy, the Philadelphia College of Pharmacy, the Pennsylvania College of Dental Surgery, the Philadelphia Dental College and School of Oral Surgery, and the Dental Department of the University of Pennsylvania. At the Nurse's Home, or, as it is technically styled, The Philadelphia Lying-In Charity and Nurse Society, besides the training of nurses, two very practical courses of illustrated lectures on midwifery are given during the winter by the principal physicians, Drs. J. G. Allen and Albert H. Smith.

At the hospital connected with the Woman's Medical College there is an admirable training-school for nurses. In considering the opportunities for special instruction, it should not be forgotten that daily clinics are held at the Will's Eye Hospital; and at the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases clinics are regularly held by the attending physicians and surgeons.

THE UNIVERSITY OF PENNSYLVANIA.

The University of Pennsylvania occupies over twenty acres of elevated ground upon a commanding site in West Philadelphia, one half of this ground being devoted to the medical department; it has situated upon it the Hall of the Department, the Laboratory Building, and the University Hospital. The architecture is modern and harmonious in design, and appropriate and attractive in appearance. The following is the *personnel* of the faculty as at present constituted:—

William Pepper, M.D., LL.D., Provost of the University and *ex officio* President of the Faculty; Henry H. Smith, M.D., Emeritus Professor of Surgery; Joseph Leidy, M.D., LL.D., Professor of Anatomy; Richard A. F. Penrose, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children; Alfred Stillé, M.D., LL.D., Professor of Theory and Practice of Medicine, and of Clinical Medicine; D. Hayes Agnew, M.D., LL.D., John Rhea Barton Professor of Surgery and of Clinical Surgery; William Pepper, M.D., Professor of Clinical Medicine; William Goodell, M.D., Professor of Clinical Gynecology; James Tyson, M.D., Professor of General Pathology and Morbid Anatomy; Horatio C. Wood, M.D., Professor of Materia Medica, Pharmacy, and General Therapeutics; Theodore G. Wormley, M.D., LL.D., Professor of Chemistry; John Ashhurst, Jr., M.D., Professor of Clinical Surgery; Harrison Allen, M.D., Professor of Physiology. Professor James Tyson, M.D., is the Secretary of the Faculty.

The curriculum of the graded course is arranged as follows:—

First year. Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final examinations at the end of the course: General Chemistry, Materia Medica, and Pharmacy.

Second year. Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final ex-

aminations at the end of the course: Anatomy, Medical Chemistry, and Physiology.

Third year. General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children.

Opportunities for practical work in the physiological laboratory will be afforded to those who desire them. A separate fee is charged.

Gynecology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otolaryngology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children).

Final examinations for degree at the end of the course: General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children.

No beneficiary students are received at the University of Pennsylvania, nor is the secretary at liberty to receive students at reduced rates, except in the case of the six successful applicants for the scholarships created by the board of trustees. These are open to competitive examination by applicants, provided, (1) that they are able to furnish satisfactory evidence that they are without the means to defray the expenses of a medical education; (2) to write a brief autobiography, not exceeding a page of foolscap, which will serve as a test of their qualifications in orthography and grammar; and (3) to pass an examination in a Latin prose translation (first three books of *Cæsar*), and an examination in elementary physics. This examination is held annually in September.

The faculty express great satisfaction with the results of the lengthening of the term and grading the course; it is claimed that the students are better taught, they seem of a higher order of intelligence, and finally that the classes are increasing rather than diminishing in members. The faculty have also established a post-graduate course, which embraces Practical Physiology, taught by Dr. Edward T. Reichert; Medical Chemistry, by Professor Wormley; Pathology, by Dr. H. F. Formad; Clinical Medicine, by Professor Pepper and Dr. Edward T. Bruen; Clinical Medicine, by Professor Tyson; Clinical Surgery, by Professor Ashhurst; Clinical Surgery of Children, by Professor Ashhurst and Dr. H. R. Wharton; Operative Surgery and Bandaging, by Dr. C. T. Hunter; Practical Obstetrics, by Dr. Elliot Richardson; Clinical Gynecology, by Dr. B. F. Baer; Diseases of the Nervous System, including Electro-Therapeutics, by Dr. Charles K. Mills; Diseases of Children, by Dr. John M. Keating; Diseases of Children (Children's Hospital), by Dr. Louis Starr; Ophthalmology, by Dr. S. D. Risley; Dermatology, by Dr. A. Van Harlingen; Otolaryngology, by Dr. W. M. L. Zeigler; Laryngoscopy, by Dr. Carl Seiler; and Venereal Diseases, by Dr. J. William White. A fee ranging from fifteen to twenty-five dollars is charged for instruction in each of these special departments. The Laboratory Building is a spacious building of four floors, the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains apartments for physiological, histological, and pathological investigation. There is also a pharmaceutical laboratory, and one of experimental therapeutics, supplied with the usual instruments for recording pathological conditions and the effects of medicines upon the system. The attendance of the students upon the laboratory courses is compulsory. Before commencing dissecting the student is obliged to attend the osteo-syn-desmological laboratory, in order to

make himself familiar with the bony skeleton before operating upon the cadaver.

(1.) For admission to the session of 1880-1881, the candidate will be required to pass the preliminary examination. Students may report to the secretary for examination at any time after the second Monday in September.

(2.) Students who have attended one course in a regular medical school will be admitted as students of the second course in the University of Pennsylvania, after having satisfactorily passed an examination in general chemistry and materia medica and pharmacy. Students who have attended two courses in a regular medical school shall be admitted as students of the third course in this institution, after having satisfactorily passed an examination in general and medical chemistry, materia medica and pharmacy, anatomy, and physiology.²

Graduates of other regular medical schools in good standing will be admitted as students of the third course without an examination.

Graduates of colleges of pharmacy and dental colleges in good standing are admitted to the second course without an examination.

(3.) The candidate for the degree of doctor of medicine must have attained the age of twenty-one years, and be of good moral character. He must have applied himself to the study of medicine for three years, and have attended at least his last course of instruction in this school; have prepared a satisfactory thesis,³ and have passed the required examinations.

(4.) When a candidate applies to the secretary of the faculty for examination, he must give satisfactory evidence that the above rules have been complied with.

(5.) Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement.

(6.) The candidate shall pay the graduation fee on the presentation of his thesis, or before receiving notice of having successfully passed his final examination. Upon receiving such notice, he will enter his name on the register for the purpose of being reported to the board of trustees.

(7.) Candidates who have passed their examination, and in other respects complied with the regulations, are reported by the secretary of the faculty to the provost of the university, who communicates such report to the board of trustees, in order that, if approved by them, their mandamus may be issued for conferring the degree.

(8.) The Commencement for conferring the degree of doctor of medicine is held on the 15th day of March, unless that day should fall on a Saturday or Sunday, when it is held on the preceding Friday.

(9.) The degree will not be conferred upon a candidate who absents himself from the public Commencement, except by special permission of the medical faculty.

In regard to the arrangement of sessions, the announcement is as follows:—

The winter session, upon which alone attendance is obligatory, begins on Monday, the 3d day of October, and ends on the last day of February ensuing.

The preliminary session begins on the second Monday in September, and ends on the Saturday preceding the day of opening of the winter session.

The spring session begins the latter part of March and ends about the middle of June.

The entire college expenses for the three years' course is \$115, including matriculation and graduating fees.

JEFFERSON MEDICAL COLLEGE.

The buildings of Jefferson College are situated in the central part of the city (near Tenth and Walnut Streets), and consist of a medical hall, a new laboratory building, and a new hospital.

¹ Homeopathic and eclectic schools are not recognized as being in this category.

² These examinations for admission to advanced standing are held towards the close of September.

³ The thesis must be in the candidate's own handwriting, and shall be written on thesis paper, the alternate pages being left blank. It is recommended that the candidate prepare his essay before the commencement of the last course of lectures. It should also be bound. A title may be published by the candidate if he desires it, the permission of the professor by whom he was examined thereon having been first obtained; but no alteration shall be made in such thesis without the consent of the said professor.

The medical hall contains two large lecture rooms, each capable of seating over six hundred students; they are spacious, well lighted and ventilated. A valuable anatomical, surgical, and pathological museum, rooms for practical pharmacy and experimental therapeutics, as well as the private rooms for offices for the faculty, are also included in this building. The laboratory building is immediately adjoining the medical hall, and communicates directly with it. The first floor is devoted to chemical and philosophical apparatus, the second to laboratory teaching of chemistry, and the third to demonstrations of experimental physiology and microscopy. It also contains a large room for operative and minor surgery. The different departments are all efficiently equipped for scientific work.

The new hospital of the Jefferson Medical College is situated immediately west of the college, fronting on Sanson Street, and is bounded on three sides by streets, and by a wide private passage-way on the fourth side. It is one hundred and seven feet square, five stories in height, and is designed for the easy accommodation of one hundred and twenty-five patients. In connection with the hospital is the out-door or dispensary department, which furnishes much valuable material for clinical instruction.

The faculty of the college comprises the following professors: Joseph Pancoast, M. D., general, descriptive, and surgical anatomy (*emeritus*); Samuel D. Gross, M. D., LL. D., D. C. L. Oxon., LL. D. Cantab., institutes and practice of surgery; Ellerslie Wallace, M. D., obstetrics and diseases of women and children; J. M. Da Costa, M. D., practice of medicine; William H. Pancoast, M. D., general, descriptive, and surgical anatomy; Robert E. Rogers, M. D., medical chemistry and toxicology; Roberts Bartholow, M. D., materia medica and general therapeutics; Henry C. Chapman, M. D., institutes of medicine and medical jurisprudence. Professor Wallace is the dean of the faculty. Prof. William Thompson, M. D., is the ophthalmic surgeon of the hospital; William S. Forbes, M. D., is demonstrator of anatomy; J. Ewing Mears, M. D., demonstrator of surgery; J. Gibbons Hunt, M. D., demonstrator of histology; G. Mason Ward, M. D., demonstrator of chemistry; Morris Longstreth, M. D., demonstrator of pathological anatomy, and curator of the hospital museum; and A. P. Brubaker, M. D., has been appointed demonstrator of physiology, and curator of the anatomical museum.

The requirements for graduation are as follows:—

I. The candidate for the degree of M. D. must be of good moral character, and at least twenty-one years of age. He must have attended at least two full winter sessions of lectures, one of which, the last, shall have been in this college, and must exhibit his tickets, or other adequate evidence of attendance, to the dean of the faculty.

He must have studied medicine for not less than three years, and have attended at least one course of practical anatomy and of clinical instruction. He must present to the dean of the faculty a thesis of his own composition, correctly written, and in his own handwriting, on some medical subject, and exhibit to the faculty, at his examination, satisfactory evidence of his professional attainments.

II. Students who have attended one complete course in a respectable medical school, where attendance on two complete courses is necessary to a degree, and where the same branches are taught as in this, are permitted to become candidates by an attendance here on one full course, the rules of graduation being in other respects observed. They are also exempted from the payment of fees upon attending a second term.

Students of dental colleges, where a five months' winter session is held, and where full courses are given on anatomy, materia medica, physiology, and chemistry, may become candidates after attendance on two courses at such colleges, and one full course at the Jefferson Medical College, with two courses on surgery, practice of medicine, and obstetrics.

Students of colleges of pharmacy, where full courses are given on materia medica and chemistry, may become candidates after attendance on two courses at such colleges, and one full course at the Jefferson Medical College, with two courses on anatomy, surgery, practice of medicine, physiology, and obstetrics.

III. Students who have attended two full courses on anat-

omy, chemistry, materia medica, or institutes may be examined on any of these branches, at the end of their second course. They are thus enabled to devote their last (third) course to the didactic lectures on the remaining branches, and to clinical study. The faculty record with satisfaction the large and increasing number of students who now avail themselves of these examinations, and who attend three courses of lectures before presenting themselves as candidates for graduation. The attendance upon the summer course of lectures has also greatly increased in numbers, and the faculty earnestly recommend all who have it in their power to use these improved facilities for a complete medical education.

No honorary degrees in medicine are granted.

IV. The degree will not be conferred upon any candidate who absents himself from the public Commencement without the special permission of the faculty.

Fee to each professor, twenty dollars, in all, one hundred and forty dollars. Matriculation fee five dollars, to be paid once only. Graduation fee thirty dollars. Students who have paid for two full courses are entitled thereafter to attend free of all charge.

V. Students who have attended two full courses of lectures in other accredited medical colleges are entitled to the tickets of a full course in the Jefferson Medical College for seventy dollars. Graduates of three years' standing of other accredited medical colleges are required to pay the matriculation fee only; to graduates of less than three years' standing the fee for a general ticket is fifty dollars. To graduates of accredited dental colleges and colleges of pharmacy the fee for a general ticket is one hundred dollars.

A preliminary course of lectures is given in September, the regular term commencing annually with the first week in October, and continuing until the close of the third week in March following. There are several courses of special instruction which should be mentioned. The demonstrator of anatomy and the demonstrator of surgery each give two illustrated lectures a week in the evening during the winter, spring, and fall sessions. The large anatomical rooms are open daily from eight A. M. to ten P. M.; a full supply of material is furnished at the rate of one dollar per part.

The working laboratory for practical chemistry, under the supervision of the professor of chemistry, aided by the demonstrator of chemistry, is open twice a week during the winter and spring courses. The student is here taught to manipulate for himself in the preparation of gases, acids, salts, etc., and to test and trace reactions, to perform qualitative and quantitative analysis, to examine normal and abnormal products, and to become familiar with those instruments, such as the microscope, the galvanic battery, etc., which are useful in the hands of the medical practitioner. In connection with this the demonstrator, Dr. G. M. Ward, holds weekly examinations upon the didactic lectures by the professor of chemistry. The fee for the courses is five dollars, and for the use of apparatus and chemicals one dollar and a half. The laboratory which pertains to the chair of physiology is under the immediate charge of a demonstrator, who conducts vivisections and assists advanced students in original investigation. The microscopic laboratory is amply provided with microscopes and other appliances for thorough practical instruction, and is under the charge of Professor J. Gibbons Hunt, demonstrator of histology.

Lectures upon pathological anatomy are given by Dr. Morris Longstreth, pathologist to the hospital, who also gives instruction in the post-mortem rooms of Pennsylvania Hospital, opportunities being given for the students to be present at the autopsies.

Professor Bartholow instituted last year an original plan in connection with his lectures for teaching therapeutics and materia medica. He has appointed an instructor in pharmacy (Dr. J. Mason McCollin), one in materia medica (Dr. N. K. Minich), and one in therapeutics (Dr. Frank Woodbury) to conduct a series of

demonstrations and examinations during the winter upon these branches, for which they are abundantly supplied with material and the proper apparatus of precision. Experimental therapeutics will also be carried on by advanced students interested in original studies of the action of drugs upon the lower animals. For these several departments no fee is charged beyond a small one for material furnished. This promises to be quite popular among the students.

The clinics at the new hospital and at the Pennsylvania Hospital are in the neighborhood.

At the close of the winter session a spring session is held, beginning early in April and ending early in June, embracing the following subjects:—

Clinical Surgery and Medicine, by the hospital staff; Clinical Lectures at the Pennsylvania Hospital, Professor Bartholow; Physiology and Comparative Anatomy, Professor W. C. Chapman; Electro-Therapeutics, ———; Diseases of the Urino-Genital Organs, Dr. S. W. Gross; Operative Surgery, Dr. J. H. Brinton; Ophthalmic Surgery, Professor William Thomson; Venereal and Cutaneous Diseases, ———; Laryngoscopy and Diseases of the Throat, Dr. J. Solis Cohen; Anatomy, Dr. William S. Forbes; Physical Diagnosis, Dr. J. Gibbons Hunt; Microscopy, Dr. J. C. Wilson; Pathological Anatomy, with demonstrations, Dr. Morris Longstreth; Diseases of Children, Dr. W. B. Atkinson; Toxicology, Dr. H. Lefmann; Urinary Pathology, Dr. Jos. S. Neff.

Attendance upon the summer course is allowed as office instruction, but does not count as a "session" of lectures.

There is no additional charge for the spring course of lectures to matriculates of the college, except a registration fee of five dollars. Non-matriculates pay the registration fee, and also \$35, *which latter sum is, however, credited on the amount of fees paid for the ensuing winter course.* And, while attendance on the fall or spring courses is not obligatory for graduation, the faculty earnestly recommend the student to avail himself of the advantages which are to be derived from these especial instructions.

The fees for the Jefferson College are matriculation five dollars, professors' tickets (\$20 each) \$140 (for the term \$280, no charge after the second term), graduation \$30. Total, \$315.

THE WOMEN'S MEDICAL COLLEGE.

This institution was chartered in 1850, since which time annual sessions have been held, and about three hundred ladies have been graduated in medicine. The college, situated in the northern part of the city, has a modern, commodious building, containing two large lecture rooms (seating three hundred each), and also large laboratories for chemical and pharmaceutical classes, dissecting, and for the museum. The sessions open in October and close at the end of February. A spring course is also held, which is free.

Early in the career of this college its authorities inaugurated the graded system of teaching, and established a chair of dental physiology and pathology, and a department of practical pharmacy, thus furnishing facilities for work in the pharmaceutical and chemical laboratories, which are kept open both during the winter and spring sessions. Lectures on histology and pathology are given weekly through the entire winter, with training in the use of the microscope. Among the features peculiar to the college may be specified the course in the pharmaceutical laboratory. Without additional fees regular weekly examinations are held through both winter and spring sessions. The college has an excellent though small library.

The Women's Hospital, in immediate proximity to the college, is a large, well-appointed building, admirably adapted for its purpose.

The faculty of the Women's Medical College, with the auxiliary instructors, is as follows:—

Mary J. Searlett-Dixon, M. D., Professor of Anatomy; Rachel L. Bodley, M. D., Professor of Chemistry and Toxicology; Benjamin B. Wilson, M. D., Professor of Surgery; Clara Marshall, M. D., Professor of Materia Medica and Therapeutics; Frances E. White, M. D., Professor of Physiology and Hygiene; Anna E. Broomall, M. D., Professor of Obstetrics and Gynecology; James B. Walker, M. D., Professor of Practice of Medicine; Alice Bennett, M. D., Demonstrator of Anatomy, etc.; J. Gibbons Hunt, M. D., Professor of Microscopy and Histology; C. Newlin Peirce, D. D. S., Professor of Dental Physiology and Pathology; W. W. Keen, M. D., Lecturer on Clinical Anatomy; Jos. B. Remington, Ph. G., Lecturer on Pharmacy; Edward T. Bruen, M. D., Lecturer on Pathology; Anna McAllister, M. D., Instructor in Obstetrics; Mary E. Allen, M. D., Demonstrator of Chemistry; Amy S. Barton, M. D., Instructor in Practice of Medicine; Emilie B. Dubois, M. D., Instructor in Materia Medica; Herrmann Haupt, Jr., M. D., Instructor in Physiology. Professor Rachel L. Bodley is Dean of the Faculty.

The whole cost of two or more courses of lectures and fee for graduation is \$265. Attendance upon two courses of lectures is required, the last to be at this college, and the candidate must have been engaged in the study of medicine for at least three years.

The advantages of Philadelphia as a medical centre need not be enlarged upon. The cleanliness and healthfulness of the city, the abundant supply of good water and good food at moderate prices, its convenience of location, and many attractions to the visitor can here only be mentioned. It can also be said with truth that its moral atmosphere (by no means an unimportant consideration "to parents and guardians") is rather better than some other large cities. As concerns its special inducements to medical students, which continue to attract them from all parts of the continent, we have very imperfectly indicated some of the more prominent of them. If the tree may be judged by its fruit, the profession can have no reason to complain of Philadelphia or her ancient halls of learning in regard to the quality of the instruction imparted by her distinguished teachers.

JOHNS HOPKINS UNIVERSITY.

COURSE ANTECEDENT TO THE STUDY OF MEDICINE.

THE Johns Hopkins University provides a special collegiate course for those who intend afterwards to study medicine. This course extends throughout three years, and, as a mental discipline, is equivalent to the other courses leading to the A. B. degree, which is therefore conferred on matriculated students who complete it. The main object held in view is to utilize for intending medical students the opportunities for practical study in physics, chemistry, and biology, found in an endowed institution with well-equipped laboratories, and so often wanting in medical schools; it is also considered an object to lessen the work to be subsequently crowded into the period of study at a medical school by giving the student a good knowledge of the sciences which lie at the basis of the medical art before he commences professional study. Physics, chemistry, and biology are therefore the main subjects included in the course; some knowledge of French and German is also demanded; and there

are, in addition, several subjects (inserted with a view to giving some breadth of culture) between which an option is allowed. These are Latin, Greek, mathematics, English literature, history, logic, and psychology. Each student must take up at least two of these optional subjects, the amount of knowledge required in each being such as would be obtained by a year's honest work.

The scientific subjects are taken up in the following order:—

I. PHYSICS.

There will be three recitations, two lectures, and one exercise in the physical laboratory weekly, through a year, at ten A. M.

Elementary mechanics will be studied during the first portion of the year; then will follow, in the order named, the study of the physical properties of matter, theories of undulations, acoustics, heat, magnetism, electricity, and light.

The lectures have as their aim the elucidation, by means of experimental demonstrations, of the subjects pursued by the class.

A morning of each week will be assigned for the work in the laboratory. This work will be selected with two principal ends in view: first, to give the student a clearer insight into the subjects studied, serving as a test of progress both to teacher and learner; and, second, to enable him to acquire a familiarity with the use of apparatus. The manner of conducting the exercise will be as follows: With the enunciation of a problem, each student will receive the apparatus necessary for its solution, and will be required to make the series of observations which, with their discussion and reduction, he is to submit to his instructor. These results will then be criticised and returned. Those who are aiming at the profession of medicine will thus grow familiar with physical instruments and methods which are of prime importance in physiological researches, for example, thermometry, the laws governing the phenomena of electricity, of light, etc. A knowledge of trigonometry is in all cases requisite before entering on this course.

II. CHEMISTRY.

The course of lectures and recitations on general chemistry is in progress through the year, at nine A. M. Students of this course are expected to attend all these exercises during the first year, and during the last half of the first year and the first half of the second year to work daily in the chemical laboratory. The instruction in the laboratory will be directed in such a way as seems best adapted to give the student a thorough knowledge of the pure science of chemistry and the methods peculiar to it. This kind of instruction is considered to be the best basis, whatever the object may be which the student has in view.

At first the student will have to make himself acquainted with the action of the various classes of substances upon each other by actual observation at the laboratory desk; and his knowledge will be constantly tested by means of appropriate problems given him for solution. After completing this course, he will be enabled farther to test his acquirements by taking up a course of qualitative and quantitative analysis. At intervals during the time he is engaged in this work, he will be required to prepare some chemical compounds in a pure state, so that his ideas concerning chemical action may become enlarged, and his knowledge of the special properties of the different classes of compounds more definite and detailed.

Opportunity is given in the laboratory for the prosecution of the study of chemistry to any extent, but generally the course thus briefly sketched will suffice for one who looks toward a course in medicine.

III. BIOLOGY.

The study of biology will begin in the second year, that is to say, after the student has made considerable progress in the study of physics and chemistry, and will continue through the third year. Those who have acquired elsewhere sufficient knowledge of the above subjects to satisfy the examiners may be at once admitted to work in the biological laboratory.

The course is designed to give the student, in the first place, a knowledge of the laws of life in general, whether exhibited in animals or plants; and, secondly, a knowledge of human anatomy and physiology. Human physiology is taught as a part of general physiological science, the student being left to acquire afterwards its clinical and hygienic applications as part of his medical studies proper; and similarly surgical and regional anatomy are left for the medical school proper; the student in

this course studies the human body as the final one in a series of animal types.

It is believed that by approaching these sciences from a general scientific stand-point the student is best prepared for the study of pathological structure and function; and that a great advantage will result from his being able to concentrate his attention on the professional applications of these studies when he enters a medical school.

The order of study is as follows:—

(1.) *General Biology.*—Lectures, recitations, or examinations four times weekly throughout one year, with daily laboratory instruction. This course is intended to bring prominently before the student the fundamental facts of biology as gathered from a detailed study of a number of typical plants and an animal from each class of the animal kingdom. The embryology of the chick is also studied in detail.

In this course beginners are taught how to use the microscope and to dissect.

(2.) *Human and Comparative Osteology.*—About sixty lectures or recitations.

These biological courses, with the corresponding laboratory study, give the student from three to four hours' work daily throughout the year.

The closing year of the preliminary medical course includes:

(3.) *Human Anatomy.*—This course extends from the commencement of the academic year to the end of March, and consists chiefly of demonstrations and practical study in the dissecting-room.

(4.) *Animal Physiology and Histology.*—Mainly with reference to the human body. Three lectures or examinations weekly throughout the academic year. The microscopic structure of the tissues and organs is studied in this course, except so much as may have already been gone through in the general biology course. Students are required to perform for themselves the simpler physiological experiments, while other more difficult but important facts are demonstrated to them.

The physiological apparatus belonging to the university is unusually good and complete, and students who follow this course will require a knowledge of the method of using all the chief instruments employed in physiological research; and, so it is hoped, will be able afterwards to carry out scientific investigations on the physiological action of drugs, in experimental pathology, etc.

(5.) From time to time short advanced courses of lectures on special physiological topics are delivered.

IV. SUMMARY OF THE COURSE.

Requisite for Matriculation: A good English education; Latin; Greek, or French and German; mathematics; physical geography.¹

First Year.—Physics (daily); chemistry (daily); German; English physiology.

Second Year.—Chemistry (daily, first half year); general biology (daily); French; English drawing.

Third Year.—Physiology and anatomy (daily); logic; psychology.

At the option of the student during the three years, mathematics; ancient languages; and various courses of lectures.

V. ADDITIONAL INFORMATION.

(1.) Students not unfrequently having presented themselves for admission to the preliminary medical course without the knowledge required to pass the full matriculation examination, and yet apparently fitted to profit by the course, the university authorities receive such if they possess an elementary knowledge of Latin (sufficient, for example, to translate *Cæsar* and *Virgil*, with a knowledge of accidence), and also of arithmetic, algebra, and geometry. Such candidates must in their answers conform to the rules of English grammar, including orthography, and no candidate will be approved who fails to satisfy the examiners in this respect. The student may, however (and is always encouraged and advised to), offer himself for matriculation at any time during his course, and may, after passing his matriculation examination, present himself in the regular course for a degree.

(2.) For requirements and opportunities in the study of mathematics, ancient and modern languages, history, psychology, etc., reference may be made to announcements in the University Register and Programme. It is only necessary to mention here that in French and German students will receive such

¹ If the candidate enter with a knowledge of French and German other studies may be substituted for them during the progress of the course.

instruction as should enable them to read at sight French and German, and to render English into French and German, and to understand French and German grammar; and that courses in English philology and literature will be in progress during the year.

(3.) Instruction is provided by the university in comparative anatomy and botany, but attendance upon special courses in these subjects is not required of all who follow the preliminary medical course, as the general principles and more important facts are taught in the course of general biology.

(4.) College graduates from approved institutions, having already obtained a liberal education, are permitted to concentrate their attention on the scientific courses, and so may complete the curriculum of the above course preliminary to medical studies in less than the usual three years. On the other hand, a student may, if he wish, spend a longer time in these preparatory studies, or take up additional ones.

(5.) It may be added that the trustees and instructors of the university are especially anxious to promote post-graduate study and original research. Medical men or others properly fitted to profit by such opportunities are received for advanced study or investigation in chemistry, histology, or physiology, as well as other subjects. The equipments of the university for such purposes are unusually complete. Twenty fellowships, each bringing in five hundred dollars per annum, are annually awarded to advanced students, at least three being in chemistry and an equal number in biology.

The buildings of the Johns Hopkins Hospital are now in course of erection. When completed a medical school will be instituted in connection with the hospital. This it is hoped to make adapted for post-graduate study, and for training in the more scientific branches of medicine, as hygiene, pathological chemistry, experimental pathology, experimental therapeutics, etc., so that the student who has already acquired a thorough practical knowledge of chemistry and physiology and normal anatomy can carry on advanced study or research in connection with disease.

As yet, however, no steps have been taken in connection with the organization of the medical school proper, and no authoritative statements can be made.

THE HARVARD MEDICAL SCHOOL.

THOSE interested in the progress of medical education in this country are already sufficiently familiar with the general features of the changes which have taken place at the Harvard Medical School within the past ten years. They are also aware that the results have in every way proven gratifying to the friends of the college, and stimulating to the medical profession in other States, and to medical schools in various sections of the country. It is well known that the effect of these changes has been to improve the quality of the students, to increase the income of the school, and to add largely to the number of instructors. These results have been mainly attained by offering such inducements as have resulted in a prolongation of the period of residence of each student at the school. In 1872 only five per cent. of the graduates had remained three years at the school, while in 1879 eighty-eight per cent. of the graduates had remained at the school during their three years of study. It must be evident to every unprejudiced observer that measures which will lead to such a prolongation of the period of study deserve every encouragement, if such measures are considered to represent additional requirements and additional opportunities. That the latter are far greater and more numerous in 1881 than in 1870 is so obvious to every person at all familiar with the history of this school during the past decade that it would seem superfluous to direct attention to the printed annual reports of the president of Harvard College.

The latest changes which have taken place at the Harvard Medical School are such as carry out the spirit of all earlier advances, and tend to make still wider the interval which may lie between this school and those which strive to compete with it in promoting the cause of medical education in this country. These changes consist in additional requirements for admission, and an extension of the period of study.

When they first demanded an examination for admission, the faculty felt that so obsolete a custom must not be restored in such an abrupt manner as to turn away many candidates who were sure to make excellent physicians, although they might not have had the fullest opportunities of college training. The examination was, therefore, made sufficiently stringent to insure a certain liberality of education, still more a certain training which should enable the student to appreciate the opportunities of study afforded by the medical school. The study of a language other than English, and the study of physics, were thought to indicate a knowledge of many other subjects, and an examination in Latin, French, or German, and physics, was offered as a test of the sort of preliminary education the applicant had been able to obtain. The standard in Latin was purposely made high to exclude the school-boy who might have studied this language for two or more years, and yet have had but little opportunity to progress in the study of mathematics, natural science, or general literature. The effect of this admission-examination was immediate, improving the quality of the students. Before it was instituted the inefficient or incompetent students failed to advance with their class, and gradually withdrew from the school, either to give up the study of medicine altogether, or to seek for a degree elsewhere. Candidates who are unlikely to profit by the opportunities offered are now prevented from entering the school, at all events until they have fitted themselves to profit by their surroundings.

It has been thought by the faculty that this test should be made still more delicate. They have determined, therefore, to exact a knowledge of Latin, instead of accepting another language as an equivalent, to require, as heretofore, an examination in physics, to demand a special examination in English, likewise an examination in either French, German, the elements of algebra or of plane geometry, or botany. This examination applies to all candidates for admission, with the exception of those holding a literary or scientific degree, and those who have already passed the more stringent examination for admission to the college, and must be passed before the students are admitted to the school.

An extension of the period of study to four years is the other step which the faculty have seen fit to establish. It has been apparent for some years past that the amount of instruction given in the third year was greater than could be properly assimilated. The students were not slow in learning this fact, and either failed to attend certain exercises in subjects in which there was no searching examination, or voluntarily attended the exercises of the school during a fourth year. The latter class were thus enabled to lighten the work of the third year, and at the same time to avail themselves of all the instruction given. To persuade more students to remain four years is the present effort of the faculty.

As the three years' course is to be as full and com-

plete as heretofore, and students are permitted to graduate at the close of this three years' course, it was necessary to make the additional year of study voluntary. It has therefore been the design of the faculty to make the fourth year so attractive that students would feel a keen sense of the advantages to be gained by adding to their period of study. Every effort has been made to give special clinical opportunities to students of the fourth year in all the specialties, as well as in medicine and surgery; to furnish practical instruction in such subjects as mental disease, forensic medicine, and hygiene; to add to the efficiency and thoroughness of operative courses in surgery, obstetrics, and gynecology; and to open the laboratories of physiology, chemistry, and pathological anatomy in the fullest and freest manner, for such advanced students to investigate those subjects which may be of special interest to them. The essential features of this fourth year are the opportunities of instruction offered to the individual. He becomes one of a class of three or four, instead of one in a class of fifty or a hundred.

As attendance upon this fourth year is voluntary, so an examination in its work is not insisted upon. The attempt is made, however, to encourage the students to be examined by offering a special degree, which shall indicate not only that they have studied four years, but that they have attained an average of seventy-five per cent. in all the examinations of these years. For those who may desire the opportunities offered, yet either fail to reach the standard or be unwilling to try for it, a certificate of attendance in the studies of the fourth year, in addition to the ordinary degree of doctor of medicine, will be given.

Such are the latest efforts made by this school to educate better physicians for the country at large, and to bring medical education in the United States more nearly to the level maintained by the great schools of Europe. May the time soon come when the voluntary fourth year shall be made compulsory, and all our medical schools be enabled to offer the best opportunities at the least cost.

THE MEDICAL SCHOOL OF MAINE.

THIS venerable institution, the medical department of Bowdoin College, enters upon its sixty-second annual course of instruction on the ninth of February next. It was established in 1820, at a time when the vast majority of the medical practitioners of the State of Maine had received no systematic education, but had picked up their knowledge of physic under the supervision of their private preceptors, — a method not entirely devoid of advantages which are not presented by our modern system, but not well calculated to develop the intellectual capacities, or to impart a broad and deep knowledge of the science and art of medicine. The new school, being well officered and receiving the countenance and financial aid of the legislature, was not slow in making its influence felt; and before many years had passed it was quite as generally the rule, as it had formerly been the exception, for practitioners to have diplomas which certified their graduation from a respectable institution.

This school, while not attempting to compete with metropolitan institutions, has always done and is still doing a most important service to the profession and the community. It affords, at a moderate price, an

excellent medical education to a considerable number of young men, who are determined to practice medicine, but are unable to attend the more extended and expensive courses of instruction in the large cities. They supply places which, without them, would have to depend for medical advice upon ignorant and unprincipled charlatans. The standard of the school is being elevated as rapidly as the integrity of the institution will warrant, and is already creditably high, as will be seen by the following statement of requirements and advantages.

Before a student can become a member of the class, he must give satisfactory evidence of possessing a fair English education. All who cannot show diplomas from recognized academies and high schools must pass a written examination in the ordinary branches. Being admitted, the student finds that, while the plan of lectures which is usual in colleges obtains here, the course is practically graded for those who prefer this better method. The faculty advises him to devote his time in the first year to the elementary branches, in the second to those which naturally follow, and in the third to the most difficult topics, the study of which necessitates a knowledge of the previous departments. At the end of the first year the final examinations in anatomy, physiology, and chemistry are held; at the end of the second those in materia medica and obstetrics; and at the close of the third those in practice, surgery, and gynecology. The pursuit of this method is optional, but a large number adopt it, and it is growing in favor. If a student chooses, he may take all his examinations at the end of his third year of study.

The members of the faculty hold frequent quizzes without extra compensation, a service which is greatly appreciated by the students, who value these exercises as highly as the lectures.

The examinations are both written and oral, and are of a searching character. Applicants must have dissected three parts of the body, have written a thesis, and have studied medicine three years.

Though situated in a country town, the school affords good opportunities for witnessing surgical and medical cases. The clinics are very large, the patients coming from all, even distant, parts of the State to receive free treatment. The means for studying practical chemistry and anatomy are superior. The faculty is composed of men who have had long experience in teaching, and who, appreciating the responsibility of their positions, are anxious to do all in their power to advance the interests of the medical profession.

PORTLAND SCHOOL FOR MEDICAL INSTRUCTION.

This is not a diploma-conferring institution, but simply, as its name implies, a school in which medicine is taught. It takes the place of private preceptorship, the difference being that, while with a preceptor a student is generally left to follow such plan of reading or idleness as his discretion or folly may dictate, and gets no help from his nominal teacher from beginning to end of the year, in this school he has systematic daily instruction in all the fundamental branches and a number of the specialties, and is held to a strict accountability in the performance of his duties by a corps of eleven competent physicians, each of whom devotes especial attention to the work of his own department. Recitations, lectures, clinics, demonstrations, dissections, all receive their share of attention. The school is admirably equipped with apparatus and material of vari-

ous kinds. The Maine General Hospital, the Greely Hospital, and the Portland Dispensary afford ample clinical advantages.

The educational standing of the school is higher than that of most medical colleges, applicants being required to pass a written examination in English, and in elementary Latin and physics.

This school fully supplements the work of the Medical School of Maine, its sessions occupying eight months of the year, and those of the latter institution the remaining four. The entire year is thus consumed. The success which those who have taken their medical education in these schools attain in the practice of their profession is the best evidence of the quality of the instruction given.

THE CHICAGO MEDICAL SCHOOLS.

The regular medical schools of Chicago are the Rush, Chicago, and Women's Hospital Medical colleges.

The Rush was organized nearly forty years ago, and was the only medical institution here for many years. Twenty-two years ago the

CHICAGO MEDICAL COLLEGE

was organized mostly by gentlemen who resigned from positions in Rush College to enter its faculty. The Chicago College was founded for the purpose of inaugurating and carrying out a change in the method of teaching which was thought to be an improvement on the practice then in vogue in this country. That practice was for students to attend two courses of lectures, of about four months each, before graduating, the lectures of the successive courses being practically identical. The plan of the Chicago was to divide the studies into the elementary or junior branches and the practical or senior branches, and recommend that students attend these courses respectively during successive terms. At the end of the junior course a student was allowed to pass his final examination on the branches of the course, and have thereafter nothing but the senior branches to attend to.

History will accord this school the credit of having first adopted the "graded system" in these years in this country.

The plan is certainly philosophical, as it has proved to be in literary colleges, and much was hoped for it in the advancement of the profession. But as it exacted nothing that other colleges did not require, but only rearranged and put in different sequence what all the first-class schools were teaching, it did not constitute an elevation of the standard in the true sense. No higher grade of requirements was made, no better qualifications for a degree were exacted; the studies were only made more convenient for the student. The result was that no better doctors were turned out; the fountain was not made higher; at the same time a student found it easier to pass his examination by this plan than under the old system.

It was not till a very few years ago that the standard was really raised by this excellent school, when it required an entrance examination in English, and lengthened its course. Its course is now six months long, and the studies are divided into three groups, junior, middle, and senior, and students are advised to take these respectively in successive years, and to pass final examinations in the studies taken at the end of

the respective years. Two courses of lectures, however, are all that is exacted, and such as do not attend more divide the "middle" branches between the junior and senior courses.

The entrance examination for applicants not presenting diplomas of academic institutions has doubtless done good in improving the character of the classes, but the examination is unfortunate in being wholly arbitrary and subject to the personal notion of the examiner. It may be severe or utterly useless, according to the individual bias. "Applicants must possess at least a good English education," and failing to present documentary proof they "must sustain a satisfactory examination before a committee of the faculty." When a rule of this sort is so wanting in specific definition of its meaning, great confidence in its uniform and beneficial working should not be expected. The term "satisfactory" is too flexible when applied to such an examination. For a strictly medical examination usage has defined the word well enough. This school has a good chemical laboratory, where students who desire may pursue practical chemistry. Quite a proportion of the classes do so.

The clinical facilities that are used are the Mercy Hospital in an adjoining building, and the dispensary in the college building. The hospital usually has about fifty patients, and the clinical advantages both there and at the dispensary are worked up to an admirable degree of perfection. The hospital medical staff are all members of the college faculty. The dispensary is largely attended, several thousand patients visiting it annually, and students regularly rotate in their attendance upon the several departments, so there is no crowding, and the best use is made of the material.

The lying-in department of the hospital is sufficiently extensive generally to enable each member of the graduating class to witness one case of obstetrics at least. Students are allowed to attend the County Hospital, but this is so far off (five and three quarters miles) that they do not visit it.

One course of dissections is made obligatory. Students must pursue the clinics of Mercy Hospital at least one term. A thesis is required. Students who desire may have instruction in practical physiology.

A practitioners' course of four weeks was inaugurated last spring immediately after the Commencement, and was very successful, thirty-nine gentlemen being in attendance. The fee for this course is \$30. This school united with Rush two years ago in raising the fees from about \$50 to \$75. The graduation, or final examination fee is \$30.

RUSH COLLEGE,

as already stated, is about forty years old. Twenty years ago the regular course of lectures had a duration of sixteen weeks. Within a few years it has been lengthened several times, so that it now continues twenty-one weeks. In addition there is a spring term of sixteen weeks that is a complete course of lectures in itself; this is practically free to the regular students of the institution, but does not count as a "course of lectures" in the conditions of graduation.

The two regular courses of lectures required for the degree are practically identical; there is no grading of the course, but students are advised to devote themselves mainly to the elementary studies during the first year, and this advice is emphasized to such as take three or more courses of lectures.

The rule of one and only one final examination has never been modified till a year ago, when it was decreed that students who will attend at least three winter courses may pass their final examination in anatomy, physiology, materia medica, and chemistry at the end of the second winter course.

The clinical facilities are the college clinics, seven each week, the Central Free Dispensary (in the same building), at which a hundred or more patients attend each day, and the Cook County Hospital.

The college clinics, occurring each week, that are public to all the class, are one each on surgery, orthopaedic surgery, gynaecology, dermatology, and venereal diseases, nervous diseases, diseases of the chest, and general medicine. In addition there is a daily clinic in gynaecology, attended by an average of eight patients each, to which small sections of the graduating class only are admitted.

There are several public clinics in the Central Dispensary each week, and in the prescribing rooms small sections of the graduating class are received in rotation by a system of cards of admission.

The County Hospital is under control of the county commissioners. Of its medical staff three members belong to the faculty of the Chicago College, three are from Rush College, and seven belong to no college.

The hospital stands opposite the college, is the public (charity) hospital, and the largest in the city, having three hundred beds. Students are required before graduation to have attended at least one year the clinics and post-mortem examinations at the hospital. There is a spacious amphitheatre for clinics and another for post-mortem exhibitions, with all the modern appliances. There are six public clinics in the hospital each week.

The college has a students' chemical laboratory, capable of accommodating about thirty at work at one time. A course in practical chemistry is obligatory, and the briefest course allowed is one consisting of thorough urinalysis, a short course in general toxicology, and a similar one in general qualitative analysis. There is a course on practical physiology, but it is optional. Practical anatomy is required, "and to the extent of having dissected each region of the body."

The fees are seventy-five dollars, exclusive of matriculation (five dollars), laboratory and dissecting tickets, (each five dollars), and the examination fee is thirty dollars, but the fee is not returnable in case the candidate fails. No thesis is required, but most of the examinations are in writing.

The announcement has been made by this school that after March 1, 1883, all new applicants will be required to submit to an examination, unless they have passed an entrance examination in some respectable literary college or are graduates of a high school. The examination is to include only the elements of physical sciences as taught in common school textbooks and arithmetic to cube root, but the examinations are to be in writing, and the papers are to be judged critically as to "spelling, knowledge of grammar, and composition exhibited."

The spring course is conducted mainly by a faculty of lecturers, who do not teach regularly in the winter course. To encourage a higher grade of attainments a special certificate of honor is awarded to students who attend three winter and at least one spring term. A post-graduate course was established lately. At first it occurred during the latter part of the regular

winter session, when the college was full of students, which was found to be inconvenient. Hereafter it is to follow the regular course, and continue four weeks. The fee for this course is thirty dollars.

The number attending the practitioners' course last winter was seventy-seven, the whole number of students attending the last winter course was five hundred and fifty-nine. The graduates of 1881 were one hundred and seventy-two.

THE WOMEN'S COLLEGE

is eleven years old, and is in every way a first-class school. It receives women only; divides the curriculum into junior and senior studies, and advises that they be taken in successive years; has an entrance examination for those not bringing "certificates of graduation from a high school or like institution, or a teacher's certificate from a county superintendent of schools," but the line up to which students must come in such examination is not stated.

The requirements for graduation are rigid. In addition to the three years' study and two lecture terms the student must have "dissected each of the usual divisions of the body at least once," and have attended one course of clinical instruction; she must also take a course in practical chemistry in the laboratory; she must write a thesis. While the studies are divided into junior and senior branches, the student is not allowed an examination at the end of the first course. The final examination covers all branches taught.

The clinical advantages are several college clinics, the Cook County Hospital, which is directly opposite, the Hospital for Women and Children, four blocks away, and Central Free Dispensary, one and one half blocks away.

The Hospital for Women and Children is wholly under the professional care of female physicians; it has about thirty beds and is always full.

The college has a very excellent summer course of lectures, given mostly by members of the faculty.

Each of the three colleges has a permanent building of its own, built after the modern notion of things, and very well adapted to its wants. Perhaps the most perfect one is that of the Women's College. The best and most spacious lecture-room is the upper amphitheatre at Rush, — which has a seating capacity of five hundred, — unless it be the clinical amphitheatre of the County Hospital, which is even larger.

THE DETROIT MEDICAL COLLEGE.

The course of instruction at this college is introduced by a definite written examination in English composition, in arithmetic, in algebra, and in physics.

The obligatory attendance upon college drill covers three yearly terms of six months each. The college requires daily laboratory work during the first two years, and daily clinical work during the last year. It requires attendance upon from three to four lectures or recitations daily during the three terms. During the first two terms it requires attendance upon one or two clinical lectures each day. During the last year, each student is obliged to spend from one to three hours daily in actual clinical work in hospital wards or in dispensaries. It requires that each student shall pass satisfactory examinations at the end of each term upon the studies he has actually pursued, and upon the laboratory or clinical work he has actually performed.

The plan of study is carefully graded. All instruction is so arranged that each branch may aid in the comprehension of each other branch pursued at the same time, and that these together shall prepare the way for the most easy and perfect comprehension of those which follow. The instruction of each class is prepared for and given to it alone, and always in a room separate from the other classes. Thus the separation of the three classes is as distinct as in the best literary colleges. The freshman class must, during each week, attend four lectures or recitations on anatomy, four on physiology, three on chemistry, three upon materia medica, and one on pharmacy. It must work twelve hours weekly for four months in the chemical laboratory, and for two months in the laboratory of practical pharmacy.

The junior class must attend each week four lectures or recitations upon anatomy, four upon physiology, two upon medical chemistry, three upon therapeutics, and four upon morbid anatomy and pathology. It must work twelve hours per week in the dissecting-room for three months, and in the physiological and histological laboratory for three months. The senior class must attend four lectures a week upon general surgery, five lectures or recitations per week upon practice of medicine, two upon diseases of women, three upon obstetrics, one upon diseases of the eye and ear, one upon diseases of the larynx or genito-urinary apparatus, one upon diseases of children, one upon nervous diseases, and one upon toxicology and medical jurisprudence. It must also work in small sections (each section being in charge of a clinical teacher) from one to three hours daily in hospital wards or dispensaries. Three hospitals, with from thirty to one hundred beds each, and two large dispensaries, situated in a city of one hundred and thirty-five thousand people, afford ample clinical material. The four laboratories are large, well lighted and fitted with all modern conveniences for the successful study of the four fundamental branches of medicine and surgery.

CHARLESTON.

THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA enters upon its sixtieth anniversary session. In sympathetic and coöperative affiliation with such institutions as are moving through the only avenue that can conduct their labors to a broader, more complete, and more productive field of usefulness, this college has seen fit to indorse and accept the three years' term of a graded course of instruction as the necessary requirement for graduation. The difficulties inherent to an internecine war have fortunately been surmounted, and the successes of the past few years encourage the hope that the present step, which otherwise would long since have been taken, will add to the reputation the college has always enjoyed.

Larger classes of students and greater proficiency among the graduates of late bear attestation to the continued popularity of this school, and to a more earnest aim among its attendants at the acquirement of that knowledge in search of which they are engaged. A more protracted course of studies, a higher standard of requirements, and necessarily a more complete final examination may and doubtless will in the future drive some away, but the faculty have not allowed expediency to interfere with duty, and they feel assured that

they will at least secure that better class of aspirants for medical renown who in time must reflect greater credit upon their alma mater.

The Medical College adjoins the Roper Hospital, which is a great advantage, since attendance upon the clinical lectures in the one and the didactic prelections in the other necessitates no loss of time in transit from one building to the other.

The present *régime* has wrought important changes in the management of the Roper Hospital.

The faculty, long since recognizing the importance of a regular, systematic annual course of clinical teachings to students, attracted to colleges only which were able to offer such facilities, saw fit to urge these claims and requisitions of a high medical educational curriculum upon the intelligent consideration of the council; while they proposed that their own professional services would be offered *gratuitously* to the city, giving every pledge on their part for the conscientious and punctual discharge of their self-imposed duties to the sick poor. Though some opposition arose in council upon the subject, as was to be expected, yet, as *nos besoins sont nos forces*, this appeal was not made in vain. The Roper Hospital has at length been turned over to the faculty of the Medical College, who have entire control now of all that concerns the medical and surgical treatment of the sick. Private cases in the practice of the professors are, whenever they see fit, brought to the hospital; and patients coming to the city addressed to either of these gentlemen are accommodated in private apartments, the appointments of which are in every respect suitable to pay patients, at a reasonable *per diem*.

Clinical instruction in various branches is given during the winter session to large classes; and all the year round clinical prelections are offered to those students remaining with us. These didactic lessons are perhaps the more useful because the more varied, since they are apportioned among six professors, a medical and a surgical clinician for each term of four months. Four house physicians or *internes*, make up the complement of a full corps of professional attendants in constant and efficient ministrations upon the sick.

Not very anxious to encumber themselves with the financial concerns of the hospital, the medical faculty requested at once to be exonerated from such an additional tax upon their time and labors, and we are pleased to announce that a board of commissioners were appointed. This division of labor between the purely medical and administrative concerns of a hospital, in its operations entirely independent of each other, is a most provident arrangement, was a consummation greatly to be wished for, particularly in view of the recent difficulties at Guy's Hospital and other organizations nearer home, and has worked admirably so far. With a laudable desire to exhibit their efficiency and interest in the welfare of the hospital, the commissioners have already improved the buildings in many respects, particularly in fitting up and embellishing the private apartments of pay patients, while further changes are in contemplation which will make the Roper Hospital one of the most complete and acceptable charities of its kind in the Southern States.

THE MEDICAL SCHOOLS AT LOUISVILLE.

UNIVERSITY OF LOUISVILLE. — The forty-sixth regular term begins October 3d, and lasts five months.

LOUISVILLE MEDICAL COLLEGE. — The thirteenth regular session begins October 3d, and lasts five months.

HOSPITAL MEDICAL COLLEGE. — The eighth regular session begins October 3d, and lasts five months.

KENTUCKY SCHOOL OF MEDICINE. — The next regular session, which is the fourth since the reorganization of the school apart from the Louisville Medical College will be held from March to June (inclusive).

There are four schools of medicine in Louisville, as above enumerated, — three holding their session in winter and one in spring. Since the disruption of the Kentucky School of Medicine from the Louisville Medical College, three years since, the several schools pursue independent courses.

The plan of instruction in all is essentially the same, — by lecture and quiz. Recitation terms (optional) are held during the spring by the winter schools. Provision is made for graded course for such as desire it. There are daily clinics at the University and Hospital schools, and semi-weekly classes at the City Hospital, in which all the schools participate. The University supplies special demonstrators for microscopy, histology, chemistry, dressings, etc.

The Louisville schools are all members of the American College Association. The requirements for graduation are three years' study and two courses of lectures. They stand pledged to require three courses after 1882.

By mutual agreement of the winter schools, the lecture ticket will hereafter not be issued to matriculates until February. This is done to insure, somewhat, attendance at lectures.

The Medical Service of the United States.

THE UNITED STATES ARMY.

The following memorandum is prepared for the information of persons desirous of entering the medical corps of the United States Army: —

[EXTRACT FROM LAWS OF THE UNITED STATES.]

Act of Congress, Approved June 30, 1834.

Section 1. *Be it enacted, etc.* That from and after the passage of this act no person shall receive the appointment of assistant surgeon in the Army of the United States, unless he shall have been examined and approved by an Army Medical Board, to consist of not less than three surgeons or assistant surgeons, who shall be designated for that purpose by the secretary of war; and no person shall receive the appointment of surgeon in the Army of the United States unless he shall have served at least five years as an assistant surgeon, and unless, also, he shall have been examined by an Army Medical Board constituted as aforesaid.

Act of Congress, Approved June 23, 1874, and June 26, 1876.

Sec. IV. That the medical department of the army shall hereafter consist of one surgeon-general, . . . one assistant surgeon-general, . . . one chief medical purveyor, four surgeons, with the rank, pay, and emoluments of colonels, two assistant medical purveyors, . . . eight surgeons, with the rank, pay, and emoluments of lieutenant-colonels, fifty surgeons, with the rank, pay, and emoluments of majors, one hundred and twenty-five assistant surgeons, with the rank, pay, and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay, and emoluments of captains of cavalry after five years' service, . . .

All candidates for appointment in the medical corps must apply to the honorable secretary of war for an invitation to appear before the Medical Examining Board. The application must be in the handwriting of the candidate, stating age and birthplace, and he accom-

panied by testimonials from professors of the college in which he graduated, or from other physicians in good repute. Candidates must be between twenty-one and twenty-eight years of age (without any exceptions), and graduates of a regular medical college, evidence of which must be submitted to the board before examination.

The morals, habits, physical and mental qualifications, and general aptitude for the service of each candidate will be subjects for careful examination by the Board, and a favorable report will not be made in any case in which there is a reasonable doubt.

The following will be the general plan of the examination:—

I. A short essay, either autobiographical or upon some professional subject to be indicated by the board.

II. Physical examination. This will be rigid, and each candidate will, in addition, be required to certify, "*that he labors under no mental or physical infirmity, nor disability of any kind, which can in any way interfere with the most efficient discharge of his duties in any climate.*"

III. Oral examinations on subjects of preliminary education, general literature and general science. The candidate must satisfy the board in this examination that he possesses a *thorough knowledge of the branches taught in the common schools, and a failure to show this will end his examination.*

Oral examination on scientific subjects will include chemistry and natural philosophy; and that on literary subjects will include English literature, history of the United States, and general history, — ancient and modern. Candidates professing a knowledge of the higher mathematics, the ancient and modern languages, will be examined therein, and due credit given for a proficiency in any or all of these subjects.

IV. Written examination on anatomy, physiology, surgery, practice of medicine and general pathology, obstetrics, and diseases of women and children. Oral examination on these subjects, and also on medical jurisprudence, materia medica, therapeutics, pharmacy, toxicology, and hygiene. Few candidates pay the attention to hygiene which it deserves; it is made an important subject in this examination.

V. Clinical examination, medical and surgical, at a hospital.

VI. Performance of surgical operations on the cadaver.

The board will deviate from this general plan whenever necessary, in such manner as they deem best to secure the interests of the service.

The board will report the merits of the candidates on the several branches of the examination, and their relative merit in the whole, according to which the approved candidates will receive appointments to existing vacancies, or to vacancies which may occur within two years thereafter.

An applicant failing one examination may be allowed a second after one year, but not a third.

No allowance will be made for the expenses of persons undergoing examination, as this is an indispensable prerequisite to appointment, but those who are approved and receive appointments will be entitled to transportation on obeying their first order.

THE UNITED STATES NAVY.

THE RELATIONS OF THE MEDICAL CORPS OF THE NAVY TO MEDICAL EDUCATION.

ADMISSION into the medical corps of the United States Navy can only be obtained through a professional examination before the Naval Medical Board, composed of medical officers of the higher grades. From the very beginning this board has assumed to

be the sole judge of the qualifications of candidates, the mere possession of the diploma of a medical school having no weight whatever as an evidence of professional capacity; and the experience of the board has demonstrated that the most incompetent applicants have been found among graduates of the great schools, while many of the ablest men of the corps have received their degrees from comparatively obscure institutions.

The candidate is presumed to have received a proper liberal education. A biographical sketch, an essay on some assigned subject, and written answers to a series of comprehensive questions in the various branches of medicine are intended as evidences of such proficiency, the orthography, grammatical construction, form, and manner of expression being as carefully scrutinized as accuracy of statement. An oral examination follows by the several members of the board in every branch of medicine, and upon such collateral studies as the candidate may have pursued, with the object not merely of ascertaining the amount of detailed information he may have learned by rote, but rather his intelligent comprehension of the fundamental facts and principles which constitute the science of medicine. Finally, extemporaneous chemical and pharmaceutic manipulations, the clinical diagnosis and treatment of actual patients in hospital, the adjustment of surgical appliances and apparatus, and the performance of operations upon the cadaver exhibit his cognizance of the practical requirements of the healing art, and his ability to assume its responsibilities, under the emergencies of a career which sometimes places the issue of life or death upon his unaided knowledge and skill.

A second examination is required for passing out of the grade of assistant surgeon, preliminary to promotion to that of surgeon, and took place, formerly, five years subsequent to the first. Recently the interval has been injudiciously lessened to the completion of two years' service on board a man-of-war. This examination presupposes a wider practical acquaintance with the various branches of medicine, particularly in the special departments which have arisen, and a familiarity with the current literature of the profession, facilities for which are now liberally provided by the Bureau of Medicine and Surgery, under the administration of its present chief, Dr. Wales. It has been the custom to allow a period of preparation for this final examination, but as its object is to ascertain the fitness of the individual for occasions when his knowledge as a medical or sanitary officer may be of need, it is manifest that such a preliminary cramming, evidencing a greater or less ability to memorize facts, is inconsistent with its real purpose, while it operates unequally upon the members of a date, under the diverse circumstances of their duty ashore and afloat. An impromptu examination, while it might not exhibit such finished results, would furnish a more accurate measure of the real acquirements of the class examined.

The bureau's interest in the officer does not cease with his final examination. Individual research and investigation are encouraged by the supply of apparatus, instruments, or opportunities required, and by the publication of essays voluntarily contributed, as well as by the requirements of annual medical and sanitary reports from every officer in charge of the medical department of a vessel or station, embracing the medical topography, climatology and hygiene of every

station or place visited, with all attainable information respecting statistics of disease and its causes, establishments for the care of the sick, charitable institutions, medical colleges, or other matters of professional interest.

A medical education, such as admission into the medical corps of the navy implies, has until quite lately scarcely been attainable through the ordinary curriculum of any school in this country, and those who have passed the examination have been men whose industry, ambition, and thirst for knowledge, under the guidance of competent preceptors, have impelled them to seek for themselves that fuller professional training of which they have felt the need. Happily, a number of the leading schools, disregarding possible pecuniary loss from smaller classes, have begun a reform in medical teaching, which promises to make their graduates as really "learned in medicine" as the phraseology of their diplomas implies, and ultimately we may hope that every reputable college will be compelled to the same thoroughness of teaching. This accomplished, the most sublime and profound and ennobling of the sciences will be delivered from the hands of empirics and sciolists into the keeping of men distinguished for their acquirements.

What is being sought to be accomplished for the whole profession the medical corps of the navy has aspired to make the patent of its own nobility, and its board of examiners may justly claim recognition for its pioneer efforts to exclude from fellowship the unworthy and incompetent.

ALBERT L. GHON, M. D.,

Medical Director U. S. Navy.

1736 I STREET, WASHINGTON, D. C.

UNITED STATES MARINE HOSPITAL SERVICE.

The following extract from the regulations governing the Marine Hospital Service is published as showing who are eligible for examination:—

(24.) Original appointments of medical officers in the United States Marine Hospital Service will be made to the grade of assistant surgeon only.

(25.) Medical officers in the Marine Hospital Service will in no case be appointed to any particular station, but to the general service, being subject to change of station as the exigencies of the service may require, and shall serve in any part of the United States wherever assigned to duty by the secretary of the treasury.

(26.) No person will be appointed an assistant surgeon whose age is less than twenty-one or more than thirty years, and, as a preliminary to a recommendation for appointment, the applicant must have graduated in medicine at some respectable medical college, and must pass a satisfactory physical and professional examination before a board of surgeons of the Marine Hospital Service, which will be convened from time to time, for that purpose, by the secretary of the treasury.

(27.) The passing of an examination must not be considered as giving assurance of appointment, as the department will select those of the highest attainments in case there should be more candidates than vacancies.

(28.) No qualified candidate will be eligible for appointment more than one year. If not appointed within that time, he may, if he desires, be reexamined, when, if successful, he will take position with the class last examined.

(29.) An applicant failing at one examination may be allowed a second examination, after one year, but not a third.

(30.) Assistant surgeons, after three years' service, at least one year of which shall have been at a United States marine hospital, shall be entitled to an examination for promotion to the grade of passed assistant surgeon. The application for this examination must be accompanied with testimonials of correct

department and habits of industry from the surgeons with whom they have served, and the applicant must be familiar with these regulations.

(31.) A vacancy in the grade of surgeon will be filled by promotion from among passed assistant surgeons.

All applications should be addressed to the surgeon-general of the service at Washington, D. C.

We extract from the annual report for 1880 the following, relative to the character of the examinations:—

"There is probably no branch of the public service to which the rules laid down by the civil-service regulations of 1872 can be more easily applied. The experience of this office has not only demonstrated their practicability, but has proved entirely satisfactory. The following table shows the number of candidates examined for the past five years:—

Year.	No. of Candidates.	No. of branches in which examined.	Passed.	Rejected.	Percentage of Rejections to whole No. examined.	No. Invited to appear for Examination.
1875	11	10	8	3	27 3-11ths.	—
1876	13	10	8	5	28 6-13ths.	—
1877	18	10	6	12	66 2-3ds.	38
1878	11	10	3	8	72 8-11ths.	35
1879	29	10	6	23	79 9-29ths.	52
1880	23	10	4	19	82 14-23ds.	43

The marking adopted has been in accordance with the scale recommended by the Board of Civil-service Examiners of the treasury department in their report dated January 21, 1873.

The scale is as follows:—

Best possible	100	Somewhat bad.....	40
Extremely good	90	Bad	30
Very good	80	Very bad	20
Good	70	Extremely bad.....	10
Somewhat good.....	60	Worst possible.....	0
Indifferent	50		

In an average examination the only branch in which the "best possible" may be obtained is of course anatomy, but it may be occasionally reached in the answers to certain questions in several branches. In the first four years during which these examinations were held, no examination in the common-school branches was made, but during the last year an oral examination in arithmetic, physics, and history has been added. Proficiency in these branches, together with a "personal history" showing the candidate to have had good advantages in schools or experience in hospitals, increases the marking under the heading "general aptitude." This heading is the one most likely to be misinterpreted by the enemies to the system, or by the friends of disappointed candidates, and yet it has been found impracticable to discontinue it. Under this heading is included the preliminary education of the candidate, his health, his personal appearance, as to neatness or slovenliness, as well as the general fitness for the service, as shown by examination-papers as a whole. The following is given as a specimen of the examination papers, and shows the scope of the examination. The questions were propounded at the session of the board held in April, 1879:—

Anatomy. (1.) Name the bones of the cranium, the foramina at its base, and the structures transmitted through them. (2.) Give the origin and distribution of the trigeminal nerve. (3.) Describe the regions of the abdomen, and name the viscera contained in each. (4.) Name the parts divided in a circular amputation of thigh at middle of Scarpa's triangle.

Physiology. (1.) Give the histology and function of the kidneys. (2.) How is the nutrition of muscular tissue effected? (3.) Give the normal constituents of bile, blood, and gastric juice. (4.) Give functions of sympathetic system and spinal cord.

Chemistry. (1.) Describe the atom and molecule, and state what is meant by atomic weight and molecular weight of an element. (2.) Give the chemical reaction that occurs in an active galvanic battery composed of carbon and zinc plates and the fluid made by dissolving bichromate of potassium in dilute sulphuric acid. (3.) Describe the physical and chemical properties of alum, and give its formula. (4.) Mention the different forms of carbon, and give brief description of each, and name the most important combinations of this element.

Practice of Medicine. (1.) Describe the process of inflammation. (2.) Give, briefly, the symptoms and treatment of cerebro-spinal fever. (3.) What are the causes of anasarca? (4.) Give the differential diagnosis between eczema, herpes, and rupia.

Hygiene. (1.) Give, briefly, your views as to the best method of lighting, heating, and ventilating hospital wards. (2.) Assuming that the water supply of a hospital contains matters deleterious to health, what method would you use to discover the impurities, and to eliminate them? What, in your opinion, are the necessary articles and proper proportions of the same, for a hospital ration? (4.) What are the principal substances used as disinfectants and deodorizers, and what is their mode of action?

Surgery. (1.) Give the causes of compression and concussion of the brain, and their differential diagnosis and treatment. (2.) What are the causes of popliteal aneurism? (3.) Describe the treatment of compound comminuted fracture of the leg. Give the best method of management, and the possible dangers of the injury. (4.) Mention the symptoms, complications, and treatment of penetrating wounds of the chest and of the abdomen.

Obstetrics. (1.) Describe the foetal circulation and the changes taking place therein at birth. (2.) Give the causes and treatment of post-partum hemorrhage. (3.) Give the causes, symptoms, and treatment of puerperal convulsions. (4.) Give the differential diagnosis between abdominal tumors, spurious and true pregnancy.

One day is devoted to clinical examinations at a hospital, which, with an oral examination, concludes the exercises.

THE STATE BOARDS OF HEALTH AND THEIR SECRETARIES.

Alabama, T. A. Means, M. D., Montgomery.
Arkansas, J. A. Ditrell, M. D., Little Rock.
California, F. W. Hatch, M. D., Sacramento.
Colorado, F. J. Baneroff, M. D., Denver.
Connecticut, C. W. Chamberlain, M. D., Hartford.
Delaware, William Marshall, M. D., Dover.
Georgia, V. A. Taliaferro, M. D., Atlanta.
Illinois, John H. Rauch, M. D., Chicago.
Iowa, R. J. Farquharson, M. D., Muscatine.
Kentucky, John J. Speed, M. D., Louisville.
Louisiana, S. S. Herrick, M. D., New Orleans.
Maryland, C. W. Chancellor, M. D., Baltimore.
Massachusetts, Henry P. Walcott, M. D., Boston.
Michigan, Henry B. Baker, M. D., Lansing.
Minnesota, Charles N. Hewitt, M. D., Red Wing.
Mississippi, Wirt Johnston, M. D., Jackson.
New Jersey, E. M. Hunt, M. D., Metuchen.
New York, Elisha Harris, M. D., Albany.
North Carolina, Thomas F. Wood, M. D., Wilmington.
Rhode Island, Charles H. Fisher, M. D., Providence.
South Carolina, H. D. Fraser, M. D., Charleston.
Tennessee, W. M. Clark, M. D., Nashville.
Virginia, L. P. Goynes, Richmond.
Wisconsin, J. T. Reeve, M. D., Appleton.
West Virginia, James E. Reeves, M. D., Wheeling.
Indiana, T. M. Stevens, M. D., Indianapolis.

Foreign Schools.¹

GREAT BRITAIN AND IRELAND.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas capable of registration under the Medical Act of 1858 is nineteen; and the registrable qualifications obtainable from them amount to fifty-seven.

The following is a general summary of the conditions required on the part of candidates for examination. The regulations of the examining bodies are, with very few exceptions, framed in accordance with the resolutions and recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council, prior to which he must have passed an examination in subjects of general education. As evidence of this are recognized: (1.) The possession of a degree in arts of a university of the United Kingdom or of the colonies, or of some university recognized by the Medical Council. (2.) A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the Recommendation of the General Medical Council. The Medical Council recommends that no such certificate should be accepted by any of the licensing boards, unless it testify that the candidate has been examined in the following subjects: (1.) The English language, including grammar and composition. (2.) Arithmetic, including vulgar and decimal fractions, and Algebra, including simple equations. (3.) Geometry, the first two books of Euclid, or the substance thereof. (4.) Latin, including translation and grammar. (5.) One of the following subjects at the option of the candidate: Greek; French; German; Elementary Mechanics of Solids or Fluids, meaning thereby mechanics, hydrostatics, pneumatics, and hydraulics. [On and after January 1, 1882, the following subjects will be required: (1.) English Language, including grammar and composition. (2.) English History. (3.) Modern Geography. (4.) Latin, including translation from the original and grammar. (5.) Elements of Mathematics, comprising (a) Arithmetic, including vulgar and decimal fractions; (b) Algebra, including simple equations; (c) Geometry, including the first two books of Euclid, or the subjects thereof. (6.) Elementary Mechanics of Solids and Fluids, comprising the elements of statics, dynamics, and hydrostatics (this subject may be passed either as preliminary, or before, or at the first professional examinations. (7.) One of the following optional subjects: (a) Greek; (b) French; (c) German; (d) Italian; (e) any other modern language; (f) Logic; (g) Botany; (h) Elementary Chemistry.] The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognized as dating fifteen days earlier than the date of registration. Forms of such registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to become connected): (1.) By attendance for one year on the practice

¹ Hardwicke on Medical Education.

of a provincial hospital or other public institution recognized for this purpose. (2.) As the pupil, for one year, of a legally qualified surgeon, holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities. (3.) By entering at once at a recognized medical school.

The minimum period of medical study required is forty-five months from the date of registration as a student, of which time at least two years and a half must be passed at a recognized medical school. For the degrees of the universities (except that of London) the candidate is required to spend a portion of the time of medical study at the university which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or license, two examinations at least in professional subjects must be passed. The first examination may be completed at or before the close of the second year of professional study, and embraces the following subjects: (1.) Chemistry and Chemical Physics. (2.) Anatomy. (3.) Physiology. (4.) Materia medica and Pharmacy. The second or final examination, which must not be passed until the completion of the fourth year of study, comprises: (1.) Pathology (including morbid anatomy). (2.) Medicine (including medical anatomy, clinical medicine, and therapeutics). (3.) Surgery (including surgical anatomy and clinical surgery). (4.) Midwifery. (5.) Forensic Medicine. This arrangement is of course subject to some variation; but the general principle of examining first in the elementary and afterwards in the practical subjects is invariably followed. Some of the examining bodies — such as the universities in Scotland — divide the examinations into three or four parts.

The medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guys, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England, there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; together with medical schools at Bristol, Leeds, Liverpool, and Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education; in fact, there is no medical school at Oxford; but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow, the Extra-Academical School in Edinburgh, and the Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

In Ireland the medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the colleges at Belfast, Cork, and Galway, in connection with the Queen's University in Ireland. There are also several medical schools in Dublin, namely, the Carmichael College of Medicine and Surgery; the Catholic University; Dr. Steevens's Hospital and Medical College; and the Ledwich School of Anatomy, Medicine, and Surgery.

FRANCE.

Degrees in medicine of the University of France are conferred by the faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the government.

(1.) The studies necessary for obtaining the degree of doctor of medicine last four years; during the first three years they may be carried on either in the faculties, in the *école de plein exercice*, or in the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be made in a faculty or in an *école de plein exercice*.

(2.) The candidates must produce, when they take the first inscription, the diploma of bachelor of sciences, limited as regards the mathematical part. They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are divided into two parts. The *examens de fin d'année* are suppressed.

(3.) The five examinations are on the following subjects. First examination: physics, chemistry, medical natural history. Second examination: first part, anatomy and histology; second part, physiology. Third examination: first part, external pathology (surgery), midwifery, operative surgery; second part, internal pathology (medicine), general pathology. Fourth examination: hygiene, legal medicine, therapeutics, materia medica, and pharmacology. Fifth examination: first part, clinical surgery and obstetrics; second part, clinical medicine, practical demonstrations in pathological anatomy, and a thesis on a subject chosen by the candidate.

(4.) The first examination takes place after the fourth inscription and before the fifth; the first part of the second examination after the tenth inscription and before the twelfth; and the second part after the twelfth inscription and before the fourteenth. The third examination cannot be passed until the end of the sixth *trimestre* of study. Any candidate who does not pass the first examination in November, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

(5.) Candidates for the doctorate, pupils of *écoles de plein exercice* or of the preparatory schools, are examined by the faculties at the periods fixed in the preceding article. They may, however, defer the first examination until after the twelfth inscription. In that case they must pass the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are subjected to interrogations at the end of six months, the results of which are transmitted to the faculties, to be taken into account in the examinations for the doctorate.

(6.) The inscriptions for *officier de santé* cannot be converted into inscriptions for the doctorate, in the case of pupils actually studying; but this conversion may be permitted in the case of *officiers de santé* who have practiced medicine for at least two years.

(7.) Practical work in the laboratory, dissection, and residence near the hospitals are obligatory. Each annual period of laboratory work and dissection comprises six months' course, or semestre. Residence near the hospitals must not continue less than two years.

(8.) Every candidate, who, without an excuse admitted by the jury, does not answer when his name is called, on the day of which notice has been given to him is sent back for three months, and forfeits the fees which he has paid.

(9.) The fees to be paid by candidates for the degree of doctor in medicine are fixed as follows:—

Sixteen inscriptions at 32 francs 50 centimes each	520 francs.
Eight examinations at 30 francs	240 francs.
Eight certificates of proficiency at 25 francs	200 francs.
Expenses of materials for practical study, first year, 60 francs; second and third years, each 40 francs; fourth year, 20 francs	160 francs.
Thesis	100 francs.
Certificate of proficiency	40 francs.
Diploma	100 francs.
Total	1360 francs.

(10.) The fees paid by the pupils of the faculties go to the public treasury. The fees paid for inscriptions and for practical work by the pupils of the *écoles de plein exercice* and the preparatory schools go to the municipal treasuries.

A foreigner holding medical qualifications to practice medicine, if desirous of obtaining the degree of the University of France, must show to the minister of public instruction his diploma, and the certificates of the course of study which he has undergone in his own university or medical school. The minister, if satisfied, will authorize the candidate to present himself for the five final examinations (*examens de réception*). These are conducted in the French language. The fees are as follows: each examination 90 francs = 450 francs; thesis, 240 francs; fifteen inscriptions, 520 francs; three *examens de fin d'année*, 90 francs; diplomas of *bachelier ès lettres et ès sciences*, 100 francs; in all 1400 francs. It will be seen that the candidate has to pay all the fees, although exempted from the necessity of passing the preliminary examinations and those for the *bacheliers ès lettres et sciences*.

Medical education in France is under the control of the state, and is given in the faculties of medicine and pharmacy, the *écoles de plein exercice*, and the preparatory schools of medicine and pharmacy.

The Faculties are six in number: three—those of Paris, Montpellier, and Nancy, are composed of two distinct schools of Medicine and Pharmacy; the others, at Bordeaux, Lille, and Lyons, are called mixed Faculties of Medicine and Pharmacy. They confer, besides the same diplomas and certificates as the other schools, the diplomas of doctor in medicine and *pharmacien* and midwife of the first class.

There are two *écoles de plein exercice*, namely, at Nantes and at Marseilles. They are entitled to give the same certificates as the preparatory schools; but candidates for the doctorate may take out sixteen inscriptions in them.

The Preparatory Schools are entitled to give diplomas or certificates of *Officier de santé* and *Pharmacien*, herbalist, or midwife, of the second class. Candidates for the doctorate can study in them three years, and take out twelve inscriptions. There are preparatory schools at Algiers, Auiens, Angers, Arras, Caen, Clermont, Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Toulouse, and Tours.

The following are the conditions laid down by the French government for the recognition of a faculty of medicine: The city in which the school is established must pay a proper share of the expenses. There must be seventeen professorships, namely, anatomy, physiology, internal physiology (medicine), general pathol-

ogy and pathological anatomy, hygiene and forensic medicine, operative surgery, therapeutics, materia medica, botany and zoology, medical chemistry, medical physics, pharmacy, and clinical midwifery,—each with one professor; and two professors each of clinical medicine and clinical surgery. There must also be eight assistant professors: two each for the natural sciences, medicine, and surgery, and one each for obstetrics and for anatomy and physiology. These assistants are selected by *concours*, and appointed for ten years.

The School of Medicine in Paris is open not only to the French public, but to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 30 francs or more is expected from each student.

The medical sessions begin for winter on October 15th, and for summer on April 15th, of each year.

The instruction in the faculty of medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. Bécclard and M. Richat (agrégé) Physiology; M. Wurtz and M. Herminier (agrégé), Medical Chemistry; M. Baillon and M. de Laessan (agrégé), Natural History; M. Gavarret and M. Garid, Medical Physics; M. Regnaud, Pharmacology; MM. Jaccoud, and Peter, and Dicuclafoy (agrégé), Internal Pathology or Medicine; M. Trélat and M. Berger (agrégé), External Pathology or Surgery; M. Guyon, Surgical Pathology; M. Le Fort, Practical Surgery; M. Hayem, Materia Medica and Therapeutics; M. Charcot and M. Ollivier (agrégé), Pathological Anatomy; M. Pajot and M. Piuard (agrégé) Midwifery; M. Bouchardat, Hygiene; M. Brouardel, Forensic Medicine; M. Bouchard, General Pathology and Therapeutics; M. Vulpian, Comparative and Experimental Medicine; MM. G. Sée, Lasègue, Hardy, Potain, Clinical Medicine; MM. Gosseclin, Richet, Verneuil, Trélat, Clinical Surgery; M. Depaul, Clinical Midwifery; M. Panas, Clinical Ophthalmology; M. Parrot, Diseases of Children; M. Laboulbène, History of Medicine; M. Ball, Diseases of the Mind and Nervous System. Supplementary courses are also given on Diseases of the Skin, Diseases of Children, Venereal Diseases (M. Fournier).

There are laboratories for Normal Histology (under the charge of Robin); Physiology (Bécclard); Pathological Anatomy (Charcot); Experimental Pathology (Vulpian); Therapeutics (Hayem); Biological Chemistry (Gautier); Pharmacology (Regnaud). The sphere of these laboratories is limited owing to imperfect accommodations and means; they are used chiefly by medical men and students preparing their theses.

GERMANY.

In the German empire there are twenty universities which possess a medical faculty and grant degrees in medicine; namely, those of Berlin, Bonn, Breslau, Erlangen, Freiburg im Breisgau, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practice medicine in this empire unless he has passed the Staats-Examen board. The law forbids any one to call himself *Arzt* (physician) unless he has passed the State Board, or doctor unless

he has passed the examinations at some university, and thereby acquired the degree. The doctor who has not passed the State Board is not a licensed physician and may hold no appointment; and if he practice has no power or right to insist on payment for his services. The physician licensed by the State Board, on the other hand, is not allowed to call himself "doctor," unless he has passed a university examination. The practitioner who is neither doctor nor physician practices at his peril; for though he is not forbidden by law to do so, yet, if any mishap occur from his ignorance, he is punished not only by fine but by imprisonment for a period varying from six months to ten years.

The expenses of passing the State Board are less than half of those for the faculty of a university, and the examination is more exclusively practical; hence it is selected by the poorer students, who seek only a rural practice. The majority of students pass both the university and the state examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma, either from a university or otherwise, can be obtained in Germany without a gymnasial certificate, to obtain which an examination must be passed at a German gymnasium (public school) in Greek, Latin, at least one modern language besides German, logic, the physical sciences, and mathematics. A candidate who cannot present this, or an equivalent certificate, must pass a preliminary examination in those subjects.

The number and character of professional chairs in the medical faculties vary greatly in the different universities; but in all we find three classes of teachers, namely, professors, extraordinary or assistant professors, and *privat-docents*.

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the state or university, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary is occasionally increased, according to the success and reputation of the professor. Any doctor in medicine may be a candidate for a vacant chair, the selection being made by the Minister of Public Instruction from a list of names recommended by the faculty.

The extraordinary or assistant professors are appointed in like manner from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

The position of *privat-docent* is accessible to all doctors of medicine, and the number is unlimited. Their compensation is from students' fees, and they may not underbid the regular professor. At some universities they are furnished with rooms, and given a share of the clinics; at others they receive little or no assistance.

There are no independent schools in Germany. No one can open a course on his own responsibility, and the universities have alone the power to confer academic grades. The system of *privat-docents*, however, compensates in a great measure for this want of freedom. As the test of fitness for a degree in the university, or for the position of a practitioner in the state, is mainly the ability to pass certain examination, and as the salaries of the professors are guaranteed by the state, it is evident that it makes little dif-

ference as to precisely when, where, or how the student gets his information, provided only that he really gets it.

There is, therefore, little objection to free, or, as it is sometimes called, "extramural teaching," and hence young men of ability can establish themselves as private teachers, demonstrators, etc., in the immediate vicinity of the universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. These *privat-docents* are subject to certain regulations, and follow in a general way the teaching and directions of the professor of the special branch to which they attach themselves; they are understood to be in training for professorships, and, if they show marked ability as teachers or as investigators, their promotion may be very rapid.

The course of study at the German universities varies according to the requirements for the particular medical degree, but in no case is it less than three years. At some the course extends over four years. The following lectures are the least which will be accepted by any of the university faculties, and may be taken in whatever order the student may wish. The courses occupy nine and a half months in each year. For one year: chemistry, six hours weekly; physics, four hours weekly; zoölogy and comparative anatomy, three hours weekly; botany, three hours weekly; mineralogy and geology, two hours weekly; anatomy, histology, and preparation of specimens, ten hours weekly; physiology and laboratory work, eight hours weekly; general pathology, pathological anatomy, and practical work, six hours weekly; pharmacology and toxicology, two hours weekly. For two years: special pathology and medical clinic at hospital, ten hours weekly; general and special surgery, hospital clinics, and operating, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course. Obstetrics and gynecology, with clinics, three hours weekly for one year; eye and ear clinics, use of ophthalmoscope, operations, four hours weekly for one year; forensic medicine, two hours weekly for one year.

The professors receive fixed salaries, varying from \$600 to \$2400 annually, and increased every ten years by the addition of from \$100 to \$250. The students' fees for the entire course vary in different schools from \$180 to \$260.

UNIVERSITY OF BERLIN.

The institutions for clinical treating connected with the university are: Professor von Langenbeck's Clinic for Surgery; the University Polyclinic (Dr. J. Meyer); the Ophthalmic Polyclinic (Dr. Schweigger); the Aural Clinic (Dr. Lucac); the Obstetric Clinic (Dr. Schroeder); the Institute for Practical Instruction in State Medicine (Dr. Liman); and in the Charité Hospital, the Medical Clinic (Dr. Frerichs); the Clinic for Elementary Medical Instruction (Dr. Leyden); the Surgical Clinic (Dr. Bardeleben); the Ophthalmic Clinic (Dr. Schweigger); the Obstetric Clinic (Dr. Gussow); the Gynecological Clinic (Dr. Schroeder); the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Henoch), and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; the physiological

laboratory under that of Professor Du Bois-Reymond; and the chemical laboratory under that of Professor Hofmann.

SWITZERLAND.

In Switzerland degrees in medicine are granted in the universities of Basle, Berne, Geneva, and Zurich. These degrees do not confer a license to practice, for which a separate examination is required.

AUSTRIA.

The universities of the Austro-Hungarian Empire which possess medical faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), and Vienna.

All the universities are under government control, and the degree of doctor of medicine obtained at any of them alone gives the right to practice medicine in the empire.

The course of study required of candidates for the degree of doctor of medicine in the universities of the Austrian Empire extends over five years, or five winter and five summer terms or semesters. The following arrangement is recommended by the government. (The first, third, fifth, seventh, and ninth are winter semesters; the others are summer semesters.) First semester: systematic anatomy; experimental physics; inorganic chemistry; general botany; dissections. Second semester: systematic anatomy (second part); experimental physics (second part); organic chemistry; special botany; practical introduction to chemical analysis; practical introduction to the use of the microscope. Third semester: physiology; histology; medical chemistry; zoology; dissections. Fourth semester: physiology (second part); embryology; exercises in physiology, in histology, and in medical chemistry. Fifth semester: general pathology and therapeutics; pharmacology; pathological anatomy; pathological histology; post-mortem examinations; practical introduction to the physical examination of patients. Sixth semester: pathological anatomy (second part); special pathology, therapeutics, and clinic of internal diseases; special surgical pathology, therapeutics, and clinic; post-mortem examinations; exercises in pathological histology. Seventh semester: special pathology, therapeutics, and clinic of internal diseases; special surgical pathology, therapeutics, and clinic; diseases of the eye; exercises in surgical anatomy (operations). Eighth semester: internal diseases; surgery or diseases of the eye; surgical operations (surgical anatomy). Ninth semester: internal diseases; surgery; theory and practice of obstetrics and gynecology; forensic medicine (exercises in obstetric operations); medico-legal exercises. Tenth semester: clinics of diseases of children, of diseases of the skin, and of syphilis (obstetrics and gynecology); exercises in obstetric operations (medico-legal exercises). Of the subjects included in parentheses one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

The examinations are public, and each member of the commission examines the candidate for a quarter of an hour. He is required to undergo three examinations for his degree.

The great clinics on medicine, surgery, etc., are conducted during the two sessions, from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate

direction of the professors of the medical faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually for from four to eight weeks. The courses are given for the most part by private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors.

CANADA.

The following are the medical examining bodies and schools in the several provinces constituting the Dominion of Canada.

NOVA SCOTIA. — University of Halifax Faculty of Medicine; Halifax Medical College.

ONTARIO. — College of Physicians and Surgeons of Ontario; Medical Faculty of the University of Victoria College, Coburg; Medical Faculty of Queen's College, Kingston; Royal College of Physicians and Surgeons, Kingston; Medical Faculty of the University of Ottawa; Toronto University Faculty of Medicine; Trinity College Faculty of Medicine, Toronto; Toronto School of Medicine; Trinity Medical School.

QUEBEC. — College of Physicians and Surgeons of Quebec; Bishop's College University Faculty of Medicine, Montreal; Laval University, Montreal and Quebec; McGill University Faculty of Medicine.

MCGILL UNIVERSITY OF MEDICINE.

The matriculation examination comprises the following subjects: English language (including grammar and composition); arithmetic (including vulgar and decimal fractions); algebra (including simple equations); geometry (first two books of Euclid); Latin (translation and grammar); and one of the following optional subjects: Greek, French, German, natural philosophy, including mechanics, hydrostatics, and pneumatics. Graduates in arts of recognized universities are not required to submit to the matriculation examination; and a certificate of having passed this examination before the College of Physicians and Surgeons of Ontario or of Quebec is accepted.

No one can be admitted to the degree of doctor of medicine and master of surgery who shall not, in this or in some other university, college, or medical school, approved of by this university, either have attended lectures for at least four six-months' sessions, or studied medicine during at least four years, and during that time have attended lectures for at least three six-months' sessions.

Candidates for the final examinations must furnish testimonials of attendance on the following courses: anatomy, chemistry, materia medica, and pharmacy, institutes of medicine, principles and practice of surgery, midwifery and diseases of women and children, theory and practice of medicine, practical anatomy, clinical medicine, clinical surgery, — each two six-months' courses; medical jurisprudence, — one course of six months, or two courses of three months; practical chemistry, botany or zoology, hygiene, — each one three-months' course duration; no less than twenty-five demonstrations upon microscopic anatomy, physiology, and pathology. Testimonials equivalent to, though not precisely the same as, those above stated may be presented and accepted. The candidate must have attended during eighteen months the practice of the Montreal General

Hospital, or that of some other approved hospital, and have compounded medicines for six months. He must also have attended for at least six months the practice of the university or other approved lying-in hospital, and have attended at least six accouchements.

Every candidate for examination must have attended at least one session at this university, and one full course of all the branches included in its curriculum.

JAPAN.

In June, 1876, the number of medical practitioners in the returns of two cities and forty-three prefectures was estimated at 23,281, about twenty-one per cent. of whom were practicing medicine according to the Western system, and all of the remainder either according to the mixed systems of China and the West to that of China and Japan, or to the pure Japanese one.

Knowing that it would be impossible to make the change to the new methods at once, and thus to secure uniformity, the government adopted a politic course. It strongly recommended to the young medical students to pursue only the most approved course of study, and to those now in practice to continue as in the past, or to make such changes as the exigencies or advantages of their practice might afford. In 1876 the late home minister, Okubo, issued a notification "that the examination of candidates for a certificate to practice medicine in accordance with the following regulations shall be introduced into every prefecture as soon as the condition of medical men in each prefecture shall admit:—

Regulations for the examination of Candidates. Article I. Any one desirous to become a medical practitioner shall be required to apply for a certificate, which shall be given only after the prescribed examination has been passed satisfactorily.

Note. Any one who has been at the time of the issue of these regulations practicing medicine shall not be obliged to subject himself to an examination. The local authorities shall therefore take the proper measures to distinguish such medical practitioners from those who have been licensed after a satisfactory examination. . . . The subjects for examination for candidates are the general principles of natural philosophy, of anatomy, of physiology or pathology, of pharmacology, and the theory and practice of medicine and surgery. . . .

Article III. The examination shall be held at a convenient place, such as the local government office or public hospital; and the results shall be reported to the Home Department, which shall grant the certificates. . . .

In June, 1877 (the date of the last published report), there was in Japan a population of 32,812,116, of whom 31,298 were medical practitioners (this enumeration includes all of the prefectures except Kagoshima), giving a proportion of 0.91 to the thousand of population. Of this army of "doctors," 20,568 were followers of the Chinese system; 1998 mixed and non-classified; 6402 the Western system; and 200 licensed after the prefectural examination. Though no official reports are at hand, yet the testimony of the native physicians in Hokkaido and at the line of hospitals in North Nippon is to the effect that Western medicine has made greater progress during the past three years than at any previous period; that the number of the Chinese school of doctors is decreasing; that the people are slowly being educated up to the advantages and benefits of the new treatment, though a very large number still adhere to the old methods; that local hospitals and dispensaries are springing up in all parts of the interior; and that the Western ideas of hygiene and sanitation are receiving increasing attention from all the local authorities.

— Dr J. C. Cutler

Medical and Surgical Journal.

THURSDAY, OCTOBER 13, 1881.

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NO. 4 PARK STREET, BOSTON, MASS.

THE PROGRESS OF MEDICAL EDUCATION.

In nature and in art, growth and development of a permanent and wholesome character are, as the rule teaches us, slow. Matters pertaining to medical education certainly are no exception to this rule. The annual periods marked by great changes are rare, and these great changes are but the sudden expression of numerous single influences which as such attracted less attention.

The appearance of the educational number of the JOURNAL last year was coincident with the first formal announcement by many schools of changes in the course of instruction toward a higher standard. The necessity for such a step has been long enough apparent, and the demand for the changes had at last become sufficiently urgent to convince several faculties that it was not risking too much to take the step. In our remarks on this subject we then said:—

"A glance beneath the surface at the work done by our medical schools during the past decade in raising the standard of education shows an amount of improvement, even among those colleges which have not adopted a new plan, or joined any special association, that one would hardly expect to find who had not followed closely the process of evolution so rapidly developed since an onslaught was made upon the old system, which had maintained undisputed sway for nearly a century. A course of instruction which ten years ago was considered amply sufficient to enable the brain of Young America to digest the art and a handsome allowance of the science of a great profession, a course which received the indorsement of the leading men in the country, would now be disclaimed, if not openly despised, by any faculty having pretensions to 'standing.' The time occupied then in obtaining a degree would hardly suffice now to enable the student to complete satisfactorily a preparatory course of study. It was thought by students at that time evidence of unusual talent and an enviable record for one to get his degree in the smallest possible number of months. A man who 'hung round' a medical school for three years was looked upon as a sort of dunce. At the present day, even at many of the schools which still hold on to the old go-as-you-please plan of study, it is thought quite the thing not to get through your anatomy, chemistry, and physiology until well into your second year, and 'four-year men' are, we are happy to say, not only the 'very latest style,' but also quite a popular one."

No very radical changes among the schools were

to be expected after those announced last year. Those then advancing their requirements have been steadilying themselves in their new positions; and others, meanwhile, have thought it well to assume a certain amount of a virtue which has not yet proved fatal, and in some cases has really been immediately profitable, to its actual possessors. Bellevue Hospital Medical College is the only one, we believe, which has avowedly "advanced to the rear" within the twelve months. The faculty of this school reluctantly, though quickly, came to the conclusion that it was improper for them to jeopardize its interests by an obligatory three years' course. Attendance upon only two years' courses of lectures, and only one of these at Bellevue, is now again, as of old, the requirement for its diploma. Recognition is given to higher aspirations by facilities for a third year of study to those desiring it.

The regulation of the practice of medicine by State legislation has received comparatively little attention, and progress can scarcely be recorded. Such regulation, whether of a positive or negative character, must always have a certain bearing upon medical education. The year's experience with registration laws is not especially encouraging. Between a failure to register, a failure to bring charges, and a failure to convict, these laws appear to more advantage on paper than in operation. Since 1859, North Carolina has regulated the practice of medicine within her borders through a Medical Licensing Body. We have been assured that the result is satisfactory to the profession, and reproached with not calling attention to the law. The *North Carolina Medical Journal*¹ says:—

"By the North Carolina law the possession of a diploma does not qualify an applicant to practice, it matters not how celebrated the college may be from which it is obtained. According to the law, any person can apply for a license to practice medicine provided he can give satisfactory evidence that he is twenty-one years of age, and of good moral character; but he must pass a satisfactory examination in Anatomy, physiology, surgery, pathology, medical hygiene, chemistry, pharmacy, materia medica, therapeutics, obstetrics, and the practice of medicine, to be licensed.

"The defect in the law is that there is no penalty clause except this: 'Any person who shall practice medicine or surgery in this State without having first applied and obtained license from the Board of Examiners, shall not be entitled to sue for or recover before any magistrate or court any medical bill for services rendered.' While it would be an improvement to have a more direct and onerous penalty clause, the omission is not so great when other advantages are considered. The Board of Examiners are elected by ballot from the members of the Medical Society of North Carolina, and no one can be a member of the State Medical Society without he has the license of the Board of Examiners, or was a practitioner anterior to 1859.

"With this foundation the moral influence is so great that but few young men are willing to ostracize them-

selves from legal professional intercourse by neglecting to obtain the State license. Every year the number applying for license is larger, and, by the way, every year the percentage of licenses granted is smaller.

"The good effects of this law have been noticed for many years, and it is growing stronger in the confidence of the people. The man who would have stricken the law from the statute books, by a resolution offered in the legislature, had his estate protected by it from the rapacity of a quack.

"Moreover, in North Carolina there are exceedingly few irregular physicians, except the usual percentage of morbid growths from the regular stock, and up to this time no eclectic or homoeopath has applied for license."

The necessity for some legal regulation of the practice of medicine will probably sooner or later become apparent, though it may require an even stronger impulse than the revelations of the past year concerning the traffic in bogus diplomas to make it so. The different States will probably awake to this necessity at different periods and under different circumstances, and we may expect a variety of bills and of subsequent failures or laws.

The study of anatomy has still to be pursued in some States under very great difficulties. An anatomical bill has been passed in Maine within the year, which makes lawful possession of material for dissection a little less impossible than previously.

Regarding the State medical societies, as a possible means of furthering higher medical education, we hope at a not distant day to devote some space in the JOURNAL to their form of organization in different States. The demands upon the knowledge of medical men are unquestionably increasing in severity all over the world, and with us no less than elsewhere. Provision must be made for meeting these demands and expectations as they arise, whether by the schools, by the legislatures, by the State medical societies, or by the aid of all.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 1, 1881, TO OCTOBER 7, 1881.

BYRNE, C. C., major and surgeon. To proceed from Wilcox to Camp Thomas, A. T., and report to the commanding officer for duty in the field. Field orders No. 4, Department of Arizona, September 9, 1881.

BROWN, HARVEY E., major and surgeon. Granted leave of absence for four months. S. O. 220, A. G. O., September 29, 1881.

CLEARY, P. J. A., captain and assistant surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to apply for six months' extension, if necessary. S. O. 224, A. G. O., October 4, 1881.

KOERPER, E. A., captain and assistant surgeon, now awaiting orders at Philadelphia, Pa. To report in person to the commanding general, Department of the East, for assignment to duty. S. O. 222, A. G. O., October 1, 1881.

KING, WILLIAM H., captain and assistant surgeon. To proceed without delay to Fort Trumbull, Conn., and report to the commanding general for temporary duty. S. O. 176, Department of the East, October 3, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held on Monday evening, October 17th, at eight o'clock, in the hall of the Medical Library Association. Reader, Dr. C. M. Jones. Subject, German Measles. M. H. RICHARDSON, M. D., Secretary.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 1, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	778	384	35.60	16.24	8.10	9.38	2.06
Philadelphia.....	846,984	404	150	26.73	9.16	4.46	1.98	6.93
Brooklyn.....	566,689	302	130	33.77	15.23	6.62	7.95	2.32
Chicago.....	503,304	263	133	41.06	7.98	7.22	6.08	7.60
Boston.....	362,535	196	74	30.10	12.70	4.08	6.12	9.69
St. Louis.....	350,522	144	65	31.94	15.97	2.78	3.47	2.78
Baltimore.....	332,190	176	77	34.66	10.23	14.20	2.27	4.55
Cincinnati.....	255,708	104	49	28.85	14.42	6.73	4.81	3.84
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	89	37	39.33	22.47	2.25	1.12	3.37
Pittsburgh.....	156,381	85	50	52.94	12.94	10.59	3.53	11.76
Buffalo.....	155,137	123	65	52.03	32.52	5.70	4.06	8.13
Milwaukee.....	115,578	53	31	26.42	13.21	11.32	7.55	1.89
Providence.....	104,857	37	16	37.84	10.81	13.51	—	10.81
New Haven.....	62,882	23	8	17.39	—	—	8.69	—
Charleston.....	49,999	36	13	30.56	8.33	5.56	2.78	2.78
Nashville.....	43,461	19	6	42.11	15.79	—	—	15.79
Lowell.....	59,485	28	18	28.57	7.14	10.71	3.57	3.57
Worcester.....	58,295	25	13	44.00	20.00	—	12.00	12.00
Cambridge.....	52,740	21	7	38.10	23.81	14.29	14.29	—
Fall River.....	49,006	36	19	22.22	11.11	—	5.56	5.56
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	15	5	20.00	6.67	—	6.67	6.67
Springfield.....	33,340	13	4	23.08	23.08	—	7.69	—
Salem.....	27,598	11	4	18.18	9.09	—	18.18	9.09
New Bedford.....	26,875	11	3	27.27	9.09	—	9.09	18.18
Somerville.....	24,985	7	3	14.29	—	14.29	—	—
Holyoke.....	21,851	15	5	53.33	20.00	6.67	13.33	13.33
Chelsea.....	21,785	7	4	28.57	14.29	—	—	—
Taunton.....	21,213	12	3	16.67	8.33	8.33	8.33	—
Gloucester.....	19,329	10	4	20.00	—	10.00	—	10.00
Haverhill.....	18,475	4	0	25.00	—	—	—	25.00
Newton.....	16,995	5	2	20.00	—	20.00	—	—
Newburyport.....	13,537	5	1	—	—	—	—	—
Fitchburg.....	12,405	1	0	—	—	—	—	—
Twenty-two Massachusetts towns.....	167,661	52	20	28.85	17.31	3.85	3.85	3.85

Deaths reported 3110 (no report from New Orleans): 1403 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 1065, diarrhoeal diseases 436, consumption 371, diphtheria and croup 208, lung diseases 182, typhoid fever 154, malarial fevers 80, small-pox 53, scarlet fever 53, whooping-cough 32, cerebro-spinal meningitis 21, puerperal fever 14, erysipelas eight, measles six. From *malarial fevers*, New York 21, Brooklyn 12, St. Louis 11, District of Columbia nine, Baltimore seven, Chicago and Charleston five, New Haven three, Buffalo and Nashville two, Philadelphia, Cincinnati, and Holyoke one. From *small-pox*, Chicago 26, Pittsburgh 12, Philadelphia 11, New York three, District of Columbia one. From *scarlet fever*, New York 24, Brooklyn 11, Philadelphia seven, Pittsburgh three, Chicago two, Boston, St. Louis, Baltimore, Buffalo, Lowell, and Worcester one. From *whooping-cough*, New York 14, Chicago five, Philadelphia, Brooklyn, and Boston three, Baltimore, Providence, Lynn, and Malden one. From *cerebro-spinal meningitis*, New York five, Chicago and Cincinnati three, Worcester and Fall River two, Philadelphia, Boston, Baltimore, Buffalo, Chelsea, and Clinton one. From *puerperal fever*, Chicago four, Brooklyn, Boston, and St. Louis two, Philadelphia, Buffalo, New Haven, and Lowell one. From *erysipelas*, New York three, Philadelphia, Chicago, St. Louis, Buffalo, and Holyoke one. From *measles*, New York and Chicago two, Brooklyn and Buffalo one.

Four cases of small-pox were reported in St. Louis, five in Cincinnati, one in District of Columbia, 76 in Pittsburgh, and one in Milwaukee; diphtheria 18, scarlet fever seven in Boston; diphtheria eight, scarlet fever five, in Milwaukee. Dysentery 21, erysipelas in Buffalo.

In 40 cities and towns of Massachusetts, with a population of 1,046,394 (population of the State 1,783,086), the total death-rate for the week was 21.98 against 22.99 and 21.03 for the previous two weeks.

For the week ending September 10th in 149 German cities and towns, with estimated populations of 7,740,071, the death-rate was 23.8. Deaths reported 3537; under five 1891; pulmonary consumption 414, diarrhoeal diseases 281, acute diseases of the respiratory organs 175, diphtheria and croup 132, scarlet fever 97, typhoid fever 73, whooping-cough 59, puerperal fever 14, measles and *rötheln* 10, typhus fever (Thorn) one. The death-rates ranged from 12 in Altona to 45.1 in Posen; Königsberg 25.1; Breslau 30; Munich 36.6; Dresden 26.4; Berlin 21.4; Leipzig 18.8; Hamburg 22; Hanover 16.1; Bremen 16.4; Cologne 24.1; Frankfurt 17.9; Strasburg 18.2.

For the week ending September 17th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 17.3. Deaths reported 2521; scarlet fever 135, diarrhoea 119, fever 57, whooping-cough 48, measles 33, small-pox (London 26) 27, diphtheria 16. The death-rates ranged from 12.1 in Oldham to 30.6 in Hull; Leeds 13.8; Bristol 14.9; London 15.7; Birmingham 16.1; Sheffield 16.4; Manchester 16.7; Liverpool 28.2; Edinburgh 15.9; Glasgow —; Dublin 21.9.

For the week ending September 17th in the 21 chief towns of Switzerland, population 479,934, there were 33 deaths from diarrhoeal diseases; typhoid fever six, diphtheria and croup five, whooping-cough four, acute diseases of the respiratory organs three, puerperal fever and small-pox one each. The death-rates were, Geneva 22.8; Zurich —; Basle 27.6; Berne 28.1.

Original Articles.

SOME OF THE CAUSES OF INFANTILE ECZEMA, AND THE IMPORTANCE OF MECHANICAL RESTRAINT IN ITS TREATMENT.¹

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THERE is no affection of the skin so frequent in infancy, nor any in the whole range of children's diseases more difficult to manage successfully than eczema. That tissues so delicate and complex as the integument of the new-born babe should find the conditions of extra-uterine existence more varied and exciting than the equable protection afforded by its long amniotic bath is self-evident, the only wonder being that it withstands so well the rude abuses of its early management. Let us briefly consider what these are: First, from its prolonged, placid, subaqueous life it emerges into sudden contact with the more stimulating properties of an entirely different element, the atmospheric ether. For the first time its capillaries dilate to their fullest extent under the new conditions of respiration, an independent and intensified circulation, and spasmodic vocalization. So, too, its glandular systems are called upon to adapt themselves to the strange external surroundings; the sebaceous follicles to modify the character of their secretion, the sweat glands to perform their functions probably for the first time. Then its abrupt acquaintance with the foreign materials of the outer world. Anointed at once with fats, too often a rancid vegetable oil; then rubbed with a chemical compound, more frequently than otherwise composed of impure constituents, and so imperfectly combined that an excess of alkali is at liberty to exercise its caustic action upon the susceptible skin; then plunged into water of all varying temperature, and briskly rubbed; and finally received upon a rough blanket and dried by friction, it may be, with a coarse towel. Such is often the first treatment the skin receives. Later the dressing: around its abdomen is bound tightly a broad flannel band, between its legs are stuffed thick folds of napkin, and about its lower extremities again the rough contact with the woolen petticoat, all ingeniously adapted to irritate the skin by overheating, pressure, and rude friction.

Is it at all unreasonable that in this its first hour's experience of the new life the skin should find cause to express resentment, or should fail to adapt itself immediately to such strange surroundings, and present within the first day or two a fugitive congestion of greater or less extent, a mild follicular inflammation, or other abnormal phenomena, which may readily develop into a more serious and permanent disturbance? But to these are soon added other exciting conditions arising from mistaken opinions as to the care of the baby's skin, or from neglect of its person. The discharges are too often allowed to remain too long unremoved. That irritating fecal matter and great folds of napkin saturated with urine left by the hour in contact with the tenderest parts of the skin should produce the condition called intertrigo is what is to be expected. Such neglect is a very frequent exciting cause of eczema among the poorer classes, who cannot give the requisite attention in this respect to their babies. So,

too, the frequent regurgitation of milk curdled by the gastric acid, and allowed to saturate the clothing around the neck throughout the day or night, gives rise to a similar inflammatory condition between the heavy folds of skin in this position in fat infants. Imperfect removal of the thick coating of smegma at the first washing, or of the superabundant secretion which sometimes continues for a few days after birth, from between the folds of the skin, is the cause sometimes, also, of the same inflammation in the groins, navel, and around the neck.

Mismanagement of this secretion in another position forms one of the most frequent causes of infantile eczema. It is not an easy matter to remove from the scalp this prenatal cap of cheesy material without first thoroughly mixing it with other fat, the hair serving the purpose of fixing it all the more firmly to the skin. Very often, therefore, a remnant of it is left by the nurse, especially over the open fontanelle, which is added to by subsequent accumulation, as a timidity is generally felt in washing this apparently unprotected opening to the brain, while not infrequently the removal of this substance from the part is regarded with a superstitious feeling by the ignorant. Thus the sebaceous matter goes on accumulating until a thick coating is formed, sooner or later covering the whole top of the head, which retains the dust and dirt coming in contact with it, and assumes in time a brown or black color. It also retains the heat and moisture beneath it, which favor the decomposition of the newly-formed sebum, and thus produces a condition of active irritation. Not infrequently, too, attempts are made to remove this cap by violent means, as with the nails or a fine-toothed comb, which add greatly to the chances of dermatitis. After a time the scaly character of the covering is found to be undergoing a change into a crust. It cracks here and there, and allows the scalp to be seen for the first time, red and moist, and oozing through such openings a free escape of serum overflows the original sebaceous coating, and, coagulating, conceals it. The underlying redness extends beyond the crust to the bordering portions of healthy skin, and slowly or rapidly the case progresses to an acute eczema of the scalp, the milk crust and scald head of household nomenclature. Such is the history of development in a vast number of cases of the disease in this locality, from which seat it may spread to a more general distribution.

To these external agencies must be added the influence of extreme temperature as an important factor in the development of eczema in infancy. The baby is generally so well protected against the action of excessive cold that with the exception of a mild degree of "chapping," it rarely gives rise to any disturbance in the skin; it is the other extreme, excessive heat, which it cannot escape, which produces so much mischief in this direction. Under its influence the sweat glands are often stimulated into such hyperactivity that the cutaneous tissues immediately surrounding them become congested, presenting a punctiform redness, or the hyperæmia may become more generally diffused. This, the mildest grade of "heat rash," may disappear at this stage with proper care on the subsidence of the exciting cause. If, however, the infant be improperly clothed at such seasons, so that the excessive action of the glands is promoted, this congestion rapidly develops into a papular eczema, which may continue indefinitely. I have seen a hyperidrosis, induced by over-

¹ Read before the American Medical Association, May 4, 1881, and before the Boston Society for Medical Improvement, October 10, 1881.

covering during a single nap in summer, pass into an acute general eczema of several weeks' duration. To such imprudent management all children are exposed. It is chiefly, however, among the poorer classes that the evil results of over-heating and neglect of the skin in combination are found. Shut up by night in the stifling atmosphere of the tenement lodging, the skin has no opportunity to cool down after the baking heat of the day; the clothes, saturated with the irritating products of perspiration, act as continual warm fomentations upon the skin, which is rarely washed; these are the conditions which, kept up for weeks during the sweltering temperature of July and August, in our large cities, give rise to very characteristic changes in the cutaneous tissues of all grades of dermatitis. First, the punctiform congestion, perifollicular in seat; then the diffused erythema, both of possibly brief duration; then true eczematous inflammation, in its macular, papular, and vesicular forms, passing into the more advanced stages of oozing, crusting, and pustulation; later, furunculoid dermatitis, affecting large surfaces of the body, especially the head; and finally deeper-seated abscess formation, affecting the subcutaneous structures. Such cases of eczema in the miserable infancy of our crowded city populations during the prolonged "heated terms" form a large proportion of the cases which present themselves for treatment at children's dispensaries and the out-patient departments for skin diseases at such seasons.

Such are the more common causes of eczema in the early days of infancy operating upon the excessively tender skin from without, some of which continue to be actively operative throughout babyhood. These form, however, but a small proportion of all the cases of the disease which occur at this period of life, although by far the greater part of those concerning the aetiology of which we have any positive knowledge. During the past twelve years I have treated at the out-patient department for skin diseases of the Massachusetts General Hospital 5000 cases of eczema, of which 1890 occurred in children of ten years of age and under, as by accompanying table:—

Within the first year of life	569 cases.
Between 1 and 2 years of age	286 cases.
Between 2 and 3 years of age	280 cases.
Between 3 and 4 years of age	198 cases.
Between 4 and 5 years of age	144 cases.
Between 5 and 6 years of age	118 cases.
Between 6 and 7 years of age	93 cases.
Between 7 and 8 years of age	76 cases.
Between 8 and 9 years of age	66 cases.
Between 9 and 10 years of age	60 cases.
Total	1890

It will be seen how large a proportion of the cases occurred in the earliest years of infancy: 31 per cent. within the first year, 69 per cent. within the first three years.

The ratio of cases in children below the age of ten to the whole number of cases of the disease is 37.8 per cent.

Taking out the operation of the causes directly acting upon the skin from without, above mentioned, and a few other extraneous agencies, the parasitic chiefly, I do not hesitate to say that I know nothing whatever of the causes of the disease in the remainder. So far as my experience goes eczema, with the above exceptions, affects all classes of society alike; it occurs at all seasons of the year; it comes in children of all degrees of

health, in the perfectly sound as frequently as in the feeble; it has no necessary connection with any other disease of childhood, even of coincidence, except fortuitous; it comes during dentition only because dentition is synchronous with infancy, although it may sometimes be temporarily aggravated by its active disturbing influences; it shows itself in an equal proportion among bottle babies and those reared by the breast, and is as independent of the nature of diet in the later years of childhood; and if there be other assigned causes for its production, of which in fact there is no end, I may here say that my observation gives me no justification for believing any of them. If a child have an inflammatory process affecting the internal skin anywhere, or the tissues of the lungs, kidneys, liver, brain, or any other structure of its system, it is not considered necessary either for the physician in attendance or the writer on such disease to account for its being, nor to offer, as a satisfactory cause of its existence, a supposed sympathy with or dependence upon the state of the blood, or the condition of some other organ or function, or to invent a hundred other imaginary aetiological relations which cannot be refuted because they rest upon no logical data. We know no more of the aetiology of infantile eczema to-day than of that of the majority of other affections of infancy. Let us then use the same honest and reasonable language in discussing it.

In infancy the disease almost always presents itself primarily in the acute forms *E. erythematousum*, *papulosum*, which under the constant rubbing and scratching to which the skin is subject, readily become excoriated and develop into *E. madidans*, and less frequently *E. vesiculosum* or *pustulosum*. In process of involution these naturally pass through the crusted and scaly stages of the affection also. A certain degree of infiltration accompanies the most acute forms after a short duration, which in obstinate cases amounts to a considerable degree of thickening of the corium. Upon the face and scalp it almost always tends to assume its most inflammatory type, serum oozing copiously from the denuded skin and drying, when left long enough unmolested, into thick yellow crusts frequently mixed with blood from the deep excoriations made by the nails, or with pus and sebum upon the scalp. Upon the rest of the body the papular variety is the most common.

All these forms are accompanied by an intense itching which demands relief by scratching, but which only adds to the sufferings of the little patient by aggravating the harassed state of the cutaneous sensitive nerves. This desire, almost always incessant, becomes in many cases a real paroxysmal frenzy, the hands and feet being used simultaneously in scratching, while the head is violently and rapidly rubbed from side to side against the pillow, the clothing, its own body, the attendant, or any opposing surface which offers. This is repeated at shorter or longer intervals throughout the day and night. Under such persistent violence the inflammation of the affected portions of the skin is of course intensified, the hyperæmia is perpetually sustained, the protecting crusts and newly-formed cuticle are constantly torn away, and the tender cells of the rete and the papillary layer are plowed into unmercifully. After such furious attacks the whole head, or large areas of the general surface, looked as if just flayed, intensely red, dripping with serum, and presenting numerous points or long furrows of free hemorrhage. But the effects of this violence are not confined to the parts principally affected; the neighboring portions of skin are unavoidably

abused also, with the necessary result of a development of the disease in such directions, and its more or less rapid spread over large extents of surface. It is in this way that a local eczema, confined at first, as in the great majority of cases it is, to the scalp or other part of the head, becomes general, the disease assuming its most advanced or active type in the most robust children, for it is these who rub and scratch most vigorously and endure the longest. Indeed, it is a marvel how long and well an infant a few months old will bear such strains upon its delicate nervous system, as these paroxysms of frenzy must be. Adults describe those of much milder form attendant upon various kinds of cutaneous pruritus as resembling in their immediate exhaustive after-effects those following the sexual orgasm. The want of continuous sleep, too, should have its ill results, but strange to say, such a child may lay waste the strength and health of a household by the care it demands through months and months of nights and days, and remain at last its only healthy representative in all respects save its skin, retaining its nutrition, plumpness, vigor throughout. The health of those in charge of it becomes, in fact, eventually the chief object in view in the cure of the baby.

This is in no way an exaggerated picture of the disease; every physician recognizes the type and his inability in many cases to deal with it. Is it strange that such cases should be obstinate under ordinary treatment, and resist change after change in method, improving to a slight extent for a few days, it may be, to relapse as often? Is it surprising that such patients should be transferred from one physician to another and another until the fortunate last one of all is reached? It is strange, however, that there should be found many a physician advising parents that it is either useless to do anything for the cure of the disease or dangerous to attempt it. The writer has seen numerous cases of severest eczema in infants allowed to continue for months and months without local treatment under the advice of fashionable homeopathic practitioners, to the effect in one instance that an application even of oxide-of-zinc ointment would be sure to bring on convulsions and death. Such let-alone treatment is at least possibly consistent with some sectarian tenet and therefore pardonable; but what can be said in the more numerous cases where the so-called regular family physician pursues the same inhuman course and permits a child to suffer the torments of self-torture, and the health and happiness of a family to be destroyed through long periods of distressful days and endless nights in at least apparent subservience to the groundless popular fear that it is dangerous to cure or "drive in" an eruption? In too many such cases the plea of ignorance cannot certainly be offered in his justification. Every physician may, indeed, often have to say that he has tried this and that remedy advised by authority without result, and that finally he has let alone what apparently could not be controlled by treatment; such want of success forms too nearly the rule rather than the exception in infantile eczema.

It is, therefore, to present the claim of a method which offers a surer success in the treatment of so obstinate an affection that I venture to ask your attention. The method to be proposed has no element of novelty in it, introduces no new or specific drug to the overburdened materia medica of the disease; it is only a system of proper restraint which shall give the therapeutics of eczema in infants the same chances of success as in other

periods of life. For so long as any degree of eczematous inflammation of the skin exists this subjective symptom, itching, is necessarily present, and is as much a part of the disease as the hyperæmia or any of its manifold forms of surface lesions. So long as there is any itching, so long will the child rub and scratch, and so long will all direct treatment in the form of washes, powders, ointments and the like, or any form of internal medication, be of little or no avail, for a minute of unguarded scratching will more than undo all that has been gained by their use in twenty-four hours. They must be allowed to do their proper work, and this can only be made possible by making this counter-agent impotent. This cannot be accomplished by any number of nurses or attendants of the most conscientious vigilance, for two persons would have to hold the child simultaneously during every moment, day and night, to insure safety, and this is wholly impracticable. It can only be effected by a properly constructed harness or system of clothing adapted to the extent and position of the disease in every case.

Let us consider, first, its application to the most common condition, acute eczema of the head. A skull cap is to be made of firm old cotton or linen cloth so as to closely fit the calvarium; a mask of the same material is then shaped to the face, with exactly placed apertures for the eyes, nose, and mouth, and with slits for the ears. It is to be gathered in somewhat beneath the chin, and made long enough to lap some two inches at the back of the head. This in mild cases will prove to be a sufficient protection against the efforts of the infant to get at the irritated skin with its hands, and a shield against the damage inflicted by rubbing the inflamed parts against every opposing surface which offers. It is sometimes sufficient that such a mask and cap should be worn only while the child is sleeping, the only time when it is generally left unwatched, but such partial use is permissible only in the mildest grades of the disease. But the protection from without afforded by the mask is only one of its important duties; it may also be made to take a valuable part in the direct treatment of the disease. Of course its use will never interfere with the application of any other class of remedies to the skin, but it may be smeared with ointment, and, adjusted tightly, form an impermeable coating to the inflamed skin. It may be worn in this way for twenty-four hours without change, or removed at shorter intervals for the application of such other remedies as the case demands. The nose and ears should protrude through their appropriate openings to assist in retaining the mask in position, which should be tightly stitched or pinned with fine safety-pins at the back of the head. But generally additional means must be employed against mischief, as the hands of a strong infant are capable of doing injury both to the mask and the skin beneath during the paroxysms of itching, or of developing the disease upon the neck and other parts. It is generally best, therefore, in all but the mildest cases of the affection, even when confined to the head, to use a sort of strait-jacket in addition to the mask. A hole is to be cut in the closed end of a small pillow-case large enough to allow the child's head to pass through. This is to be drawn down over the body and arms. The back and front surfaces are then to be stitched together between the arms and body by a long darning-needle from the axilla down to the ends of the

fingers, thus confining the arms in closed sleeves to the sides. The same result may perhaps be more readily accomplished by the use of several safety-pins in place of the stitches, by which the jacket may be more readily taken off when necessary. The pillow-case is then to be fastened together by the pins between the legs from front to back, so that the arms cannot possibly be brought up to the head. This lower fastening can of course be removed without trouble as often as it is necessary to change the napkin. We have thus rendered the hands completely harmless. The mask and jacket are of course resisted by the little patient at first, but in a day or two are worn, when adjusted, without a struggle. The chief opposition to their use come always from the mother, to whose pride in her child's appearance they are often a sore affront. The jacket should be worn day and night, and while removed for the application of other dressings, or during the bath, the hands are not for a moment to be left unheld by an additional attendant. It is astonishing what results are often accomplished within twenty-four or forty-eight hours by the mask and jacket. The skin, having for the first time, it may be for months, a chance given it of expressing its desire or capability of improvement, loses rapidly its inflamed condition, and its nerve filaments, free from the constant insults they had received, quiet down and in turn give the patient the rest so long wanting. The demoralization of the household disappears with the same rapidity, and in a week, it may be, the disease is seen to be well on the road to recovery. Such is by no means an uncommon result. But not until the skin is completely restored to its normal condition, or at least until all signs of the inflammatory state and of pruritus have disappeared, are these mechanical means of restraint to be relaxed.

When, however, the disease is more extensively distributed, covering the arms and legs, or the whole surface as well as the head, the necessity of their employment is the more imperative, as the suffering is greatly intensified and the temptation to injure the skin increased in proportion to the greater area affected. In such cases it often becomes necessary to confine the feet and legs as well as the upper extremities, to prevent their constant friction against each other. The same method of pinning through the pillow-case from front to back should be employed, following the inner line of the legs from the crotch to the feet, while they are kept some distance apart. If the outer edge of such trousers be then fastened to the bed or cushion on which the child is seated, the legs can neither be drawn up or approximated to any dangerous contiguity. To any who think that such restraint, preventing as it does almost wholly the natural movements of the limbs, might be not only uncomfortable but injurious, the custom of many nations of tightly swathing their infants through the early periods of life without harm may be cited.

But with these preventive measures can we combine means also of hastening more directly the cure of the affection? It is not my intention to discuss here that important and difficult subject, the general therapeutics of infantile eczema; I will state how far only the former may be made to do additional service in the latter direction. As I have stated that the cap and mask may be smeared with ointments, so may the arms and legs be covered with bandages anointed with the same before being placed in confinement. A favor-

ite plan of managing this part of the treatment with myself is as follows: To the head and face or other parts affected there may be applied, morning and evening such washes as are thought advisable. The cap and mask, previously well smeared with some ointment, are then carefully adjusted, pressed firmly into the skin, and tightly fastened. Other parts are then similarly treated, the ointment being applied to the body and limbs if required, on thin old cotton or linen cloths. The pillow-case is then put on carefully and pinned into form. These dressings are left unchanged twelve or twenty-four hours, according to circumstances, and are then removed for a short time for the application of other needful remedies. The same cap and mask and other swathes are then to be respread and applied as before. In this way one set of cloths may be made to serve for three or four days, according to the amount of discharge from the skin. If they be changed daily the ointment is mainly wasted in saturating the texture of the cloth, leaving little free to act upon the skin. Of course in some cases ointments are not advisable, when the mask should be worn dry.

Such are the simple mechanical means, to be found in every household, which I regard as all-important in the treatment of one of the most distressing and rebellious diseases of infancy.

A PECULIAR CONDITION OF THE CERVIX UTERI WHICH IS FOUND IN CERTAIN CASES OF DYSTOCIA.¹

BY ALFRED HOSMER, M. D.

THAT extraordinary form of dystocia to which attention was directed in former communications² still retains much of the character of an interesting novelty; its importance, which is not unlikely to be underrated for the very reason that its occurrence is supposed to be rare, is not as yet generally appreciated. No allusion is made to it in the last edition of Leishman's Midwifery, published scarcely a twelvemonth since, and revised by the hand of the author. Nor is it mentioned in the second English edition of Playfair's Midwifery. Under date of June 18, 1878, Dr. Playfair writes to me as follows: "I have never seen, or at least recognized, a case of the kind; but I can quite understand the occurrence." However, in the second American edition of this writer's work, Dr. Harris has introduced the subject under the head of "tetanoid falciform constriction of the uterus."³ In many respects this designation is suggestive and significant, yet it lacks precision, intended as it is to provide for a certain mental reservation with which a topic new to text-books is discussed by the editor, who, at the time of writing, has not been convinced that the internal os is the seat of the anomalous constriction. The title under which we first introduced this subject had its origin in some early impressions which were received in connection with the imperfect investigation of a single case. I was not ready to abandon it until

¹ Read at the meeting of the Obstetrical Society of Boston, February 12, 1881.

² For the sake of uniformity the original title is still used, though the condition under consideration would more properly be designated as *tetanic spasm of the internal os*.

³ *JOB. LANCET*, vol. XXVIII., No. 12, p. 360, and No. 22, p. 683.

⁴ Playfair's System of Midwifery, second American Edition, page 350.

the testimony of clinical observation and anatomical study should have proved what relation exists between a preternatural elongation of the cervix and that strange tetanic contraction limited to a narrow segment of circular fibres of the uterine muscle; and to what extent the amount of this elongation would indicate the degree of dystocia to be encountered, and measure the danger to which the patient is to be exposed.

In the third American edition of his book Dr. Playfair respectfully admits the existence of this odd deformity of the uterus, and says: "I have no personal experience of this complication, which, fortunately, must be very rare." He does not attempt to treat or discuss a subject a knowledge of which he would be forced to derive mainly from sources which are neither indorsed by personal acquaintance nor certified by high professional reputation. Yet English writers, whose books teach classes of the largest possible size, must soon appreciate a new form and phase of difficult labor, and make it a visible, if not conspicuous, object in the obstetric field; otherwise their instructions in midwifery will be incomplete, and fail to provide for one of the most serious emergencies of practice.

It is not to be supposed that this Society will demand any additional proof of the possible existence of an *ante-partum* hour-glass contraction of the uterus. But there is a great diversity in cases which, for convenience and simplicity of classification, are designated by the same name, and the symptoms found in a single instance can rarely, if ever, suffice for a complete description of any morbid condition. I have therefore thought proper to place before you all the clinical material not included in my original collection which I have been able to obtain from the periodical literature of medicine. The several cases will be presented, as far as possible, in the chronological order of their occurrence.

In the *Medical and Surgical Reporter* of February 5, 1876, may be found the report of a case of hour-glass contraction. The patient was a married primipara aged thirty-one. Labor began in the afternoon of April 17, 1874,¹ upon what was, by calculation, the one hundred and sixtieth day of pregnancy. At the end of sixty hours a dead child was delivered, and without assistance, so far as the record enables us to judge. The womb not diminishing in size, its cavity was explored for the purpose of ascertaining if it contained another child. "The placenta was found attached at the fundus² of the uterus, and it was still quite impossible to make out the kind or condition of the body above." Twenty hours later a consultation was held, and upon removing a placenta there was found an hour-glass contraction, the degree of which was such that there was left an opening of only one inch in diameter, through which a second fetus could be felt. It was a slow process by which the operator reached and brought down a foot. Progress was slow, and only made by dint of persistent traction, and continued so until the constriction came to encircle the fetal neck. At this point all movement "seemed to be entirely arrested, when, as if something was giving way, the child made rapid advances by the woman's natural efforts, and was born headless." There were two separate placentas, both of which were duly expelled. "No flowing followed: patient slept some

from exhaustion, and with but little tympanites." "On the morning of April 22d the head was found, brought nearly down by the organ's own power." The amount of hemorrhage was not dangerous, yet the woman died on the afternoon of the eighth day, April 24th. This case occurred in the practice of Dr. M. D. Good-year, of Gorton, N. Y. It is to be regretted that his report is not made with more of fullness and detail. Such as it is, I offer it without comment.

In the *Pacific Medical and Surgical Journal*, January, 1879, Dr. W. A. Briggs, of Sacramento, Cal., relates the following facts: A married woman, aged thirty-one, whose four previous pregnancies had terminated normally, fell in labor, at term, August 3, 1876. A few hours later the right arm of the fetus was found to be protruding through the os. At six A. M. on the 6th Dr. B. was called in consultation. He found the patient in active labor, with no untoward symptoms and with "pelvic dimensions normal." He proceeded to turn, but upon the first search was unable to find the feet, which, together with the head, proved to be beyond easy reach, inclosed as they were in the superior uterine chamber. During a second attempt the hand came in contact with what was taken to be the fundus of the uterus, and very soon the cessation of a pain allowed the finger to pass beside the fetal neck "through an opening in the presumed uterine roof," and for an instant the alarming impression was conveyed that the peritoneal cavity had been entered. It is soon discovered that the edge of the supposed aperture is perfectly smooth, and to the touch suggests "that a silken cord has been run beneath the mucous membrane of the womb, and tightened about the child." During a pain "the 'cord' becomes more rigid, grasps the neck of the child with my finger and almost cuts them. Such are its wonderful power and tenacity." At the instant of uterine contraction the constriction embraced the fetus with such firmness that there seemed to be not simply contact but continuity of tissues belonging to different individuals, so that all trace of an opening disappeared. The patient was now etherized. At first the constriction was found to be as firm as ever, and the child was "held as by a vice." Force was required, yet by digital and manual dilatation the stricture was gradually overcome, and at the end of thirty minutes the hand was fairly within "the upper cavity." The passage of the fetal head having been provided for by securing a still farther relaxation of the annular contraction, the feet were seized and brought down, and delivery was accomplished without difficulty. The child was dead. The placenta followed naturally. The patient made a slow but complete recovery. To the report of this case the writer appends some thoughtful remarks, interesting to read, but not sufficiently brief for introduction here. He insists upon that difference of anatomical structure which makes the contrast between the uterine body and the cervix, and clearly points out the relations in which these two portions of the organ respectively stand to the parturient function. He states at length, and illustrates by diagram, his theory of the manner in which the innate forces of the womb lose their natural equilibrium, and thus produce deformity and dystocia.

In the *North Carolina Medical Journal*, March, 1878, A. H. Goelet, M. D., of New York, furnishes a very meagre and unsatisfactory account of a case of *ante-partum* hour-glass contraction, which came to his notice July 24, 1877. The patient was a married woman,

¹ My first and only observation was made in September, 1876.

² This statement may fairly be questioned. Those portions of the report which refer to the placenta are somewhat confused.

and this, her third labor, was premature, occurring in the middle of the seventh month. In due time "the uterus was discovered to be contracted in the centre, the fetus above the constriction and a finger projecting through." On account of a hemorrhage, which in amount was sufficient to compromise the safety of the woman, it was decided to deliver at once. "With great difficulty one finger was forced through the constriction, then another, and after considerable search a foot was found." The constriction opposed the passage successively of the breech, the shoulders, and the head, so that at each of these points there came a requisition for "all the force that could be exerted with both hands." The removal of the placenta was effected with considerable difficulty. Beyond this point the record does not go. But if the foregoing report is based upon observation that is accurate and authentic, the case is one of unusual interest and significance. For it would prove that the development of an ante-partum hour-glass contraction does not necessarily depend upon those influences which may be traced to the relations existing between either the maternal pelvis or the uterine cervix and some portion of the fetus.

Among the papers announced to be read before the Gynecological section of the American Medical Association, at the meeting held in Buffalo, in June, 1878, was one entitled "Hour-glass Contraction of the Uterus prior to the Expulsion of the Child, by T. A. Reamy, M. D., of Cincinnati, Ohio." What I take to be this paper is reprinted under date of May 10, 1879, in the *Cincinnati Lancet and Clinic*. It contains the report of three cases, one of them being referred to the *London Medical Gazette*, July, 1848, from *Schmidt's Jahrbücher*, vol. lxiv., p. 37, 1849. A foot-note alludes to a fourth case, "recently reported in the *American Journal of Medical Sciences*." The paper contains some facts that are extremely interesting. It proves that the patient in whom this formidable complication occurs for the first time is not necessarily a primipara, but that it may present itself in a woman who has passed through as many as seven normal labors. It also shows how the abdominal wall may be moulded to the shape of the deformed uterus, and how readily external palpation may often recognize the constriction. As the result of careful clinical observation, it certifies to the marked differences in the physiological condition and action of the two portions of the uterus which are respectively above and below the stricture. The supposed obliquity of the constriction in one instance, raises the question of the possibility of an unequal elongation of the opposite sides of the cervical cylinder. Case II. of this series forms a very valuable acquisition to the history of this subject, illustrating, as it does, the relation which may exist between tonic spasm of the internal os and the several stages of a multiple birth. According to the record, as the result of an eighth pregnancy, two living male children were born by a brief and easy process. They weighed, the first five and one half, the second five pounds. The uterus was found to contain a third child, and through the abdomen it was "easy to trace the rigid hour-glass contraction." "By persistent traction the hips passed through the constriction, and a dead female child of four and three quarter pounds was delivered." "Just below the umbilicus, at a point seized by the constriction, the body of the child was nearly cut in two." The placenta, with three cords adhering above the constriction, was reached and removed with the greatest diffi-

culty, and only by the successive efforts of three physicians, each of whom experienced in a painful degree the paralyzing and disabling effect of the severe pressure to which the hand was subjected in its vigorous and forcible efforts to overcome the occlusion, and obtain possession of the true uterine cavity. The woman speedily died.

The *Boston Medical and Surgical Journal*, in its issue of May 27, 1880, published the proceedings of the Society, at the regular meeting held in October, 1879. Therein is included the report of a case made by Dr. L. R. Stone, in which a firm constriction, encircling the fetal neck, seriously retarded the progress of labor, rendered instrumental interference necessary, and in some way determined a still birth. The mother recovered. It is worthy of note that a degree of relaxation in the stricture seemed to be produced by the use of ether.

On page 397 of the *British Obstetrical Journal*, September, 1879, may be found "Note of a case of spasmodic contraction of the lower uterine segment during the first stage of labor." It was under this title that Dr. Angus MacDonald made a communication to the Obstetrical Society of Edinburgh, at a meeting held February 12, 1879.¹ Mrs. C., a chronic epileptic, then advanced ten or twelve hours in her fifth labor, was visited in consultation by Dr. MacDonald at 9.30 p. m., December 16, 1875. Pains were severe. "Immediately above the cervical segment, which was half dilated and easily dilatable, the lower uterine segment was felt to project or bulge in a peculiarly rigid or shelving manner," and to be as "hard as a deal board." Such was the rigidity of the parts that the presentation could not be ascertained. "The perineal and levator ani muscles, as well as the lower uterine segment, were observed to be thrown into a condition of intense spasms by every attempt to perform a vaginal examination." The full impression of chloroform removed the spasm at once, and through the unbroken membranes a small head was found to be presenting at the time. During each pain the external os and cervical canal remained flaccid, but the inner os was closely shut, and the head, instead of being depressed by uterine action, was elevated very distinctly. In due time the need of artificial aid was obvious, and with the assistance of chloroform anesthesia, version was performed with ease, and the child was saved. "The placenta was expelled spontaneously about fifteen minutes after the birth of the child." The record contains no intimation that the maternal convalescence was not a rapid and prosperous one. The reporter alludes to a possible complication of version, which is sometimes fatal to the child, and which consists "of the trouble that is occasionally experienced in getting the after-coming head through the spasmodically contracted lower uterine segment."

The species of case which gives title to his communication, is in his experience unique. The conclusion must then be that it is only in an extremely mild and manageable form that he has witnessed ante-partum hour-glass contraction.

With one exception, the ideas which found expression in the discussion that followed were based upon the theory which located the spasm in the internal os and adjacent muscular tissue of the uterine body, and acquitted the cervix of all participation in the abnor-

¹ The Obstetrical Society of Boston had discussed this subject as early as February 9, 1878.

mal and perverted condition. The "why" of this thing did not escape attention, and the question receives a provisional answer, as follows: "It would, therefore, appear to me that the predisposing cause in this case was a neurosis affecting the vagina and the lower part of the uterine body, but not extending to the upper ranges of the body, or to the fundus uteri, and which seemed to act in such a manner, on slight stimulus, as to throw the parts within its reach into a condition of spasmodic contraction. The pressure of the head against the internal os during a pain would appear of itself to have been sufficient to start this spasmodic condition, or, in other words, to have probably acted as the proximate cause of the spasmodic condition." Science may gain something if future observers will bear in mind the hint here given as to the relation existing between individual temperament and tonic contraction of the internal os. In my first paper I distinctly stated the possible aggravation of such contraction through the reflex action of measures that were intended to be remedial.

In view of the terms of the title under which I now for the third time ask the attention of the Society to a dangerous and anomalous condition, which in November, 1876, was introduced under the name of ante-partum hour-glass contraction, I desire to quote Dr. J. Matthews Duncan. His article On Two Contrasted Forms of Weak Labor, copied from the *Obstetrical Journal*, February, 1878, page 705, may be found in Braithwaite's *Retrospect*, Part 67, July, 1878, page 184. In one case labor is weak because the uterus of the elderly multipara is feeble and inert, endowed with only a small remainder of its original energy, and incapable of vigorous and efficient action. In the other case, the subject is generally a primipara, or a young woman having a special nervous mobility. The labor is practically weak, not through any deficiency in the inherent muscular power of the womb, but for the reason that the contractile force of the organ, instead of undergoing the normal conversion into the propulsion and expulsion of the child, is expended in the production of deformity. In other words, the body of the womb acquires a permanent retraction; with each succeeding pain becomes a little shorter in its longitudinal dimension, always adding something to the thickness and strength of its wall; while the cervix is elongated and attenuated in a corresponding degree; the fetus becomes stationary, and the condition of labor loses its parturient character. The disproportion between the two portions of the womb may be so great that the lower margin of the uterine body is sometimes raised almost to the level of the umbilicus. In both these forms of weak labor, "the child is brought into the world by a very small expenditure of force." Dr. Duncan cites the case of an "excessively nervous" woman whose three labors were all, in a similar way, busy and painful, but tedious. "When the head reached the perinæum, while the pains continued severe, progress was arrested." It was only at the third confinement that the nature of the case was exactly ascertained. At that time "delivery by forceps was effected without any effort worthy the name of pulling; the child was little more than lifted out of the passages."

Without forgetting the allowance that is due to irregularity in pelvic size or shape, let us make a comparison, placing upon one side that case in which the uterus, by the retraction of its body and the elongation of its neck, loses the relation and proportion that nat-

urally exist between the two portions which in their combination constitute the organ; and in which, although spontaneous delivery is extremely improbable, the removal of the child is effected by artificial means with surprising facility, and with absolute safety. Upon the other side, we will place the case in which uterine deformity of the most aggravated kind is produced by the introduction of a third element; by the addition of a tetanic spasm of the whole circle of the internal os to the retracted body and elongated cervix, and in which not only is spontaneous delivery simply impossible, but the termination of labor is reached with a difficulty that is beyond all description, and can be appreciated by those alone who have met and overcome it, and have been eye-witnesses of the appalling danger to which it exposes both the lives that are involved in every case of child-birth, and which natural labor was never intended to put in jeopardy.

Trite and old is the saying that new things are not to be found on this side of the sun. Possibly the older obstetricians failed to appreciate all that passed before their eyes, or came in contact with their hands, just as the old physicians accepted identity when there existed a similarity only the most remote, and in diagnosis overlooked distinctions which now irresistibly force themselves upon the attention. But within seven years, that is, since April, 1874, by a coincidence that is not without precedent in the history of even important discoveries, ante-partum hour-glass contraction has been observed in so large a number of cases as to modify the impression of extreme rarity and extraordinary character which was conveyed by the first report of a case made to this Society. The wide geographical distribution of the instances here collected proves that this particular complication of labor does not take its origin in accident or influence of place, but that it forms a legitimate and indisputable part of universal midwifery, and is entitled to a high rank among those difficulties and obstacles to delivery which make the process of child-bearing in any degree unnatural. Different observers, in entire ignorance and independence of each other, have made their several descriptions in words and phrases so nearly identical that there can be no doubt that they have all been dealing with the same thing.

I will not attempt a careful analysis of the several cases which constitute the substance of this communication, but upon making a general review of them, I would draw the following conclusions, and ask their provisional acceptance:—

(1.) Simple elongation of the cervix, even though it be excessive, disables the uterus by perversion of its force, renders spontaneous expulsion improbable, but in connection with artificial delivery does not produce a condition of things to which the term dystocia can be applied with any propriety or significance.

(2.) Tonic spasm of the internal os may in single labor be developed so early as to imprison the whole fetus in the cavity of the uterine body, and in a multiple labor its production may be so postponed as to interfere only with the birth of the last child. Its existence cannot necessarily be referred either to pelvic deformity, to extreme elongation of the cervix, nor to the occupation of the cervical cavity by any portion of the unborn child.

Finally I would call attention to the facts that tonic spasm of the internal os has shown a marked tendency to recur in the successive labors of those who have

once or even twice survived the danger to which it exposed them, and that the patient in whom it occurs for the first time is not necessarily a primipara.

The form of difficult labor to which this article refers, has sometimes been spoken of as "Bandl's dystocia." That obstetrician published in 1875 *Rupture of the Uterus*, and in 1876 *Relation of the Uterus and Cervix in Pregnancy and during Labor*. But I am not aware that in either publication he describes tonic spasm of the internal os. A competent medical friend, recently a student in Vienna, and thoroughly familiar with the German language, having searched at my request, writes under date of February 24, 1881: "I have looked carefully through the two pamphlets, and find no mention at all of a spasmodic contraction of the internal os."

REPORT ON PROGRESS IN THE PATHOLOGY OF DISEASES OF THE NERVOUS SYSTEM.

BY JAMES J. PUTNAM.

CONGESTION OF THE BRAIN.¹

THE diagnosis, congestion of the brain, familiar as it is, can hardly lay claim to more than a conventional significance. Its rights are, to be sure, upheld by various writers, among them so conservative and intelligent an investigator as Nothnagel,² but on the other hand there are many who believe that it holds its place partly because the term is so convenient as a pass-word, and partly because its very obscurity of meaning renders it difficult of criticism. Some authors have used it, with manifest impropriety, to connote a condition of cerebral exhaustion, where if it exists at all it is as a result, not a cause; others have made it stand for various groups of cerebral symptoms of which the origin was obscure, the onset and disappearance rapid and complete. The whole subject has received an able overhauling in the papers by Dr. Moxon, and in the clinical arguments which he adduces to show that the conception of congestion as a primary source of disease rests on no solid basis, but is a sort of remnant of a humoral pathology, we entirely sympathize with him. We do not regard ourselves as fully able to judge of the value of the strictly anatomical and physiological parts of Dr. Moxon's work. Some of his suggestions indeed tax the imagination too strongly to be accepted without caviling, while others appear to be of great value. He says: "I wish to show that no quantity of blood that can be forced into the vessels of a brain whose veins are not closed by obvi-ous pressure, does as a matter of fact cause any such symptoms (as those met with in the several serious and even fatal diseases, which are described under the name of 'congestion of the brain,' or 'determination of blood to the head'). I believe this may be proved beyond dispute. I should like to make clear that in doing this I am proceeding in harmony with the great principles enunciated by the illustrious Professor Virchow, who . . . proved that the life of texture is in the texture itself, its pathologized as well as its natural life, and that the movements of the blood in what is called irritation or inflammatory congestion are secondary to a demand which is made by the proper power of the texture elements. . . . And when I say that the forcing of blood into the vessels of

the brain produces no symptoms, I do not mean that no symptoms will attend a fullness of the vessels when that fullness has been caused by disturbance of the brain's texture itself. There will be symptoms, but symptoms caused in the texture by the very irritation that drew the blood to the brain, and not to be ascribed to the blood that is drawn thither."

Dr. Moxon then proceeds to analyze the anatomical, experimental, clinical, and pathological evidence bearing on this question.

The *experimental* testimony in favor of the theory of congestion of the brain as a primary disease is of the most meagre, and in fact there is none at all, with regard to *arterial* congestion, the only form which is of much importance to us here, since it is to this form that familiar groups of symptoms are ascribed. *Venous* congestion, due to complete or partial closure of the cervical veins, is a complex condition, calling for consideration by itself.

Moxon has now appealed to an unnoticed piece of evidence which he believes to be of the greatest significance as showing that arterial congestion is in fact innocuous.

It is, namely, evident that when the body is exposed to high pressures of air the movable fluids must collect to a greater or less degree in the practically closed cavities of the skull and spinal canal.

In the building of bridges by means of caissons as at St. Louis³ the workmen may be for hours under a pressure of upwards of three atmospheres, so that, according to Moxon's calculation, the blood must be driven into the cranial cavity with a force several times greater than the action of the heart, as measured by arterial tension, is able even under pathological conditions to exert. Yet these workmen, and even visitors to the works, so far from feeling any ill effects from this tremendous pressure are, if anything, especially buoyant and comfortable. It is well known that on their return to the outer air these same workmen are liable to suffer from a variety of serious symptoms, for which several causes have been suggested, but these need not concern us further here, since it is with the effects of increased not of diminished pressure that we have now to deal.

The sense of buoyancy felt under this high pressure is ascribed by Moxon to the abundant supply of oxygen carried by the increased current of blood to the cerebral tissues.

If Dr. Moxon's reasoning is really correct its great value must be evident to all. It is, however, difficult to believe that this is the case; and for the simple reason that since blood cannot enter the skull without displacing cerebro-spinal fluid, and since this fluid is, in the experiment, exposed to the same atmospheric pressure with the blood itself it would seem that the amount of blood in the skull must remain the same in the caissons as upon the earth's surface.

As to the experimental evidence with regard to *venous* congestion, it is well known that complete or nearly complete (if sudden) closure of the veins returning the blood from the skull is able to cause serious symptoms, which are essentially the same with those of cerebral anæmia, together with slowing of the pulse, from excitation of the vagus. The attempt is rarely made to differentiate between the action of carbonic-acid poisoning and of the excess of blood in itself as factors in their causation, yet this is plainly of the greatest importance if we wish to deal fairly with this subject.

¹ On the Pathology of the Cerebrum, in the Nervous System, from the Lectures of Walter Moxon, M. D., etc. Lancet, March 26, at p. 178.

² *Zentralblatt*, Oct. 2, 1880.

³ Report by Capt. Eades.

"These symptoms are not, however, what is habitually indicated by "congestion of the brain," and it is, furthermore, but rarely that an interference with the venous circulation sufficient to produce them is clinically met with. A considerable degree of interference of this kind is in fact of far less consequence than may be generally believed.

Thus Moxon says, in speaking of the effects of impeded respiration during violent paroxysms of coughing, as in pertussis or emphysema, the cause of venous obstruction most frequently referred to, "When a person is in a seizure of either of the forms of protracted cough which I have mentioned, the evidences of venous obstruction and imperfect aeration of the blood become apparent, often painfully so, and yet cerebral disturbances but rarely show themselves. Twice only have I known persons affected with old bronchitis, and habitually almost cyanosed, to stagger and fall in the extreme height of their paroxysms of cough. Every one must have seen the veins rise on the forehead, and a dusky color suffuse the face of persons coughing violently, when meantime nothing noticeable happened to the comfort of the brain. . . . Also, I believe, that general experience will be with me in recalling how, in examples of tumors in the cervical region pressing on the jugular veins, and even involving and completely closing one of them, the comfort of the brain is surprisingly little invaded. One of the most intelligent and clear-headed patients I have seen had the neck enlarged so that shortly below the chin it exceeded the girth of the head and face, and these were livid with venous obstruction, yet she denied to my questions every sign of cerebral annoyance."

Another striking instance of this sort may be adduced. Athletes at the circus, namely, often hang with the head downwards during a long series of evolutions involving many muscular efforts, both delicate and powerful, in the course of which the chest walls must often be fixed, and the glottis closed, yet they show no sign of distress.

It is worth mentioning in this connection that Mosso, after his long experience as an experimenter, has recently declared himself convinced "that the amount of blood circulating in the brain may be materially increased without causing any disturbance of consequence in the cerebral functions."¹ He further goes on to say: "So far as the circulatory disturbances arising from *venous stasis* are concerned every one would be prepared to admit that their effect upon the nutrition of the brain might be but slight. It is, however, a matter of much greater significance—in view of the accepted theories as to the aetiology of cerebral symptoms and their relation to the circulation—to learn that even a very considerable degree of *arterial hyperæmia* of the brain may occur without disturbing the cerebral functions in the slightest degree. This fact is well illustrated by the experiment with nitrite of amyl, recorded in a previous chapter, where we saw the cerebral circulation become materially more rapid, the volume of the brain increase, and the arteries dilate without the subject of the experiment feeling anything wrong other than a sense of warmth in the face."

Mosso believes that the effects on the nutritive changes in the cerebral tissues of increased *quantity* of blood, due, as in the above-mentioned experiment, to dilatation of the vessels, are different from those of

increased *tension* of the blood, causing a more rapid circulation, and thinks that the latter condition is induced when the cerebral functions are called upon for increased activity. It is difficult to see how this increased tension or pressure could occur clinically unless as a result of the action of a hypertrophied and rapidly contracting heart, not forced to expend all its energy in driving its contents through a very narrow opening.

A striking case of this kind is analyzed by Moxon. The aortic valves were incompetent, but the heart was greatly hypertrophied and beating with great violence, apparently from a defect in its inhibitory innervation. The temporal arteries were tense and bent, and each heart-beat made them spring sharply. "Yet," he says, "this man said that his head was quite free from unpleasant sensations, and when I induced him to cough and otherwise to use strong pressure of his expiratory muscles so that the veins rose in his neck, the heart meantime beating still more strongly and quickly with his exertions, no ill effects occurred in the way of morbid sensations in the brain."

These various statements as to the slightness of the effects of the congestion of the healthy brain with healthy blood become the more striking when it is remembered that the action of even very moderate *diminution* of the amount of blood makes itself at once evident, showing that the reaction of the brain to real disturbances of nutrition of circulatory origin is quick and delicate. In the absence of any more direct means of appreciating the quantity of blood circulating in the brain and the relation of a possible excess to such symptoms as may be present, one naturally turns, first to the physiological or experimental, then to the *pathological* tests. The former we have just considered, the latter will now occupy our attention.

In stating the post-mortem appearances believed to indicate congestion of the brain, we will follow Moxon, though it is a matter with regard to which text-book repeats text-book with extraordinary exactness. Four such appearances are usually described:—

- (1.) A swollen state of the brain.
- (2.) Distention, tortuosity, and varicosity of the veins and capillaries, and dark color of the gray matter.
- (3.) L'état criblé.
- (4.) Minute collections of blood or hamatoidine about the capillaries.

With regard to the first sign, Moxon says that in the large number of autopsies which he has made he has never seen anything that could be called swelling of the brain (as evidenced by flattening of the convolution-) except in case of increase of the intraventricular fluid or of apoplectic bleeding, as of tumor. In so far as the swelling is an indication of the distention of the blood-vessels it will be subject to the remarks upon this condition, which is the one next to be considered.

It is remarkable that all the best modern teachers on pathological anatomy, as well as most of the writers of text-books upon cerebral diseases, lay great stress upon the difficulty of judging from the amount of blood found in the vessels of the brain and its membranes after death the amount which had been present during life. It is admitted on all sides that a dependent position of the head and respiratory obstruction during the act of dying may congest the veins to almost any extent. Furthermore, as Moxon—quoting Mr. Hilton—points out, if the cranium be opened before the jugular veins are cut, a brain may appear saturated with blood which would otherwise have looked rela-

¹ Ueber den Kreislauf des Blutes im menschlichen Gehirn, 1881, p. 207.

tively pale. Moxon's remarks on these points, and his use of kindred facts concerning the apparent congestion of other organs, as the liver and stomach, are highly instructive, but we have room for only one quotation:—

"Can we infer from the amount of blood in the brain after death the amount during life?"

Perhaps one could not find a more decisive answer to this question than the answer given by Kussmaul and Tenner.

These observers were investigating the effects of ligature of the cervical vessels, and it was most important for their purposes that they should be able to estimate the resulting anæmia of the brain by post-mortem examination. Their experiments were very numerous. They were testing the results of a simple mode of treatment of the brain: they had it in their power to place the bodies in any position they liked or in any circumstances of temperature, etc., and they knew accurately the conditions actually allowed. This is what they say as the result of their investigations:—

"We could never deduce any results from the post-mortem examinations undertaken with a view to determine the state of fullness before death of the most important parts of the vascular system, namely, the arteries and arterial capillaries, and even in the most favorable instances, when similar inquiries were directed towards the veins, our results could only be looked upon as approximate."

With regard to the signs of chronic or recurrent congestion—the presence of varicose and tortuous veins, the sieve-like appearance of the cut surface (*l'état criblé*), due to dilatation of the perivascular spaces, the presence of blood crystals, and the like, Moxon's criticisms seem to us equally pertinent. Real varicosity of veins, he says, he has never seen in a single one of the several thousand examinations which he has conducted. It cannot therefore be a very common condition. An appearance of temporary tortuosity and local overfilling is, to be sure, often enough observed, but its significance is neither greater nor less than that of the general overfilling which has just been commented upon. For the condition characterized by the sieve-like appearance of the cut surface (especially noticeable in the corpus striatum) Moxon offers an explanation which is at least as plausible as that commonly adopted, namely, that it is due to a shrinking of the brain as a result of degenerative changes, which may be natural (senile) or pathological, and which makes itself manifest in the neighborhood of the vessels for the same reason that it does so over the convexity, that is, because both are parts where the lymph can flow in to supply the place of the atrophied tissue.

As to the presence of hamatoidine and other signs of disease and rupture of capillary vessels, Moxon says that for years he was in the habit of cutting out a cubic inch of brain tissue from the neighborhood of the island of Reil in every brain which he examined and studying carefully the condition of the vessels in it, and that he found these changes to be far from uncommon, even in brains which there was every reason to consider normal. He refers them to such causes as slight injuries to the head, saying with justice that when a person over twenty-five years of age declares himself to be in good health his statement has only a relative value.

Large hemorrhages into the brain may destroy life, but small ones do not, and may, indeed, pass unno-

ticed, or cause temporary symptoms which are soon forgotten, though traces of the lesion that caused them remain behind.

To refer, then, slight lesions to past congestions is to make, in the present state of our knowledge, a gratuitous assumption, and one which would perhaps never have suggested itself had it not been that the admission of the clinical diagnosis seemed to require it. But, in fact, the clinical diagnosis is based upon the observation of *acute* symptoms, and in so far as without anatomical justification. If, as has been shown, acute congestion is impotent to provoke serious symptoms, its power to cause capillary hemorrhages, even if it exists, loses all clinical interest.

It is, in fact, quite true, as Moxon says, that if we read chapters on this subject in our best text-books we find that it "gathers groups of symptoms of a disease called 'congestion of the brain,' and collects signs of morbid anatomy of the disease so named, and this gathering of symptoms includes a sweeping together of all such things as are obscure, and associated with stupor, and have an acute course, and the collection of anatomical signs includes a sweeping up of all the marks of change in the texture and blood-vessels of the brain, however evidently chronic and ancient. And the collection of chronic and ancient changes stands there to the gathering of acute and obscure symptoms as the morbid anatomy of a definite and fatal disease, — congestion of the brain."

If, now, we examine more closely the *symptomatology* of the so-called congestion, we find (still following Moxon, who adopts the usual classification) four prominent forms described, namely: the convulsive or epileptiform, the apoplectiform, the febrile, and that characterized by delirium, and usually occurring in old persons. To these might be added the form described by Hammond and others, and characterized by cerebral exhaustion of greater or less degree.

With regard to the *two former*, for an account of which we would warmly recommend the reader to Moxon's analysis, we do not think it necessary to go into the differential diagnosis at length. Their names really contain all that is known about these conditions, and there is but little use in making out of them "an epilepsy which is not quite epilepsy, or sunstroke that is not quite sunstroke, and alcoholism which is now changed so that it is deserving to be called no longer alcoholism but congestion of the brain." As we really know almost nothing of the pathology of any of these states, it would seem to be an unnecessary piece of labor to attempt to divide them into pathologically different groups so long as the clinical distinctions are of secondary importance.

As to the *apoplectiform* variety, so good an observer as Trousseau is quoted as saying, "During the first years of my practice I saw a pretty large number of cases of apoplectiform congestion, but for a long time I have not seen any. Yet other medical men see as many as before. Let us therefore inquire on whose side the error lies."

With regard to the *febrile* form, if congestion be present, — for which view Moxon thinks there is not the slightest proof, — it is strange that the cold-water treatment, which contracts the vessels of the periphery and should therefore help to congest those of the brain, is often the one that gives the greatest relief. Of this he gives a striking instance in the case of a patient with rheumatic fever with cerebral symptoms, where

bleeding and other antiphlogistic treatment had previously been tried in vain.

The *fourth form*, that characterized by delirium. Moxon believes to be cerebral exhaustion due to degenerative (senile) changes, and probably associated with *impaired cerebral circulation*.

As for the variety with which Hammond's name is largely associated, and which often occurs as a chronic condition in persons well enough to go about the streets, and even to do more or less active business, his own arguments are so little marked by a spirit of scientific criticism that we feel justified in passing them by without comment. The mere fact that he claims that in persons suffering from these symptoms, which he has seen and cured by the hundred, the optic disk is often so congested as to deserve the name of "choked disk" or "congestion papilla," must throw a veil of discredit over his views in the minds of those accustomed to judge carefully of the value of ophthalmoscopic evidence.¹

"Choked disk" is now well recognized to indicate nothing more nor less than neuritis, and although neuritis may of course come and come and go without seriously interfering with sight, no reliable ophthalmoscopist of the present day would venture to refer it to simple increase of the cerebral circulation. Even if we grant that healthy intellectual activity increases the flow of blood to the brain, and that during sleep the brain is anemic (and the latter doctrine is probably not correct in the sense that cerebral anemia is necessary to or the cause of sleep), it is a bold leap to the conclusion that hyperemia attends excitement and wakefulness, to say nothing of its being the factor primarily responsible for these or similar states.

In like manner, to conclude from a "venous hyperemia" of the retina (ordinarily impossible to diagnose without familiarity with the usual appearance of the individual retina), or from a pinkish tympanic membrane, that the brain is surcharged with arterial blood, is, in the present state of our knowledge, an unwarrantable step.

Moxon concludes this part of his subject as follows: "I have thus far endeavored to establish these propositions: *First*, that atmospheric pressure so great as to force blood into the vessels of the brain more thoroughly than could be done by any intrinsic forces of the circulation does not produce cerebral symptoms. *Second*, that strangulation and carbonic-acid poisoning lend no support to a supposition of independent congestion of the brain. *Third*, that morbid anatomy is unable to show any evidence of general overfilling of the blood-vessels of the brain. *Fourth*, that in the diseases described as congestion of the brain clinical evidence of overfilling of the cerebral vessels is utterly wanting, and that the state of the circulation present in these disorders can be shown in typical instances to be the reverse of an overfullness. From all this it follows that there is no pathological justification for our setting up congestion of the brain as a distinct kind of disease, nor for our attempting to explain cerebral symptoms by the assumption of congestion of the

brain. For the forcing of blood into the brain while the blood is good and properly aerated, and is within its vessels, affects only favorably the functions of the brain as far as our evidence goes."

We regret not to have space to speak of Moxon's views as to the anatomical arrangements of the circulation in the brain, — though indeed they call for expert criticism, — but will refer briefly to his examination of the doctrine which regards *anæmia of the brain*, due to arterial spasm, as the cause of *epileptic paroxysms*. It is well known that this doctrine, in spite of the many arguments which have since then been adduced in its favor, is based essentially on the celebrated experiments of Kussmaul and Tenner, who found that ligation of the cervical vessels, if sudden and complete, is capable of exciting convulsion in certain animals.

These last words, "if sudden and complete," contain the key of Moxon's criticism. For he shows reason to believe that such contraction of arteries as is brought about through the agency of the vaso motor nerves is neither so complete as Kussmaul and Tenner found to be necessary in their experiments, nor nearly rapid enough to account for those epileptic attacks which come on like a flash, causing the patient to fall as if struck down by a blow, it may be into the fire or the water. On the contrary, such a vaso-motor contraction requires five to ten seconds for its development.

A more probable cause of the convulsions Moxon finds in cessation of the heart's action, which both he and others have observed to usher in the epileptic seizure.

Reports of Societies.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

FEBRUARY 12, 1881. DR. HOSMER read a paper on

TONIC SPASM OF THE INTERNAL OS,

which will be found on page 368 of this number of the JOURNAL.

Dr. Hosmer stated that in the first paper he had made reference to Bandl, who first reported excessive elongation of the cervix originating primarily in some pelvic deformity, one lip being caught between the head and the pelvis. In McDonald's case there was no relation of the condition to pelvic deformity.

Dr. RICHARDSON asked why pelvic deformity should be thrown out of McDonald's case, stating that it was difficult to detect a slight deformity.

Dr. HOSMER said that they were not, as Duncan's cases were, those of excessive elongation of the cervix without spasm of the internal os, and which were delivered without difficulty.

Dr. BLAKE questioned whether these were cases of pure spasm or to some extent the result of inflammatory action, such as might result from the combination of pressure and deformity.

Dr. SINCLAIR thought we had no more right to infer an inflammatory character in this than in other tetanic states of the uterus which do not yield.

Dr. RICHARDSON said that in Bandl's cases no local lesions were found, the only pathological condition noticed being that in many of the cases rupture of the uterus had taken place at the line of the constriction

¹ "Ophthalmoscopic examination shows the arteries of the retina to be increased in size and tortuosity, and vessels which in health are not visible are now clearly perceived. The optic disk is often more or less congested, exhibiting the appearances to which Allbutt has applied the name 'congestion papilla,' but which is perhaps more generally known as 'choked disk.' The tint of the choroid is deeper than it is when in a normal condition." (Cerebral Hyperemia, Hammond, 1878, page 40.)

from attenuation, aided, or perhaps induced, by the hand or attempts to introduce the forceps.

PRIMITIVE CANCER OF THE VAGINA.

The paper was read by DR. CURTIS, and will soon be published in the JOURNAL.

DR. LYMAN referred to a case of this disease reported by him at a previous meeting.

DR. BIXBY reported a case of primitive cancer of the vagina.

This was in the person of a lady in high life, a multipara aged fifty. The growth, the size of a half-dollar piece, was discovered a year previous. The local suffering was insignificant, but the general health was profoundly affected. The ulcer was confined to the mucous membrane, quite movable, and easily and apparently completely removed, leaving a clean wound, which was brought together with silver sutures. In the course of ten days the parts were firmly united, but there was no improvement in the general health. Three months later the disease reappeared in the cicatrix, infiltration of the vaginal wall and perimetrium soon followed, and the case terminated fatally six months after the operation. In another case Dr. Bixby would use the cauterizer instead of the knife.

DR. CURTIS remarked that in this case the progress was very rapid, the woman being confined to the house not over a month.

DR. SINCLAIR stated that on the other hand sessile polypoid growths from the vagina have not returned even when, as in a case in this city, they have been pronounced malignant by a gynecologist.

MASSACHUSETTS MEDICAL SOCIETY; COUNCILLORS' MEETING.

OCTOBER 5, 1881. The stated meeting of the Councillors was held at the Medical Library Hall at eleven A. M., October 5th, the President, DR. WILLIAMS, in the chair.

After the transaction of the usual routine business — the selection of delegates to the meetings of the New York and Vermont Medical Societies, the remission of certain assessment dues, and the direction to the treasurer to collect other dues by legal process — the Councillors listened to the report of a joint special committee appointed at the annual meeting "to consider the relative rights of the Council and Society to originate amendments to the by-laws," and to report "whether it is desirable to formulate a new code of by-laws." The report declared that "it is not necessary to formulate a new code of by-laws, it having been ascertained from the records of the Council and Society that the last edition contains and includes all the by-laws that are now in force." The committee recommended, with reference to the other matter before them, that the following be adopted as an amendment to the present rule governing such actions: "In all changes of the by-laws, requiring, as they do, a concurrent vote of the Councillors and Society, the action of the Councillors shall precede that of the Society; but it shall be competent for a Fellow at any meeting of the Society to propose any alteration of any by-laws and the said proposition shall at once be referred to the Councillors, and, in case of its adoption by the Councillors, it shall be submitted again to the Society for final action."

The presentation of this report initiated an animated discussion.

DR. HODGSON said the committee's plan proposed to substitute a clumsy method for accomplishing that which under the present rules was easy and plain. He saw no reason for any change.

DR. S. CABOT said that the only change proposed appeared to him to be that in amending by-laws the action of the Councillors should precede that of the Society, and he thought the committee might have said so in simple terms.

DR. G. C. SHATTUCK suggested that as doubt seemed to exist in some minds as to the questions presented in the committee's report, it would be proper to re-commit the subject if the Council were not ready to accept the proposition recommended.

DR. H. I. BOWDITCH said that by twenty years' usage the Councillors had assumed the right to originate action touching the by-laws, and as a member of the committee he had insisted on that part of the proposed amendment which permitted a Fellow at any meeting of the Society to offer an amendment.

DR. HODGSON claimed that the Society's charter gave the right to the Society to originate amendments and nowhere prohibited it. The effect (though, perhaps, not the intent) of the committee's proposition would be to postpone for a whole year the presentation of any measure for the admission of women to the Society; therefore he opposed the adoption of the report.

DR. G. C. SHATTUCK reminded the meeting that the Council was essentially a representative committee of the whole Society, designed to facilitate the Society's business and administration; and just as in other similar associations or assemblies, measures are first considered and reported upon by committees, so here the fairer way in disposing of business would be that the Council, the smaller body, should initiate action.

The president stated that for nearly forty years the rule that the Councillors should act first upon amendments to by-laws had been departed from on one occasion only, and then, as the record said, "amid great confusion." The committee's proposition was in effect simply a confirmation of this usage, establishing a convenient method of procedure.

DR. FRANCIS was well aware of the custom alluded to, but he condemned it as discriminating against the Councillors who resided at a distance from Boston, the place of meeting, and who really represented, in his opinion, the sentiment of the Society better than the Councillors of Suffolk district.

Finally, upon motion of DR. MORRILL WYMAN, the Council voted almost unanimously to indefinitely postpone the whole matter.

DR. H. I. BOWDITCH moved that a committee be appointed to obtain legal advice upon the question whether the censors of the Society could, in conformity with the charter, examine women as to their qualification to practice medicine, and, if such women were found to be qualified, to give them a diploma or certificate to that effect, without, however, admitting them to be members of the Massachusetts Medical Society.

The president explained that the charter explicitly declared that candidates who passed the examination of the censors became by that fact Fellows of the Society.

DR. BOWDITCH argued that the present policy of the Society was to drive women-physicians into quackery or to study medicine at small medical schools or

beyond the sea. He proposed his plan as a compromise measure whereby the community should know who are educated women and who are not; he would have the censors examine all candidates without regard to sex and certify concerning their qualifications. The power granted by the charter to the censors to admit candidates to fellowship certainly implied the lesser power to examine candidates and to give them a certificate of proficiency.

DR. LYMAN asked Dr. Bowditch to point out in the charter any clause which permitted the action which he proposed. As a matter of fact, there was no such half-way stage at which women physicians could stop; the censors must either make them, under the charter, members of the Society, or must reject them from membership.

DR. SHATTUCK was opposed to the motion to apply for legal advice, both because it is costly and because it is partisan and unsatisfactory. The only final method of securing the legal determination of the question involved is by a suit brought before the highest court. Anything short of this was simply assaulting the bulwarks; it did not meet the main issue.

DR. HODGSON deprecated expending any more money for legal opinions.

The question upon the adoption of Dr. Bowditch's motion being put, it was lost by a unanimous vote.

The corresponding secretary, DR. SWAN, read letters from Drs. Sampson Gamgee, and William Bowman, of London, accepting the honorary membership to which they had been elected.

THE NEW YORK ACADEMY OF MEDICINE.

THE RECENT PROGRESS OF PERITONEAL SURGERY: DOES IT LEAD TO A BETTER TREATMENT OF GUN- SHOT AND OTHER WOUNDS OF THE ABDOMINAL CAVITY.

At a stated meeting of the Academy, held October 6th, Dr. J. Marion Sims read a paper on the above subject. After alluding to the wonderful advances that had been made in this department of surgery during the past few years, especially as set forth in the papers and discussions at the recent International Medical Congress in London, he took up a number of the most important points and methods of procedure adopted by the best authorities in abdominal surgery, and dwelt particularly on the subject of drainage. Listerism and drainage, he said, were intimately associated, and had had their rise almost simultaneously; but in the brilliant achievements of Professor Lister the no less useful labors of Chassaignac, the originator of modern surgical drainage, had been to a great extent lost sight of. In all amputations, particularly, drainage was of the most vital importance, and if in any case he personally had to choose between Listerism and drainage he would undoubtedly select the latter, with a view to the best chances for the patient. If drainage was of so much importance in general surgery, then, why should it not be more frequently resorted to in abdominal surgery? It had been conclusively demonstrated that there was no great danger in introducing a glass tube into the peritoneal cavity. Yet Spencer Wells had discarded the use of the drainage tube entirely, on the theory that Listerism renders the peritoneal fluids entirely aseptic, and that their absorption is not, there-

fore, attended with danger. Dr. Sims feared, however, that this was not in reality the fact, and, in support of his position, mentioned a case in which he had himself seen Wells operate. It was a very bad one, with numerous and firm adhesions, and when the external wound was closed there was still some oozing. For thirty-six hours (as frequently occurred in such instances) the patient did perfectly well, but at the end of that time she began to grow rapidly worse, and her life was saved only with the greatest difficulty. There was seen to be some bloody oozing from the lower end of the wound, and, in consequence, Mr. Wells removed some of the sutures and thoroughly washed out the cavity, when the patient began to improve again, and finally made a good recovery. One unfortunate feature of drainage in ovariectomy was the tendency which it had to result ultimately in ventral hernia, and the prevention of this was an important problem that was yet to be worked out. Still, he believed it was better to risk the chance of ventral hernia than that the patient's life should be sacrificed for fear of its occurrence. In connection with the subject of ovariectomy he stated that the use of the clamp had now been given up by all the great operators in England, and remarked that the clamp and Listerism were antagonistic.

Dr. Sims then went on to speak of the other important operations which have grown out of that of ovariectomy. The first mentioned was extirpation of the uterus, which, he said, had first been successfully performed in this country by Kimball, of Lowell, and the late Dr. John T. Darby, formerly of South Carolina, but at the time of his death professor of surgery in the University of New York, and gave a detailed description of the method of Péan, who had met with the greatest number of successes. In his hands the operation was a very tedious one, as the peculiarity of his plan was the removing of the uterine tumor piecemeal, namely, by dissecting out successive segments of the mass, which had first been secured by a parallelogram of constricting wires. Finally, he made a pedicle of the cervix and broad ligaments. He also mentioned some modifications of Péan's method, which rendered it much less tedious, and stated that the late Dr. Wright, of Cincinnati, had met with greater success in the operation than any other American surgeon.

Dr. Sims spoke for some time of the extirpation of the kidney, as first practiced by Simon, and the later operation by abdominal section, which had now been done six times, and was first performed by Martin, of Berlin. He believed that there was a future for the last-named operation in the case of floating kidney, while the lumbar section was more available when the organ was fixed. Lawson Tait, whom he regarded as the most daring and successful operator in abdominal surgery of the present generation, had performed no less than six operations for pyo-nephritis, and they had all proved successful. He then described a case of dropsy of the gall-bladder in which he had himself operated, where the operation was performed with perfect success, but the patient had afterwards died from septicæmia in consequence of the procedure having been too long delayed. In a similar case, under the hands of Lawson Tait, the patient had made a good recovery, and the same surgeon had operated six times successfully in hydatids of the liver, the drainage-tube in these cases bearing an important part in the accomplishment of the good result. Wounds of the bladder, whether from a knife, a bayonet, or the horns of

a bull, could also be successfully treated by means of sutures and appropriate drainage.

Dr. Sims next took up the subject of Battey's operation, which he dwelt upon for some time. The fame of Battey, he said, would endure, because the procedure had now won for itself an established position in surgery. Its victory had been easier than that of ovariectomy, for the reason that the one was simply a corollary of the other. Its success was plainly indicated by the fact that Lawson Tait had already performed the operation seventy times. Twenty-six of these operations had been in cases of uterine myomata, and in this number five patients died. Of course, it was not to be undertaken in such cases unless there was serious danger to life. The operation had become perfectly legitimate in England, and Thomas Sawyer had performed it thirty times without a death. Battey had always insisted that every particle of the stroma of the ovary should be removed, but Tait went still further, and included the Fallopian tubes in the parts excised. Dr. Sims claimed that the difficulties of the operation were very materially diminished by the aid of his uterine retractor, by means of which the ovaries could be rendered much more accessible to the surgeon.

After alluding to the triumphs of gastrotomy and Billroth's excision of the pylorus, he remarked that the Cæsarean section was going out of vogue, and said that the want of success in the operation had been undoubtedly due (as any one reading the literature of the subject could see at a glance) to the entire absence of every precaution to prevent sepsis in the various cases reported. With the light that science now sheds on the subject, there was no reason why the skill of modern surgery should not give this old operation a well established position.

Then alluding briefly to the results obtained by Porro's operation, laparotomy, and lumbar colotomy, he took up the subject of Fallopian pregnancy. One of the deputy coroners of New York, in the course of his professional duties, had met with no less than seven cases of this during the past ten years. Some years ago he had seen a case with Dr. Henry D. Nicoll in which he did not doubt that the patient's life might have been saved if prompt interference had been made. When Dr. Nicoll was called in, soon after the rupture of the cyst, he recognized the condition of affairs, and correctly diagnosed the limited accumulation of blood that could be detected from the rectum, but when he himself arrived the blood had accumulated to such an extent in the pelvic cavity that the diagnosis was not so evident. Under the circumstances he hesitated to open the abdomen and secure the bleeding parts, and so the golden moment was lost, and the woman died of death. In a similar case now he would not hesitate for an instant to operate.

With the exception of the operation of ovariectomy all the great advances in peritoneal surgery had been made within the last ten years, but its principles and practice were already so fully recognized that the path was open to even more brilliant results in the future. In 1872 Dr. Sims published a paper in which he showed that after injuries and operations involving the peritoneal cavity septicæmia, and not peritonitis, was the usual cause of death. Some years since, while sojourning at Cooper's Well, the waters of which were so efficient in the treatment of the chronic diarrhoea which is so frequent and fatal in the South, he had

seen a number of patients suffering from this affection perish from perforation of the intestines, and he had found that they died from septicæmia and shock, and not from peritonitis. He then alluded to the well-known cases of Albert Richardson and James Fiske, in New York, both of whom perished from gun-shot wounds of the abdomen, and both of whom, he thought, might possibly have been saved if the peritoneal cavity had been opened by the surgeons in attendance. In the former case, although the liver, stomach, and ileum were injured, the patient lived for eight days, and after death thirty-two ounces of bloody serum were found in the abdomen. In the case of Fiske, the pistol-ball entered the body six inches above the umbilicus, and caused two perforations of the ileum, which he thought might have been reached and sutured, but he died of shock and septicæmia, and at the autopsy from four to six ounces of bloody serum were found in the abdominal cavity. Wounds of the peritonæum, however made, had a common course to run, and were all amenable to the same treatment. Peritonitis was the exception, rather than the rule, in such cases, and even if it did complicate a septicæmic case, it need make no difference whatever in the treatment pursued. This was plainly recognized in ovariectomy, but there was no reason why the triumphs achieved in consequence of this knowledge should be confined to a special branch of abdominal surgery. In every case of injury involving the peritonæum it was plainly the duty of the surgeon to open the abdomen, clear out the peritoneal cavity, secure the bleeding vessels, and suture the lacerated parts. In illustration of the importance of the subject, Dr. Sims narrated the case of the late distinguished Dr. George McClellan, of Philadelphia, who perished from intestinal perforation in the prime of manhood, and whose valuable life, he thought, might undoubtedly have been saved if the principles he was now endeavoring to inculcate had been understood at the time.

When in charge of the Franco-American ambulance train in the French-Prussian war, Dr. Sims hoped to have an opportunity of putting his views in regard to the treatment of gun-shot wounds into practical effect, but circumstances had conspired to prevent this. At Sedan he saw more cases of wounds of the abdomen, all of which proved fatal from shock and septicæmia, and in all of which an effusion of reddish serum was found after death. It might be stated as a general rule that in gun-shot wounds of the abdomen situated above the brim of the pelvis, the natural tendency was towards a fatal issue, while if the injury was at a lower point, the reverse of this was true. In the cases seen by him and his first assistant, MacCormac, at Sedan, there were seven patients shot through the pelvis, all of whom recovered, while the seven shot through the abdomen, as just stated, all died. Four similar cases had been reported by Major Gardner, of the United States medical service, who was present at the meeting. The statistics of the Crimean war showed that ninety-two per cent. of all gun-shot wounds of the abdomen proved fatal, and it would be interesting to inquire whether, in the eight per cent. of patients who recovered, the injury was not located below the brim of the pelvis. The reason for the difference in the two classes of cases was, that in the pelvis there was a natural drainage, while if the wound was higher up the bloody serum accumulated in the peritoneal cavity, and septicæmia resulted because there was no out-

let for it. Dr. M. A. Pallen, now of this city, had seen some frightful cases of abdominal injury during the war get well, for the reason that the wounds were of such a character that sufficient drainage was afforded. Dr. Newell of New Brunswick, who was also present, had had a most remarkable case thirty-four years ago, and had treated it in such an admirable manner that the patient was alive to-day to tell of his escape. The external wound, which was made by a fowling-piece, was situated just below the sternum, and after free purgation the man passed no less than twenty-nine shot by the rectum. Not long afterwards three shot were found just under the skin in the left lumbar region, and on making a free incision in this locality Dr. Newell succeeded in removing quite a large mass of foreign matter, which consisted of the wadding of the charge and pieces of the patient's clothing. The distinguished Clement L. Vallandigham, of Ohio, had perished from the accidental discharge of a pistol in his own hands, which resulted in fatal internal hemorrhage, but he did not doubt that if the abdomen had been opened, and the lacerated vessels secured, his life might have been saved. He did, in fact, telegraph to the surgeons in charge to adopt the procedure, but his advice was disregarded. Hunter McGuire, the well-known surgeon of Richmond, had had an immense experience in gun-shot wounds of the abdomen during the late war, and he was happy to state that he was now an advocate of his views on this subject.

Dr. Sims then took up the consideration of the case of President Garfield, which had attracted such universal attention to the subject of abdominal wounds, and stated that as he had been subjected to considerable criticism in some quarters on account of the cable dispatch which he sent to the surgeons in Washington, it was principally in vindication of the position that he had then taken that he had engaged in the preparation of the present paper. As the President did not die within three days after the reception of the injury, however, he said he knew that the abdominal cavity had not been entered, and that there was a good chance of his recovery. But if there was undoubted evidence that the ball had traversed the peritoneal cavity, and if he had recovered from shock, it was the correct thing to open the cavity and secure the patient against septicæmia. "This I said at the time, and this I say now," continued Dr. Sims, "and I stand ready to defend my position with all the ability at my command." He then went on to say that, fortunately, in the President's case the ball did not penetrate the peritoneal cavity, and this placed the case outside the present field of discussion entirely. The wound was a flesh and bone injury, and he had no criticisms whatever to make in regard to its management. When ninety-seven per cent. of cases of ovariectomy could be saved, he thought it was time that it should be understood that the same success could be obtained in gun-shot peritoneal wounds. It had been said that opportunity made the man, but the man must be prepared to seize the opportunity, and he was now eagerly on the watch for the man and the opportunity to demonstrate beyond a question the correctness of his position on this important subject.

The general conclusions of the paper were summed up as follows:—

(1.) Wounds of the peritoneal cavity, however produced, have to run a common course.

(2.) They have a common termination in death, and that death is by septicæmia.

(3.) This is the general law in deaths from ovariectomy.

(4.) This is the general law after gun-shot and other wounds of the abdomen.

(5.) The septicæmia is the result of the absorption of bloody serum remaining in the peritoneal cavity after wounds or operations.

(6.) In gun-shot wounds of the pelvic cavity the tendency is to recovery, on account of the natural drainage in this situation.

(7.) Gun-shot wounds of the abdominal cavity prove fatal from septicæmia, because there is no natural drainage, and the bloody serum poured out becomes absorbed.

(8.) In order to prevent this it is necessary to open the abdomen, clear out the peritoneal cavity, tie the bleeding vessels, suture the intestines or other tissues requiring it, and, possibly, insert a drainage tube.

(9.) If the operation is properly performed, it is rarely necessary to make use of a drainage tube.

Dr. Sayre being called upon by the chair to open the discussion when Dr. Sims concluded, remarked that it was, perhaps, the most able paper to which he had ever listened. The author of it had covered the whole ground, and there was but little left to be said upon the subject, but he could not refrain from endorsing Dr. Sims' position as to the vital importance of drainage. Why was it that patients recovered who received pelvic wounds? For the simple reason that they were through and through wounds, and an opportunity was thus afforded for successful drainage. If the wound of the President had only been a through and through one (as, indeed, it came in reality very near being), the history of the case would have been a different one from what it was. In the treatment of abdominal wounds there were two points that demanded special attention: first, accuracy of diagnosis, and second, proper procedures for the securing of drainage and the prevention of septicæmia.

Colonel McKee, of the United States Army medical service, related two cases which had occurred under his charge. The first was one of gun-shot wound of the abdomen, and was met with during the war. The patient one day, while at stool, passed the ball by the anus, and after that made an excellent recovery. In the second case, which occurred more recently, at Fort Whipple, Arizona, a man accidentally swallowed a piece of wire three inches long, and as after a time he felt it in the vicinity of the umbilicus, Dr. McKee cut down upon it and extracted it, thereby saving the patient's life.

Professor Mussey, of Cincinnati, then mentioned a case of remarkable recovery from abdominal injury caused by the horns of a bull. The patient, who was a woman, was gored twice, in each instance a gash five or six inches being made in the abdomen, and the intestines protruding to such an extent that she had to gather them up in her apron before going to the neighboring house.

Dr. Fordyce Barker, the president of the Academy, stated that the special aim of the paper was to show the importance of general surgeons availing themselves of the advances that had recently been made by gynecological surgeons, and called upon Professor James R. Wood to speak upon this subject.

Dr. Wood said that while he felt very grateful to Dr. Sims for his great paper, he believed that there were things in it which nobody else in the world would

dare to say, and he would therefore be loath to express an opinion indorsing all the points that had been maintained by the distinguished writer. In general surgery he considered it a very dangerous procedure to invade the abdomen unless an accurate diagnosis was possible in every case where it was attempted. He had now had a very extensive experience in regard to this subject, and he could not but confess that in his earlier days he had sometimes tried to find balls in the abdomen which he ought not to have looked for. He did not care to speak of the President's case; but he mentioned another somewhat similar one, in which the ball entered the left side and passed to the lumbar region of the opposite side, and the patient died from blood poisoning. At the autopsy the ball was found embedded in the glutei muscles. As to the bloody serum upon which so much stress had been laid, he was disposed to think that this was often a post-mortem phenomenon, and in many cases of autopsies after fatal septicemia he had failed to find it altogether. In wounds of the liver there was usually very free hemorrhage, and it would be impossible to control this, even if the abdomen were opened. In these cases the patients generally died within six or eight hours after the reception of the injury, and if the surgeon cut into the abdomen at all it had to be done before the patient had recovered from the shock. The chances were that death would take place while he was engaged in cleaning out the peritoneal cavity, and this would not be a very good thing for the operator's reputation. So, if in a case of laceration of the stomach the surgeon attempted to sew up the organ he would get into trouble, because, as a rule, such patients died of shock, and did not live long enough to get septicemia. In ovariectomy the case was very different, for there the surgeon could choose his own time for operating, and have his patient all prepared; but in abdominal wounds the trouble was that this terrible shock stared him constantly in the face. Dr. Wood was not willing that the gynecological surgeons should have all the glory, and finished his remarks by mentioning several cases of severe injury of the bladder and other organs in which the patients had recovered under his hands. He believed in drainage-tubes, he said, but not to the extent that Chassaignac did.

The discussion was also participated in by Major Gardner, of the United States Army medical service, and by Drs. Newell, of New Brunswick, N. J., Clinton Cushing, of San Francisco, Cal., and Leonard Weber, of New York.

Recent Literature.

A Treatise on the Continued Fevers. By JAMES C. WILSON, M. D., with an introduction by J. W. Da Costa, M. D. New York: William Wood & Co. 1881.

This book appears as a volume of Wood's Library of Standard Medical Authors. The diseases considered in its 360 pages under the head of Continued Fevers are: Simple Continued Fevers, Influenza, Cerebro Spinal, Enteric or Typhoid, Typhus, Relapsing Fevers, and Dengue. The variable and inconstant eruptions in the last named disease the writer does not regard as a sufficient reason for classifying it with the exanthemata.

The necessary retention of the old, but, as we all hope, provisional, title of this group of diseases is depicted in the preface.

Dr. Da Costa's introduction, covering a half dozen pages, is devoted to some remarks upon the management of fevers in general, remarks which are thoroughly sound though not an essential part of the book. This device of starting a younger man's book under the escort of an older man's introduction seems to be growing in favor with the parents and guardians of medical literature. In this connection it would not be amiss for them to bear in mind the old saying that good wine needs no bush.

The writer of the present volume states his object to have been the description of the diseases of which it treats with greater fullness than is usual in the textbooks, yet without the extreme elaboration that mars the usefulness of some of the special treatises. This object is attained quite well enough to make the book a useful addition to the working library of the busy practitioner, and to allow the book to stand upon its own merits.

In regard to typhoid fever, Dr. Wilson embraces unreservedly the theory that the fever-producing principle is an organized germ, a *contagium vivum*, and is disposed to reject the pythogenic or *de novo* origin of the disease. In the description of the spirilla of relapsing fever some reference to the investigations of Vandyke Carter and other recent observers would not have been amiss.

Manual for the Physiological Laboratory. By VINCENT HARRIS, M. D., and D'ARCY POWER, B. A. New York: William Wood & Co. 1881.

It has been the custom for some years at St. Bartholomew's Hospital to distribute short histological and chemical papers to the physiological students in order to facilitate their laboratory work. These papers have now been collected into a small manual and given to the public. A number of books of this character have been published, and no doubt serve a useful purpose as reference for those who are interested in microscopy, but have had no special laboratory training in the study of microscopic anatomy. This book seems to be carefully prepared, and is a fair sample of its class. Numerous blank pages are scattered throughout the book, which will be handy for notes and references.

Anatomical Studies Upon Brains of Criminals; a Contribution to Anthropology, Medicine, Jurisprudence, and Psychology. By PROFESSOR MORITZ BENEDIKT. Translated from the German by E. P. Fowler, M. D., New York: William Wood & Co. 1881.

Professor Benedikt describes the brains of twenty-two convicted criminals as studied by him post mortem. Many of the descriptions are accompanied by rather coarse wood cuts illustrating the peculiarities and deficiencies described. Professor Benedikt finds almost invariably deficient gyrus development and a consequent excess of fissures, both of them fundamental defects in cerebral constitution; in a large proportion of the cases examined the cerebellum was incompletely covered by the occipital lobes of the cerebrum.

Dr. Benedikt's observations are too few to base any positive laws upon. Moreover he was forced to pursue his study in parts of the Austrian Empire where there is no fixed race type. His observations, however, as far as they go, are very suggestive and point to a source of fruitful investigation in a not remote future.

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SANITARY SCIENCE JUSTIFIED BY ITS WORKS.

THOSE State legislatures and town governments which have not yet established boards of health, those which may be hesitating whether such notions pay, and certainly those politicians who may have persuaded themselves that a curtailment of the efficiency of such organizations already established, under the excuse of a little pretended economy, will in the long run be approved by the people at large, all such would do well to devote some study to the recent report of the Local Government Board, which contains, among other things, a statement of the progress of sanitary work in England and Wales. We have seen nothing of late more strikingly illustrative of the practical value of sanitary work when carried out under favorable auspices, and it offers precisely that kind of hard arithmetical testimony by which the politician who finds it ordinarily for his advantage to pose as a watchdog of the treasury may easily justify to his constituents the comparatively modest outlay of money which the suggestion and supervision of sanitary work demands of the State or the town. In fact the results are so positive, and the mere money returns are so readily deducible therefrom, that we believe the average constituent, who had not entirely neglected to secure the advantages of our common school education, would not only feel the expense justified but imperatively demanded were the figures once brought to his notice. We make the following extract from the report in question:—

"Before concluding the part of our report which relates to sanitary administration, it may be useful to draw attention to the annual death-rate for some years past as indicating the effect which recent sanitary measures would appear to have had upon the public health.

"The following table shows the death-rate for each of the four last decennial periods:—

ENGLAND AND WALES.

Annual death-rate per 1000.	1841-50.	1851-60.	1861-70.	1871-80.
All causes	22.4	22.2	22.5	21.5
Seven zymotic diseases	—	4.11	4.14	3.36
Fever	—	0.91	0.88	0.49

"From the above figures it will be seen that, speaking generally, the death-rate of the country remained stationary from 1840 to 1870, but that in the period 1871-80 it fell from 22.5 (of the previous decade) to 21.5, a reduction equivalent to nearly four and one half per cent. It may, therefore, be roughly estimated that about a quarter of a million of persons were saved from death in the ten years, 1871-80, who would have died if the death-rate had been the same as in the previous thirty years. If twelve cases of serious but non-fatal illness be reckoned for

every death, it follows that about three million persons, or over one ninth of the whole population, have been saved from a sick bed by some influences at work in the past decade which had not been in operation previously. The case, indeed, is still stronger than this. The death-rate of rural districts is habitually lower than that of urban districts; and as the population is steadily concentrating itself more and more into the towns, the death-rate of the whole country would tend to increase, if the other circumstances affecting it remained the same. When we find that this tendency has been so much more than merely counteracted, it becomes interesting to see where the gain has been, and to endeavor to trace some of the causes to which it may be due.

"Comparing, then, 1861-70 with 1871-80, it will be seen from the foregoing figures, that of the entire reduction of 1.0 in the death-rate, more than three quarters ($4.14-3.36=0.78$) comes under the head of "the seven zymotic diseases," of the diseases, that is, which are most influenced by sanitary improvements, and most amenable to control by the action of sanitary authorities. And of this three quarters, just half ($0.88-0.49=0.39$) or three eighths of the entire reduction, is in "fever," the disease which, more than any other, shows itself in connection with such faults of drainage, of water supply, and of filth accumulation, as it is within the province of good sanitary administration to remove.

"It is particularly significant that since the year 1870, when the fever death-rate was 0.80 per 1000, it has fallen pretty steadily, year by year, as follows, down to 0.32 in 1880:—

1871 . . . . .	.70	1876 . . . . .	.44
1872 . . . . .	.61	1877 . . . . .	.41
1873 . . . . .	.58	1878 . . . . .	.42
1874 . . . . .	.59	1879 . . . . .	.30
1875 . . . . .	.55	1880 . . . . .	.32

"Thus in the five years, 1871-75, the fever death-rate was 0.61; in the five years 1876-80 it was 0.38."

The Board in making this gratifying and honorable statement credits its efforts simply with the deaths and sickness avoided by the influences which have been quietly brought to bear largely through its agency. To some minds, however, escape from sickness, with a consequent increase of capacity for activity and happiness, appears only in its full beauty when placed upon a strictly cash basis. For the benefit of law makers and constituents of this class we repeat some of Mr. Edwin Chadwick's comments upon the above statement. Mr. Chadwick says:—

"During the decade from 1861 to 1870, there appeared to be no gain from the outlay on sanitary works or on sanitary service in England and Wales; but since then the service appears to have made an effective start, and the pecuniary gain may be thus stated: Under the inquiry as to interments, the cost of funerals—all round—was ascertained to be £5 pounds each. The gain under that head will, therefore, be about one million by the quarter of a million of funerals saved during the last decade. The direct cost of sickness has been estimated at about £1 per case. The gain under that head during the decade will therefore amount to about three millions; a gain, that is to say, of medical treatment and other expenses. But the gain to the wage classes, from the saving of lost labor, will have been far greater. Dr. James Watts, who has had great experience in friendly societies, states the average loss of working time at two and one half working weeks per member between twenty-one and seventy years of age, and he estimates the total loss to the wage classes, by the loss of work through sickness, at upwards of thirteen millions per annum. The gain derivable from sanitation may be further illustrated from its advance in military service. The first British army went out to the Crimea under the established curative or medical service, and it was lost. Sanitary Commissioners, trained in service under the first General Board of Health, were then sent out to reform the condition of hospitals and camp, and within three months reduced the sickness and mortality from a plague-rate down to an ordinary standard of health, and by the end of the summer of 1855 to a rate lower than that of the best hospitals at home; and the War Minister declared in Parliament that by the application of their science the second army had been saved. Since then, the Army Medical Department has applied extended sanitary operations. Their exercise under great difficulties is best shown in India. Formerly the death-rate in the Indian army was 69 per 1000 per annum. The aver-

age mortality from 1899 to 1878 was only 20.41. There was, therefore, a gain of 48.59 per 1000; or, on the present force out there, a gain of 2350 men. The death-rate of the army at home was formerly 18 per 1000. In the year 1879 it was 7.55, being a gain of 10.55 per 1000. As the strength of the army in 1879 was 80,700, the gain was 843 per annum. The total gain to the army in India and the army at home, and the rest of the army will be 3113 men, per annum. As each soldier is estimated at £100, this represents in money value £311,300, or more than a third of a million. It is not very easy to get at the real amount of the sickness; but the total gain, including the diminished death-rate, is considered to be underrated at half a million per annum. The deaths by steam explosions, in mines and on railways, amount to about five thousand annually, but the lives saved by the civil sanitary service in England and Wales are five-fold greater than the lives thus destroyed by civil accidental violence. A reduction of the death-rate by four and one half per cent. is only an instalment of sanitary progress. Thus, in the instance of Croydon, visited by the delegates of the Congress, the death-rate has been reduced from 25 to 16 per 1000, chiefly by the methods introduced by the first General Board of Health, by which spring supplies of pure water are carried into the houses, and the fouled water carried at once out of the houses and out of the town, by one Local Board authority, while all putrescible matter, instead of remaining for months and years in conditions of putrefaction, is undecomposed, and flows upon the land within two hours. So in Salisbury, Leamington, and a number of other places. At Croydon, it has been stated by Dr. Alfred Carpenter, that, by complete sanitation, the death-rate might be reduced to ten in a thousand. In the metropolis the death-rates amongst the wage classes in their common dwellings is upwards of thirty per thousand. In the model dwellings, in London, it is, however, about sixteen or seventeen, even with surrounding deteriorating conditions. On the demonstrations of various model instances, it may be held that the reduction of the general death-rate by one and one fourth per cent., as reported, satisfactory as this is, cannot be considered more than one third of the results obtainable by advanced sanitary administration and further sanitary works.

No science, no organization, and no individual can be subjected to a more searching test of efficiency than the character of the works it produces. Sanitary science, as exhibited in this statement of the Local Government Board, which is merely typical of work actually doing and work that may be done in many other parts of the world, is certainly justified of her children.

As he observes, the estimates given by Mr. Chadwick serve to show the money loss incurred by inattention to the continuance of preventible physical evils, but the pain and misery, and the social disorders, occasioned by excessive sickness and premature mortality are generally beyond pecuniary estimation. Hence, the civilized state of the present day cannot afford to have anything short of the most efficient attainable organization of its sanitary service, and any neglect to secure this, no matter from what motives, will be sure to revenge itself sooner rather than later. The more civilized the state the more imperative the demand upon it and the greater the responsibility incurred by its officers.

CHEAPNESS IN THE CARE OF THE PAUPER INSANE.

THE *Boston Daily Advertiser* of September 15th contains some facts with regard to the detention of insane people in almshouses which are well worth careful consideration while the spirit of "economy" is urging so many towns to return to the old method so long and successfully fought against in this State of treating the pauper insane and other paupers together. It seems that a man sixty years of age, who had been an inmate of the

New Bedford almshouse a number of years, being paralyzed on his left side, showed symptoms of insanity, so that it was necessary to confine him in the yard to prevent him from escaping, which he attempted several times. On one occasion being prevented from passing out by the doorkeeper he dealt him a severe blow upon the head with his cane, and presently made a second attempt, which was prevented by an officer, and his cane taken from him. The doorkeeper having charge at that time was seventy-five years of age, and was only occupying the position for a day or two, while the regular one was away. The offender next struck an inoffensive inmate a hard blow on the arm without the least provocation. One day as the boys stood in line preparatory to going to their breakfast, he struck one of them in the face so as to break the skin. The officer being present prevented any further trouble at that time. This was also without cause. He a second time attempted to escape, but was arrested by the doorkeeper and was found to have a stove-wrench secreted under his paralyzed arm and an old sheath-knife in his right hand. He was then placed in close confinement. About the same time an old man about eighty was standing in the doorway, when a "harmless" inmate discharged from the Taunton insane asylum eight years ago, but troublesome at times, came along and struck him an awful blow over the eye, which not only felled him to the floor, but across the door-step and hurt his back, from which he has not yet recovered, and perhaps never will. The blow was sufficient to break the skin on the eye. He next struck a man about seventy, but this time he found his match and was overpowered. He next made a pass at a boy, but the boy was too quick for him. He then struck one of those previously struck, and has since struck an idiotic inmate twice. The last time it was in the presence of an officer who had a plate of food in each hand, and was struck a stinging blow behind the ear. Within a few days of these occurrences, in the outskirts of Fall River, a man entered a blacksmith shop. On his ankles were a pair of shackles, to each of which were attached a few links of broken chain. The shackles were of iron, similar in shape to the iron thimbles used on the rigging of vessels. The ends of the shackles were joined by an iron bolt and screwed nut. The stranger uttered not a word and silently picked up a wrench with which he succeeded in taking off the bolt from one of the shackles, thus removing it from the ankle. He then attempted to take off the other shackle, but the bolt resisted his efforts, and throwing down the wrench, he went out without a word. He was afterwards picked up by the police, and proved to be one McAvoy, transferred to the Fall River almshouse from the Taunton asylum.

There could be no better illustration of the folly and inhumanity of the unwise and cruel treatment that is pretty certain to attend all efforts to treat the insane simply upon the basis of cheapness. A man apparently harmless under the restrictions of the life in an insane asylum may be and very often is, so different a person when placed entirely upon his own resources in ordinary life, or partly upon them in a charitable institu-

tion, that he becomes a dangerous, in place of a safe, member of the community in which he lives, and is treated with a degree of harshness commensurate with the fears of those by whom he is surrounded. If, as is required by Scotch law, all almshouses containing the incurable insane had entirely separate departments for them and were supervised by a competent lunacy commission, there could be no reasonable objection to that method of dealing with the quite harmless class. Every intelligent community, however, is naturally shocked at any attempt to treat men and women who are simply suffering from disease with more than the severity allotted to criminals, or to expose those who only have the misfortune to be poor to the violence and insane freaks of irresponsible lunatics.

MEDICAL NOTES.

NEW YORK.

—The various eminent lights of the profession having returned from abroad, and all the schools and societies having now resumed operations after the long vacation, the medical world in New York is once more full of life and activity. The College of Physicians and Surgeons, at which the introductory address was delivered by Prof. A. Jacobi, on the evening of October 3d, announces that the experiment, tried in 1880-81, of discontinuing the spring session and of lengthening the regular session of five months, attendance upon which is obligatory, to one of seven months, has resulted to the entire satisfaction of the faculty. The expectation that it would be for the advantage of the student to attend fewer didactic lectures a day, and thus have more time to devote to clinical study, laboratory work, and recitations, they say, has been completely filled, while the numbers of students in attendance and the material prosperity of the college have never been so great. Consequently the same plan will be pursued during the present season. Since his resignation Dr. T. Gaillard Thomas has been made emeritus professor of obstetrics and diseases of women and children, but during a portion of the session he will deliver a special course of lectures on uterine displacements.

—The first meeting of the County Medical Society this season was held on the 26th of September, when the nomination of officers for the ensuing year took place, and Dr. W. Gill Wylie read a paper on the causes of laceration of the cervix uteri.

—On Thursday evening, October 6th, the first meeting of the Academy of Medicine was held, and an immense audience, including a number of army surgeons and other distinguished visitors, assembled to listen to an elaborate paper by Dr. J. Marion Sims, entitled, *The Recent Progress of Peritoneal Surgery: Does it lead to a Better Treatment of Gun-Shot and other Wounds of the Abdominal Cavity.* A report of the proceedings on this occasion, which attracted more than usual attention, will be found on page 377 of this number of the JOURNAL.

—The Board of Health's statistics show that 28,567 persons died during the first nine months of the present year, or 4715 more than during the corresponding period of last year. The total number of deaths in 1880 was 31,866. The mortality for the last three months of the year was 8014, and if that for the last quarter of 1881 should be proportionately as great as in the first three quarters, the total number of deaths during the present year will be about 38,000, or 6000 more than in 1880. This would make the highest mortality yet recorded in the city, the next highest being in 1872, when there were 32,647 deaths. The high death-rate of that year was attributed to the prevalence of small-pox and the extreme heat of the summer.

—The Board of Health is pursuing its crusade against the fraudulent milk-dealers with great energy, and sometimes as much as two thousand quarts of condemned milk have been emptied into the street at once. In consequence of this "waste of milk," as they call it, as well as the long drought which has prevailed this year, the wholesale dealers say they will be obliged to raise the price of milk. The poor quality of much of the milk that comes to New York seems to be due to the fact that the cows in the vicinity of the city are fed to a greater or less extent on brewery grains, the use of which is said to be more extensive now than it has been for years. It is generally fed to the animals mixed with hay, oats, bran, and such articles, for if it were used exclusively the milk produced would yield no cream. Every day, it is stated, eight or ten car-loads of the stuff are sent away from the Harlem railroad depot consigned to farmers along the road. The milk produced from such materials cannot be good, and it is time that the Board of Health should adopt measures to prevent the practice.

—During the past summer 11,220 women and sick children were received at the parish sanitarium, which was kept open until the 1st of October.

—The death is announced, in his seventy-second year, of Dr. James P. White, first vice-president of the American Medical Association, and president of the medical department of the University of Buffalo, of which he was one of the founders. For many years he was professor of obstetrics in that institution, and his career was in every respect a most successful one.

PHILADELPHIA.

—The introductory lecture to the one hundred and sixteenth course of lectures in the Medical Department and to the fourth course in the Dental Department of the University of Pennsylvania was delivered by Dr. D. Hayes Agnew, J. Rhea Barton Professor of Surgery and of Clinical Surgery.

—At Jefferson College the general introductory for the fifty-seventh annual course of lectures was delivered by Professor Robert E. Rodgers, for Professor William H. Pancoast, who was prevented by a death in his family. His eldest son died of typhoid fever at Long Branch.

Miscellany.

ERASMUS DARWIN MILLER.

MR. EDITOR, — The Dorchester Medical Club cannot let pass the death of their friend and comrade, Dr. Miller, with a mere word of lament; and wishing that the profession may know more of him than his own love of quiet would ever have made known, the Club transmits this notice to the JOURNAL at the first opportunity.

Erasmus Darwin Miller was the youngest son of Dr. Nathaniel and Hannah (Boyd) Miller, of Franklin, in this State, and was born August 7, 1813. His father was one of those characters in his day and generation which a uniform education has banished from the present. He was the surgeon of Norfolk and Bristol Counties. He used, when business was dull, to drive from town to town, calling on the doctor in each place and asking there if there were any surgical cases in which he wanted "counsel;" if one were forthcoming, and one generally was, the doctor was ready at a moment's notice to cut for stone, tie an artery, or dissect a tumor from the neck. He had the degree of A. M. from Bowdoin College in 1814, and of M. D. in 1817 from both Brunswick and Cambridge; he was vice-president of the Massachusetts Medical Society. His surgical fame drew so many patients to Franklin that he had to put up a large house for a hospital. He specially prided himself on detecting "deep-seated matter," and published a treatise on the subject; his colleague was Dr. Leprellette, a French surgeon who left France during the reign of Napoleon I., and for this friend Dr. Nathaniel Miller's oldest son was named. Lewis Leprellette Miller became the well-known surgeon of Providence, and was for many years President of the Rhode Island Medical Society. Mrs. Nathaniel Miller was another of the characters of the time, whom old Dr. Emmons used to call "one of the three best women in town," — the strength of her affection for her sons being only equaled by that of her nerves. When one of them was expected home she had been seen standing at the door for hours — her cap-strings flying in the wind — watching for him. She made Leprellette remove a large cancerous growth from her breast, declining to submit to any other knife than his. She had been known, when her husband was away, to conduct operations of no small importance herself rather than keep the patient unrelieved till the doctors returned from their long drives. These particulars have been dwelt on to show the stock of which our friend came.

Dr. E. D. Miller was fitted for college at Day's Academy, in Wrentham, where he received a medal, which he maintained was bestowed to please his parents, and not from any merit of his. In 1828 he entered Brown University, where he was a great favorite, and bore the sobriquet of "the little doctor." Graduating in 1832, he studied medicine for a time with his father, attended lectures at Bowdoin, was at Pittsfield with the elder Dr. Child, taking his degree of M. D. at Brunswick in 1835, and returning to the home-stead in Franklin, where he had the advantage of his father's hospital for the perfection of his surgical studies. After practicing for a time in Franklin he married Miss Louise Clarke, daughter of the Hon. Truman Clarke, of Walspole, and established himself in Worcester for

a few months, after which he returned to Franklin, becoming a member of the Massachusetts Medical Society in 1838. In 1843 he removed to Dorchester, against the strongest counsels of his father, and upon the urgent advice of his life-long friend, the Hon. Marshall P. Wilder, who survives him at the age of eighty-three. He was soon finally settled in business in Dorchester, and having gained a special reputation for the successful practice of obstetrics early turned his attention to gynecology. It was not long before his office hours were fully occupied with patients seeking his advice in this specialty. He had a very large midwifery practice of the best kind in Dorchester and the adjoining towns, covering a great extent of territory; and although we hear of single practitioners attending two or three hundred labors in a year, — till we cannot understand when they sleep, or eat, or think, — Dr. Miller used to say that the largest number of confinements he conducted in one year was eighty-three. To most of us this conveys the notion of very hard work indeed; and when one adds to this a wide general practice and an exacting specialty, we wonder that Dr. Miller kept his health as long as he did.

We remember with admiration his consultations in midwifery; his confidence, his quickness in diagnosis, the abundance and readiness of his resources, and his indomitable courage; these qualities were doubly welcome when coupled with the cheerfulness and swift ness of his response to our call for aid.

Dr. Miller's abilities as a surgeon were less known to us, because of late years little of surgery is seen outside the hospitals; his insight into disease, mechanical tact, and sound judgment served him here as everywhere, and his surgical training was admirably adapted to secure excellence and success in his chosen work.

As a gynecologist he was less known than he deserved, because he had an unconquerable aversion to writing. The rules of our club, requiring once a year from each member some kind of written contribution, forced him to give us a paper now and then; what he wrote always taught some practical lesson in general practice, obstetrics, or gynecology, particularly the latter branches, and was made as short as possible. In the discussions his knowledge and great experience was largely drawn on for our instruction and entertainment. In 1867 he read to us, and afterwards to the Norfolk District Society, a paper on the Treatment of Endometritis by Uterine Scarification; this was published in the JOURNAL of March 21, 1867, with a cut of the modification of Lallemand's urethrotome which he devised, and which had long been known to his neighbors in consultation and conversation. This article was widely copied in the medical journals, and was noted by Dr. T. G. Thomas in his Centennial Memoir of American Gynecology. Had he chosen to write out the cases which he reported to our Club, with his comments, many additions would have been made to our medical literature of solid practical worth, and his reputation as a thinker and operator more widely spread. He was conservative, not going to extremes, nor taking up new schemes and operations because they were fresh. He had great method in conducting his business, which helped him to go through his great amount of work. Every morning at half past seven he drove out of his stable, and allowing three patients and eight miles of road to the hour, was always at home at a specified time, or was

to be found at certain given points. In 1851, when cholera prevailed, he passed a whole night in driving from one patient to another, only arriving at home to find a fresh message; he used to say he never heard of another doctor doing this.

Five years ago he began to contract his business, having suffered from supra-orbital neuralgia and sleeplessness, and excepting attendance upon the daughters of a few old friends withdrew altogether from obstetric practice. He would now and then attend an old patient, stipulating that he would make the engagement if he might set the day of labor, at full term, and induce it. Such a patient must be known to him by former confinements. He would arrive in the evening, pass a gum catheter between the membranes and the uterine walls, coil the free end in the vagina, and go to bed, to be called in a few hours to complete the labor. Such was his judgment in selecting cases, his strong confidence in himself, and his good fortune, that he was always successful when others would surely have fallen into trouble while thus giving a jog to waiting nature.

Sleeplessness was added to his neuralgic symptoms, and tired of tossing in a wakeful bed, wishing in vain for a call from some patient to occupy the hours, he would rise, have a horse harnessed, and drive twenty-five miles to Franklin, where he had a large cranberry meadow on which he had expended more than \$50,000 for flogage and other purposes, and from which he used to gather annually a large crop of cranberries. Two years ago he began to be troubled with pains which he called rheumatic, and which culminated in severe illness in 1880. Convalescence was greatly aided by a sojourn at Sharon Springs, and he returned home much refreshed, and attended somewhat to business. In the latter part of last June he went again to Sharon Springs, saying that as the first visit was for health this should be for enjoyment. On Saturday afternoon, the 2d of July, when he never felt or looked better, while chatting with friends in the shade, he was told of the President's assassination. He walked about awhile, and after retiring to his room said that the news had depressed him, and while talking about the crime he became powerless to walk; his mind was perfectly clear for three hours, and he said he knew he had paralysis. After vomiting a few times he became unconscious, and remained so till his death on Tuesday, the 5th. It had been suggested to him by one of our number that a stethoscopic exploration of the heart was advisable, but he rather evaded the examination. There was no autopsy, but cerebral hemorrhage was considered to be the cause of his death. His widow survives him, with a married daughter and two sons, one of whom, Dr. Winthrop Miller, practices medicine in Minneapolis.

Dr. Miller's personal appearance was striking. Of slender make and medium height, dressed with scrupulous nicety, his long, snow-white hair and beard, and full, keen blue eyes, made a figure not soon forgotten. A quick sense of the ludicrous, the shrewdest knowledge of human nature, a power of rapid observation, strong common sense, an unusual ability to adapt himself to any society in which he might find himself, rather than wide reading or scientific research, made him rare good company. Add to these traits the store of learning and fact gathered in forty-five years of his own practice and the home education in a professional atmosphere, and those who did not know him may

judge how much the Dorchester Medical Club will miss Dr. Miller.

Always having had a respect for religion, he joined the Second Parish Church of Dorchester in 1878. Into that church, filled with mourning friends, on the 8th of July, 1881, he was borne by the hands of members of this Club. The same hands lowered him into his grave. No one of us will have better earned his rest.

S.

A LETTER FROM KANE, A NEW MOUNTAIN RESORT IN PENNSYLVANIA.

MR. EDITOR, — The few but memorable superheated days at the beginning of September again brought forcibly before the attention the rival claims of seashore and the mountains as places of refuge, and your correspondent, strongly reminded of the quandary of Lucifer, so graphically portrayed by Milton, decided to fly to the mountains, the prospect of 100° in the shade at Long Branch with a land breeze having settled the question in favor of the highlands. Having converted the decision into action, he seizes this opportunity of justifying his course, and at the same time expressing his grateful sentiments for the physical benefits he has already enjoyed.

Among the many favorable and deservedly popular health resorts found in the course of the Alleghany Mountains, it is difficult to select any that would be universally accepted as superior to all the rest, therefore in bringing into notice a modest and little-known claimant for public favor it is not intended to institute any invidious comparison with others, but merely to call attention to advantages that it possesses in common with some of its neighbors, and at the same to set forth a few that are peculiar to it.

On the line of the Philadelphia and Erie Railroad the highest point attained in crossing the Alleghenies is known as Clarion Summit, which is more than two thousand feet above the sea-level. This is a stretch of table-land, said to be about twenty miles square, situated in Northwestern Pennsylvania, principally in McKean and Clarion Counties. From this elevation the waters of the Susquehanna, Clarion, and Allegheny rivers, respectively, flow mainly in three different directions. The summit is nearly level, and is covered with virgin forest, consisting principally of hemlock, beech, and maple except when the labors of the bark-cutter and lumberman have aided the farmer in making clearings where there are flourishing farms. At the highest elevation reached by the railroad is located Kane, which, almost unknown until within a few years, has been of late rapidly growing into favor as a health resort. This is a small town in McKean County, having several hotels and boarding-houses, where plain fare is furnished, but there is also in the place a large and superior hotel, the appointments of which are especially intended for summer visitors. Being conveniently located on the line of the railroad and near the station, the train usually stops in front of the house, an advantage appreciated by those who are unable to walk any distance. On the other hand it has the corresponding disadvantage of the noise of occasional passing trains, and the whistle of locomotives. Around the hotel is an enclosure forming a park, in whose well-shaded grounds of several acres in extent children play with perfect security. The altitude and the presence of vast numbers of forest trees, principally

hemlock, notably influence the atmosphere; it is very pure, dry, and is sensibly rarefied. Its physiological effects are very evident, it is decidedly invigorating, moderately accelerating the respiration and the pulse, and giving a sense of well-being. From personal experience we can speak of the elevation of spirits and the reviving effects of this beautifully clear mountain air; it certainly stimulates the nutrition, for an increase in weight is commonly observed; in some cases this is very decided; one gentleman who had just recovered from an acute illness gained fifteen pounds in eight days, but it is not unusual for visitors to gain two or three pounds in a week. The causes of this gain in weight are not far to seek. The pure air improves the appetite and digestion, there is an abundance of substantial, wholesome food, with plenty of rich milk from cows kept on the uplands, and finally, what is even more important from a hygienic point of view, there is an entire absence of temptation to dissipation and late hours so noticeable in many summer resorts.

As regards amusements, a good bowling alley is on the grounds, and it is surprising to see delicate persons rolling the balls, and entering into the game with considerable energy, although at home they had evidently been complete invalids, furnishing another convincing proof of the salubrity and invigorating character of the climate. The nights are always cool, and refreshing sleep is obtained. Walking in the woods is a favorite exercise in the middle of the day. The trees are of primeval forest, many of them three or four hundred years old. The ground is kept quite dry by the constant movement of the air; there is comparatively little undergrowth, and the ground is carpeted by dried leaves, the accumulation of centuries. There are in the neighborhood of the hotel no pools of water that children may fall into, but running through the woods are small mountain streams that furnish good trout-fishing for the sportsman. No poisonous plants exist in this vicinity, the smooth-leaved sumach is found, but poison ivy and similar varieties are said to be entirely absent. It is also important to note that there are no dangerous snakes whatever, occasionally a garter-snake may be encountered, but nothing larger or more formidable. Good dry roads and paths intersect the woods, and riding, driving, and walking are equally enjoyable. There are numerous springs about here, and an abundance of good water. In the spring wild pigeons fly through the woods in myriads, and afford sportsmen an abundance of shooting; in the winter deer are also killed in large numbers. Throughout the summer pheasants, woodpeckers, and other birds abound, while rabbits and squirrels are also seen from time to time crossing the path. The mountain views that unexpectedly appear through the forest well repay the tourist for a tramp, while those unable to walk far may command a fine prospect from the top of the hotel.

One of the great natural curiosities of this neighborhood and, indeed, it might be said of the world, is the burning, spouting well. Approaching the well through the virgin woods the roar of the flame can be distinctly heard for a considerable distance; soon the flame is seen pouring in huge volume, but without smoke, from an enclosure about eight feet high, built of heavy logs of wood. At first sight we marvel that the rude altar, as it appears to be, is not consumed by the fire, but while wondering a bubbling noise is heard, each instant growing louder, until water commences to be thrown

up, *per saltum*, in a large fountain, which gradually attains the height of about forty feet, and then in the same manner retires. The fountain plays up every three minutes, and attains its maximum height only every sixth time. Originally the water reached over a hundred feet, but malicious persons have endeavored to choke up the well by throwing in stones and even large branches of trees, and have to some extent succeeded. The well was originally drilled for oil about six years ago, but the gas was struck and caught fire, and has been burning ever since. The search for oil being abandoned the owners endeavored to withdraw the tubing, but were only partially successful, so that water from surface springs now pours into the well to be subsequently thrown out in this intermittent manner. At night the mingling of the fire and water, making a fountain of prismatic colors, is surprisingly beautiful, grand, and awe-inspiring; surrounded as it is by the primeval forest, dark, gloomy, and oppressive in its stillness, the spectacle approaches the sublime, and gives the visitor the feeling of intrusion upon some weird and sacred scene.

Situated, as it is, on what is known as the gas-belt, almost anywhere around Kane an unlimited quantity of good illuminating gas can be obtained by simply boring for it. The town of Sheffield, about fifteen miles distant by rail, is lighted and heated entirely by natural gas which is also used as fuel for manufacturing purposes, the gas being thus used to run three large tanneries, two saw-mills and other similar establishments. The streets are also lighted with the natural gas, the supply of which is so abundant that the large lamps are allowed to burn continuously day and night, as they have done for about five years.

There are several oil wells also to be seen at Sheffield, some of which are flowing, others are being sunk along the line of the railroad. Bradford, a short distance above, is similarly lighted by natural gas, it is the centre of the new oil-field, and to those interested in the subject well repays a visit. There are no oil-wells directly in Kane but in its vicinity is the First Station of the United Pipe Line, which, with its large Worthington pumps, and large tanks, is an object of general interest. The large tanneries at Wilcox, eight and one half miles from Kane, are also worth seeing; while the numerous saw-mills and dams filled with logs, and the great piles of hemlock-bark are equally suggestive of mountain scenes and lumber-camps. Kane is south of Chatauqua Lake, and can be reached either from Maysville or Jamestown via Corry or Warren; it is about four hours distant from Erie by railroad, and about six from Niagara Falls. Visitors from the east come via the Philadelphia and Erie Railroad. This country is as yet not fully developed, the people are still civil to strangers, and the hotel charges moderate. The many advantages of Kane as a sanitarium have been appreciated by Professor Da Costa, who has been sending patients here with great benefit, for several years. Lately Dr. Weir Mitchell and others have become acquainted with its advantages and speak highly of it. There is an entire absence of malaria, and hay fever is unknown. Kane, as a place of mountain resort, has unquestionably a future before it, for it possesses advantages which are permanent and positive, and needs only to be better known in order to become widely popular. It possesses many of the merits of Colorado, and is much more accessible and convenient. W.

SEPTEMBER 15, 1881.

— Professor Frankland, of London, is reported to have lately analyzed a specimen of water taken from the sacred well of Mecca. This water is transported to all Mohammedan countries, and is greatly sought for by the faithful. The sample examined was

found extremely filthy and much infected by sewage, and is forcibly described as bottled cholera. It requires no effort of the imagination to realize the virtues of this water as a disseminator of disease, whatever its other merits may be.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 8, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	610	277	35.90	15.57	8.52	9.02	1.64
Philadelphia.....	846,984	347	120	23.92	6.34	5.76	4.32	6.92
Brooklyn.....	566,689	292	137	35.27	18.15	9.59	7.19	.68
Chicago.....	503,304	239	112	47.70	6.28	7.53	5.86	12.97
Boston.....	362,535	164	72	37.80	22.57	7.32	4.27	4.88
St. Louis.....	350,522	142	62	27.46	9.15	4.23	6.34	4.23
Baltimore.....	332,190	159	61	30.19	9.43	9.43	.63	3.77
Cincinnati.....	255,708	95	38	24.21	12.63	1.05	7.37	6.32
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	77	28	35.06	12.99	5.19	6.49	11.69
Pittsburgh.....	156,381	99	40	43.43	6.06	4.04	3.03	8.08
Buffalo.....	155,137	90	48	44.44	30.00	4.44	3.33	4.44
Milwaukee.....	115,578	36	19	30.56	13.89	2.78	5.56	11.11
Providence.....	104,857	31	12	25.81	9.68	12.90	19.35	3.23
New Haven.....	62,882	22	11	18.18	—	—	4.55	4.55
Charleston.....	43,999	30	15	20.00	10.00	—	—	3.33
Nashville.....	43,461	23	4	30.43	8.70	—	—	13.04
Lowell.....	59,485	26	14	26.92	15.38	7.69	3.84	3.84
Worcester.....	58,295	19	9	31.58	21.05	5.26	10.53	5.26
Cambridge.....	52,740	24	8	16.67	4.17	4.17	12.50	8.33
Fall River.....	49,006	16	7	18.75	—	12.50	—	6.25
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	13	1	7.70	—	—	—	—
Springfield.....	33,340	16	4	25.00	18.75	6.25	6.25	—
Salem.....	27,598	20	8	25.00	15.00	—	—	10.00
New Bedford.....	26,875	8	4	25.00	12.50	—	12.50	—
Somerville.....	24,985	5	1	20.00	—	20.00	—	—
Holyoke.....	21,851	8	3	50.00	37.50	—	—	12.50
Chelsea.....	21,785	8	5	37.50	37.50	—	—	—
Taunton.....	21,213	7	3	14.29	14.29	—	—	—
Gloucester.....	19,329	6	3	33.33	33.33	—	—	—
Haverhill.....	18,475	6	2	50.00	33.33	—	—	—
Newton.....	16,995	5	1	20.00	20.00	—	—	—
Newburyport.....	13,537	8	2	12.50	—	12.50	—	—
Fitchburg.....	12,405	5	2	20.00	—	—	—	—
Twenty-one Massachusetts towns..	161,228	55	20	23.64	12.73	7.27	5.45	3.64

Deaths reported 2711 (no report from New Orleans): 1153 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 899, consumption 368, diarrhoeal diseases 353, diphtheria and croup 182, lung diseases 160, typhoid fever 134, small-pox 71, malarial fevers 63, scarlet fever 54, whooping-cough 16, measles nine, cerebro-spinal meningitis eight, puerperal fever six, erysipelas three. From *small-pox*, Chicago 41, Pittsburgh 18, Philadelphia seven, New York three, St. Louis and Cincinnati one. From *malarial fevers*, New York 16, Brooklyn 12, St. Louis eight, Baltimore six, Philadelphia five, Chicago and District of Columbia four, Cincinnati, New Haven, Charleston, and Nashville two. From *scarlet fever*, New York 25, Pittsburgh seven, Brooklyn six, Philadelphia, Baltimore, and Buffalo four, St. Louis three, Cincinnati one. From *whooping-cough*, New York seven, Chicago and Boston three, St. Louis two, Baltimore one. From *measles*, New York four, Boston two, Brooklyn and Chicago one. From *cerebro-spinal meningitis*, New York four, Chicago, Baltimore, New Bedford, and Haverhill one. From *puerperal fever*, New York, Philadelphia, Buffalo, Milwaukee, New Haven, and Lynn one. From *erysipelas*, New York two, Brooklyn one.

Two cases of small-pox were reported in Brooklyn, one in Boston, two in St. Louis, three in Cincinnati, 82 (of small-pox and varioloid) in Pittsburgh; typhoid fever 57, diphtheria 35, scarlet fever four in Boston; diphtheria eight, scarlet fever five, in Milwaukee. The epidemic of dysentery is subsiding in Buffalo.

In 39 cities and towns of Massachusetts, with a population of 1,039,961 (population of the State 1,783,086), the total death-rate

for the week was 21.01 against 21.98 and 22.99 for the previous two weeks.

For the week ending September 17th in 149 German cities and towns, with estimated populations of 7,806,793, the death-rate was 21.8. Deaths reported 3269; under five 1693: pulmonary consumption 368, diarrhoeal diseases 254, acute diseases of the respiratory organs 170, diphtheria and croup 135, scarlet fever 111, typhoid fever 74, whooping-cough 39, puerperal fever 18, measles and *rötheln* 14, small-pox (Benthen two, Aachen three), typhus fever (Königsberg, Grandenz) two. The death-rates ranged from 13.7 in Darmstadt to 34.8 in Posen; Königsberg 26.2; Breslau 27.1; Munich 33.5; Dresden 17.9; Berlin 22.4; Leipzig 17.8; Hamburg 19.2; Hanover 16.1; Bremen 17.8; Cologne 18.7; Frankfurt 17.9; Strasburg 23.1.

For the week ending September 24th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 18.2. Deaths reported 2655: scarlet fever 110, diarrhoea 103, fever 73, whooping-cough 53, measles 39, small-pox (London 26) 28, diphtheria 21. The death-rates ranged from 15 in Bradford to 25.2 in Manchester; Leeds 15.1; Birmingham 15.2; Bristol 15.4; Sheffield 17.2; London 17.4; Liverpool 23.2; Manchester 25.2; Edinburgh 20.1; Glasgow 19.5; Dublin 22.8.

For the week ending September 24th in the 21 chief towns of Switzerland, population 479,934, there were 18 deaths from diarrhoeal diseases; acute diseases of respiratory organs 11, diphtheria and croup eight, typhoid fever seven, whooping-cough three, scarlet fever, measles one, small-pox one. The death-rates were, Geneva 10.6; Zurich 26.4; Basle 15.1; Berne 15.2.

The meteorological record for the two weeks ending October 8th, in Boston, was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
September-October, 1881.																			
Sun., 25	30.002	72	88	58	100	57	84	80	S	SW	W	3	15	10	G	C	C	—	—
Mon., 26	30.017	79	95	70	82	43	82	69	W	W	S	8	2	11	C	F	F	—	—
Tues., 27	30.030	69	79	66	91	78	90	86	E	SE	SW	4	3	10	F	F	F	—	—
Wed., 28	29.973	77	90	69	91	50	66	69	SW	SW	NW	11	13	12	F	F	F	—	—
Thurs., 29	30.385	59	71	56	70	76	81	76	NE	E	SE	15	10	5	O	F	O	—	—
Fri., 30	30.280	70	82	58	93	64	84	80	SE	SW	S	4	16	10	O	F	C	—	—
Sat., 1	30.220	76	90	66	82	44	71	66	SW	W	N	20	11	7	C	C	O	—	—
Week.	30.130	72	95	56														0.46	—

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
October, 1881.																			
Sun., 2	30.434	59	73	57	71	75	88	78	NE	E	SE	13	8	4	O	O	R	2.15	.15
Mon., 3	30.001	67	79	58	93	71	84	83	S	W	W	3	3	11	R	F	C	19.30	.62
Tues., 4	29.800	56	76	45	80	80	53	71	SW	NW	NW	9	6	18	C	O	C	1.10	.02
Wed., 5	30.155	36	46	29	47	28	30	43	NW	NW	W	28	28	10	C	F	C	—	—
Thurs., 6	30.283	48	63	32	61	39	68	56	W	SW	SW	12	20	4	C	C	F	—	—
Fri., 7	30.301	59	76	39	68	25	68	54	W	W	SW	10	6	6	C	C	O	—	—
Sat., 8	30.040	70	80	52	66	42	66	58	SW	SW	SW	10	12	13	F	C	T	1.15	—
Week.	30.145	57	80	29														23.10	.79

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 1, 1881, TO OCTOBER 14, 1881.

EWES, CLARENCE, captain and assistant surgeon. Granted leave of absence for one year on surgeon's certificate of disability, with permission to go beyond sea. S. O. 220, C. S., A. G. O.

O'REILLY, R. M., captain and assistant surgeon. Granted leave of absence for six months from December 1, 1881, on surgeon's certificate of disability. S. O. 225, A. G. O., October 5, 1881.

HALL, JOHN D., captain and assistant surgeon. The leave of absence granted him in S. O. 141, August 4, 1881, Department of Dakota, is extended three months. S. O. 220, C. S., A. G. O.

MAYS, L. M., captain and assistant surgeon. Granted leave of absence for four months. S. O. 222, C. S., A. G. O.

CUNNINGHAM, T. A., captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 102, Department of the South, September 29, 1881.

MURRAY, ROBERT, colonel and surgeon, medical director, Military Division of the Missouri. Granted leave of absence for two months. S. O. 100, Military Division of the Missouri, October 5, 1881.

JUGLIET, major and surgeon. Granted leave of absence for one month. S. O. 231, A. G. O., October 12, 1881.

WOODHULL, A. A., major and surgeon. Granted leave of absence for four months. S. O. 227, A. G. O., October 7, 1881.

KOLBORN, E. A., captain and assistant surgeon. Assigned to duty at Plattsburg Barracks, N. Y., as post surgeon. S. O. 180, Department of the East, October 7, 1881.

HARVEY, P. F., captain and assistant surgeon. Granted leave of absence for twenty-five days, to take effect on adjournment of the G. C. M., of which he is a member. S. O. 182, Department of Dakota, October 5, 1881.

COWDREY, S. G., captain and assistant surgeon. Granted leave of absence for four months. S. O. 228, A. G. O., October 8, 1881.

ARTEL, D. M., captain and assistant surgeon. Relieved from duty at Fort Supply, I. T., and assigned to duty at Fort Elliott, Texas. S. O. 201, Department of the Missouri, October 4, 1881.

ROBINSON, S. Q., first lieutenant and assistant surgeon. Granted leave of absence for four months. S. O. 228, C. S., A. G. O.

STRONG, N., first lieutenant and assistant surgeon. When relieved by Assistant Surgeon Shannon from duty at Fort Thornburgh, U. T., assigned to temporary duty with troops repairing road between Park City and Fort Thornburgh, U. T. S. O. 102, Department of the Platte, October 4, 1881.

MEMBERS of the profession will oblige Dr. Horatio R. Bigelow, 1502 Fourteenth Street, Washington, D. C., by reports of their cases of ovariotomy, on which subject he is preparing a paper.

BOOKS AND PAMPHLETS RECEIVED. — Report to the Illinois State Medical Society on Laryngeal Tumors. By E. Fletcher Ingalls, M. D. (Reprint.)

Quarterly Report of Medical Officers, United States Army, with their Stations and Duties. October 1, 1881.

Report of Section on Ophthalmology and Otology. By Samuel Theobald, M. D. (Reprint.)

Original Articles.

SAFEGUARDS IN PRIVATE OBSTETRICS.¹

BY J. P. REYNOLDS, M. D.

CHILD-BIRTH, viewed in its relation to the whole community, necessarily involves a certain percentage of death and disaster. The causes of danger are always at hand: overwork, starvation, sorrow, desertion, and anæmia come before, and hæmorrhage, convulsions, and insanity follow after. Disease, deformity, disproportion, malposition, and malpresentation put the child in peril. Careless or criminal neglect in the period immediately following delivery adds another element of danger. And no ordinary attention can save from these risks the class of pregnant women who supply and always will supply the material for hospital and dispensary practice.

Fortunately, results very much happier may legitimately be claimed for the private exercise of obstetrics. In cases of the latter class the profession enjoys and the community, from year to year, increasingly exacts, watchful oversight. Illustrations of this fact meet us on all sides. The prophylactic management of women approaching confinement has several times, within two or three years past, been exhaustively treated by English-speaking accoucheurs. We are weighing together the pros and the cons of a proposal that Listerism, so-called, be applied even to cases of labor. That time-honored practitioner whose refinement of modesty forbids him to look at a bulging perineum is fast disappearing from our ranks with his colleague, who in the practice of a lifetime never encountered anything wrong in obstetrics. The modern attendant is beginning to be held almost responsible for a lacerated cervix. He is expected to know, not to guess, the measure of the involution that takes place. He is held to blame if fetid lochia are not watched, or if creeping inflammation of the connective tissue escapes his notice.

Upon this subject, in its full extent, I do not propose to enter. I ask your attention to three unpretentious details in the duty of an accoucheur, upon which the safe conduct of his cases will, in my judgment, largely depend. These are, first, that he take an intelligent care of each patient during the six or eight weeks before delivery; that as a matter of obligation he make her during this period visits sufficiently frequent to render him familiar with the details of her bodily and mental condition. Next, that he *make sure, by extreme care and peremptory order* of being summoned to the patient when she has the first warning of approaching labor, go promptly to her, and from that moment take the full charge of her case. And lastly, when delivery is completed that he watch the management of the sick woman during two hours or an hour and a half, remaining in most instances at her side.

Not only are these points commonplace, they are even trivial. I am addressing honorable and upright professional men, who give every needed attention to obstetrics as to other parts of their work, who, if summoned to labor, avoid delay, and when the birth is completed do not leave their patients till they have all reasonable assurance that the time of danger has passed. And yet my effort is to emphasize more strongly these very habits, and to point out their extreme importance

and value in the care of women confined. For I suspect that medical men, in not a few instances, fail to recognize any duty to a case of obstetrics till notice of labor is given. To many practitioners the attendance upon births is an annoyance, a vexation, an interruption to their work, an interference with comfort, sleep, and eating, comparable to the worries of teething, vaccination, and nursery croup, except only that this is a trial immeasurably worse. The nurse "should know when not to send for them;" "ought to be capable of superintending the first stage of labor;" "must not summon the doctor till he can be of some use." The child born, the placenta delivered, no hæmorrhage showing itself, and the general condition of the patient being cheerful, the physician's duty to others presses upon him. The nurse is at hand to apply the bandage and to put the bed in order, as well as to wash the baby and dress it. He has endured most burdensome and fatiguing attendance, — he has a right to relief.

And yet, commonplace though these suggestions are, a conviction of their important bearing upon the safe conduct of obstetrics, which deepens with every year of my professional work, must be my excuse for bringing them very briefly before you to-night.

I need hardly justify my first recommendation by any elaborate arguments. It has been lately said with great force that the preparation of woman for labor exacts the use of very much the same methods which a man adopts in training for a foot race or a rowing match. Her strength is to be gotten up in every way for the great trial, and towards this end the positive efforts of her adviser may greatly help. He is not to judge his principal duty performed because he has searched the urine for albumen and casts; pallor, exhaustion, depression, mental worry, above all sleeplessness, ought to arouse his interest and command his most earnest and watchful care. In obstetrical communications the risk which attaches itself in labor to the woman seduced and abandoned has become classical, but such a statement still leaves unnoticed other cases of precisely similar import. The clergyman's wife who, in the eighth and ninth months, must sit up till the small hours to hear the reading of his sermons, the woman whose husband has been for weeks sleepless with the agony of impending bankruptcy, she whose daily life is made wretched with that thorn in the side, a merciless mother-in-law, or that other whose wrongs have robbed her home of all peace, these are equally the cases that invite puerperal insanity, eclampsia, and fatal hæmorrhage. By watchful, persistent tact to gain the clue to the unrest which his eye detects, to force home upon the mind and heart of thoughtless bystanders the knowledge that the woman who is on the eve of labor is doing a great work, that all those about her are in duty held to bow down to her, help her, and comfort her, that she is by the mere fact of her pregnancy made unfit either to edit an encyclopædia or to keep a hotel, becomes then a physician's obligation. Sleep must be made possible, and, in case of need, must be secured, week after week, by the steady, unremitting employment of suitable drugs. Let me say, in passing, that in many cases marked by persistent wakefulness, the good effects of a judicious use of chloral and the bromides are not limited to the production of sleep at night, but are felt throughout the nervous system and in the mental condition.

Nor is this all. To many a mother of troops of children, from whom the details of housekeeping, dress,

¹ Read before the Boston Obstetrical Society.

meals, discipline, steal all repose, the service of a physician who patiently, perseveringly, remorselessly, by daily visits, it may be, gets her under his thumb, and by degrees gains for her two weeks of bed and feeding before her confinement, is worth more for the avoidance of accidents in labor and for the prevention of puerperal disease than cart-loads of tonics and oceans of antiseptic injections. I do not forget that there exists, on the other hand, a class of self-indulgent, indolent women who need, even up to the moment of labor, to be roused to moderate though continued exercise and occupation, but these form among us an inconsiderable minority.

Of food during these weeks not much need in most instances be said. Excessive appetite sometimes needs restraint. Articles of diet outrageously difficult of digestion are never to be allowed just before the onset of labor. In cases in which there is good ground to expect eclampsia an exclusive milk diet not only affords a great guarantee of safety, but frequently extorts from the patient the warmest acknowledgment of comfort and relief.

Care of the rectum and bladder, truisms in all obstetrics, must never be forgotten. And I pay willing tribute to direct tonics, and especially to iron. The number of pregnant women who find help in it is very large.

My second point is that the patient, the husband, the nurse should be alike instructed that it is of the first importance for the best conduct of labor that the attendant be notified at the very earliest moment, so soon as the recurrence of two or three pains make the mother convinced that her labor is beginning. Promises to this end are readily given. It is no easy task to have them faithfully kept. Not only does the nurse ordinarily consult the doctor's case, or the husband hope that the accoucheur is not required till daylight, but the very woman herself shrinks from a hinting that the hour has come. And yet the physician's selfish interests, as well as his real comfort in his work, demand this quite as truly as does the welfare of the patient. If promptly called, after being made sure that everything that he may need is already in the room, and having convinced himself by a reasonable delay that there is no probable urgency, he may with the greatest peace of mind again and again absent himself for periods which he fixes definitely in advance during which all other important obligations are cleared away, his own personal preparations are made, and everything is arranged for the entire appropriation of his time to the new duty. Nowhere in life is it so true as in this work that the early bird gathers the grain. The breaking of a dam may sweep away every house in the valley, and sacrifice hundreds of lives, but there is always a moment when the whole risk lies in a trickle that a boy might check. Run through the whole gamut of obstetric emergencies, from a swollen anterior lip to a cranium hopelessly wedged in the bones of the pelvis, where can we find one that will not be found easy or difficult, just in proportion as the physician undertakes it in season or comes too late?

With what ease in the majority of cases will palpation at the beginning of labor detect the head in a pelvic presentation or in a transverse. With what comfort, at that moment, or even external version be accomplished providing the presenting part be still high in the pelvis and the membranes unbroken. In the simple

matter of diagnosis of position by vaginal examination contrast the confident assurance of the man who has steadily watched from the beginning the progress of the mechanism with the worry and uncertainty of him who finds under his hand a tumid and swollen scalp, and bones distorted and overriding. None of us receive without anxiety the summons to a woman in paroxysms of eclampsia, but were the habit which I am urging established in the profession, how much oftener would timely warnings come from localized headaches during labor, from unusual restlessness and agitation, from pains aimless and ineffective, putting an observant physician on the alert long before the slightest choreic twitching of an eyelid proclaims that danger is at hand. The same necessity, that the case be watched from its very outset, applies with the greatest significance to the timely use of forceps, of which so much has lately been said, and said, too, with such wonderful force. It is largely to delayed attendance that the worst dangers are due. With many a funis long prolapsed, an arm or foot precident by the side of the head, a breach hopelessly wedged, early watching would have substituted for all the difficulty and peril the chance of easy relief. And without such neglect who would know the fearful picture of a uterus, after redoubled hopeless, overpowering efforts, helplessly bound down in tetanic rigidity over some impossible presentation.

Lastly, there are few occasions in which the personal presence and control of a physician are of greater value than in the lying-in room during the period following delivery. Women are in some occasional instances apparently confined with little or no nervous shock. Parturition deserves with these patients little more serious regard than defecation. They approach it with something of the unconcern with which the commercial traveler enters upon his fifty-second Atlantic passage. But these are rare exceptions. Under all the cheerfulness and even gayety of the newly-delivered mother, amidst the hurry and bustle of the surroundings, how many times has one occasion to hear at last the sigh of relief and watch the comfortable settling down to rest, when noise and light have gone, when the nurse and the baby have been dismissed, and the physician, his hand watching patiently the uterine contraction, mounts guard till the hour of imminent risks has gone by. The shock of labor, the exhaustion of nervous power which that process brings, is only too familiar to us in severe cases. But the fact that similar symptoms, less only in degree, accompany nearly every labor, is not always recognized. And yet, attentively watched, there are few patients who do not betray it. The real restorative for this effect of labor is rest, and, if possible, sleep. In extreme cases we acknowledge this in our resort to opium, used not infrequently as the best of stimulants, but ordinarily bringing with that first effect the readiness to sleep. Even in ordinary childbirth every one of nature's processes is helped by sleep. It is surprising to observe how little many advisers appreciate this. I have known a primipara, exhausted by hard confinement, to be conscientiously roused by her nurse during every time that she dropped asleep during twenty-four hours because "sleep after confinement is so dangerous," severe puerperal insanity supervening three weeks later; and Cazeaux, though hesitatingly authorizing a nap after delivery, is careful to add that it is nevertheless of the utmost moment that throughout all this sleep the condition of the uterus should be constantly watched by an experienced attendant. The

repose enjoined should be absolute. Nothing so favors the safe contraction of a well-emptied uterus as deep and tranquil sleep. In not a few instances, when the uterus has remained for some considerable time of small size and well contracted during the period of enforced quiet, the preparation of the bed, the application of a bandage, some change of position, however carefully conducted, will cause it suddenly to double its size and to attain a marked elevation and prominence. So that in cases of hemorrhage I have heartily approved that advice, which has neglected for hours every one of these important attentions, lest the mere fact of disturbing the patient should involve the loss of all that has thus far been gained.

Obviously what has been said is open to the criticism that life is short, and that care that is not ordinarily essential should not be required. Shall a man always stay at home because in any walk out a coping stone may fall on his head and kill him? No, indeed! and yet in the matter under consideration this argument may be pressed too far. The few additional hours which careful preliminary watching, acceptance of responsibility and attendance from the first warning of labor, waiting a somewhat longer period after the birth, take from the time of the general practitioner are few in number with most of us, and ought to be little weighed, in view of the great additional safety of the patient. However we may dream of overwhelming obstetric engagements the physicians are surprisingly few in any country who attend two hundred labors a year. Few men in middle life count as a rule thirty cases in a twelvemonth. No words of mine are needed to portray the stake which families under our care have in the prevention of danger in childbirth. To see taken away from hearth and home the one being in whose safety more than in that of any other the happiness of all rests, to be responsible in any degree for a breach that is never filled, is bitter work. Gladly should we bend all our energies, spare no time, count trouble light to prevent that.

A CASE OF PYLEPHLEBITIS.¹

BY J. L. HILDRETH, M. D.

MRS. P., age forty-four, tall, large, and fleshy, was first seen by me January 26th, after having had a severe chill. Three days before she had been to Boston in a snow-storm, and got very tired and cold. For three weeks before she had not been well, having frequently, after taking food, nausea and sometimes vomiting; she also had spoken of chilly sensations and of some pain in the bowels; her friends had remarked that she did not look well; her sleep had been poor, and in the morning she was not rested; headache and loss of appetite she had complained of. The exposure in the snow-storm seemed to hasten the sickness that was coming upon her. At the time of my first visit I obtained the following history:—

She was born in Massachusetts, always had been strong and robust, and generally during the past three years had weighed about one hundred and ninety-five pounds. She was married at twenty, had borne two children, both boys, the youngest twenty-one. Since her last confinement had scarcely been sick. Among

her friends she had been a wonder, never complaining of aches or pains, and in every way had seemed so well and strong. When first seen the chill had passed off, and she was vomiting, having severe pain at the pit of the stomach, and loose discharges from the bowels, with intense headache; pulse 121, temperature 103.2° F. She was so fleshy that any critical examination of the abdomen was impossible; pressure over the epigastric region was painful, and over the whole bowels there was some tenderness. Morphia and mint-water was given, and hot fomentations applied over the stomach and bowels. In the evening pulse 136, temperature 101° F.; headache severe; vomiting only partly controlled; pain at pit of stomach had not been relieved; the general appearance was of a person suffering from some severe malady. The morphia was ordered to be increased, and twelve grains quinine to be given in divided doses as soon as the stomach would retain it.

January 27th, second day of her sickness, recovered from the first chill; passed a comfortable night by taking two grains morphia; quinine had been given and retained; slept four hours, and had only one loose discharge; headache better; pulse 126, temperature 104.4° F.; pain at pit of the stomach and in the head, the only pain or discomfort complained of. In the evening was more comfortable; less pain; had slept some, and there had been no vomiting or passages from the bowels; pulse 118, temperature 104.8° F.

January 28th, third day. About midnight had a chill, but not severe; slept but little; after the chill great thirst; some vomiting, and one large, loose discharge from the bowels; pulse 136, temperature 104.6° F.; still complains of the pain at the pit of the stomach, and says it has extended to either side. In the evening pulse 140, temperature 105° F.; very restless; great pain; some nausea; takes little but hot brandy and soda water, milk and lime-water, and pounded ice; quinine and morphia continued.

January 29th, fourth day. More comfortable in the morning; pulse 130, temperature 103.1° F.; slept about three hours; takes the milk and brandy freely; no vomiting or diarrhea; no headache, but is conscious of a pain at the pit of the stomach, and flinches at slightest pressure over any part of abdomen; bowels considerably distended; skin and conjunctiva slightly tinged with yellow. In the evening less pain; pulse 116, temperature 102.2° F.; taken less morphia by one half.

January 30th, fifth day. Very comfortable in the morning; decidedly jaundiced; no nausea or vomiting, and is able to change her position considerable; pulse 108, temperature 101.4° F. In the evening pulse 102, temperature 101.2° F.

January 31st, sixth day. In the morning pulse 108, temperature 101.1° F.; slept poorly; great deal of headache and pain at pit of stomach; about eleven in forenoon had another severe chill, followed by profuse perspiration and weakness, so that brandy and soda water were given in large quantities. In the evening pulse 106, temperature 104.6° F.; intense thirst with considerable nausea and occasional vomiting.

During the three days following this third chill she remained about the same, pulse varying from 120 to 130, and temperature from 103° to 104.5° F.; there was but little nausea, and large quantities of milk and brandy and soda water were taken, with morphia enough to control the pain; quinine was given, about sixteen grains a day, in anticipation of another chill; jaundice nearly disappeared.

¹ Read before the Boston Society for Medical Observation, May 16, 1881.

February 4th, tenth day. In the morning another chill, but less severe than either of the three that had preceded. In the evening comfortable; pulse 122, temperature 104.1° F.; complains of pain extending all across the body from right to left hypochondrium, thinks it is worse in right side; unable to make any careful examination of the part on account of the pain and great tenderness upon pressure; decubitus that upon back, and can scarcely be moved except to be raised straight up.

February 5th, eleventh day. Passed a comfortable night; pulse 102, temperature 100.1° F. She says it is the most comfortable day since the sickness began. The tenderness in right side and across the stomach to left side nearly gone; has some appetite, and wants to be dressed and sitting up, and to have the same food as the family.

For the three days following there was little change in her symptoms; some pain and tenderness remained at the pit of the stomach and in either side, but she ate well, slept a good deal, and took ordinary food with considerable relish. The pulse and temperature remained about the same; quinine and opiates given in much smaller doses.

February 9th, fifteenth day. Another slight chill in the evening; two hours afterwards pulse 128, temperature 103° F.

February 10th, sixteenth day. Another chill, but not severe.

February 11th, seventeenth day. Chilly sensations, not amounting to a decided rigor; at this time she began to complain of pain through the whole of the left chest; had a slight cough, and said a full breath gave distress from the armpit to crest of ileum; decubitus was altogether up left side, and she complained of so much soreness and tenderness that for three days she was hardly moved; there was considerable dry cough and shortness of breath with slightest exertion; temperature was nearly normal in the morning, but generally 102° to 103° F. in the evening, with profuse sweating whenever she fell asleep.

February 11th, twentieth day. Was able to raise her up sufficiently to examine the chest; the lower left back was dull, respiration absent, and vocal fremitus marked.

From this time till February 20th the cough and dyspnoea increased; there was increased soreness over the whole of the left side; appetite poor; some vomiting, and profuse perspiration when asleep.

February 20th, twenty-sixth day. The dyspnoea increased so much that, with the assistance of Dr. Stevens, I aspirated from the left chest twenty ounces of bloody pus, with an odor intensely fetid. The removal of this fluid from the chest gave great relief. Dyspnoea afterwards was slight, and cough nearly absent. The appetite returned, and she was able to be dressed and sit up nearly an hour each day, but this temporary improvement lasted only a few days, the dyspnoea and cough soon came back, sweating was profuse, sleep fitful and disturbed, pain and soreness over whole chest greatly increased, and March 5th I again aspirated, removing only about twelve ounces of the same fetid pus mixed with blood. During the interval of time between the first and second aspiration there was a great deal of sweating, so much at times that the nurse was obliged to be occupied nearly the whole time wiping the face and hands and arms and limbs. Whenever she slept the perspiration would run down

the face so as to wake her up. The pulse varied from 90 to 108, but the temperature was generally at normal or a half or one and a half degrees below. She took nourishment well, bowels fairly regular, and nearly every day was sitting up from fifteen minutes to an hour.

From this time to March 10th, which was the forty-third day of her sickness, there was little change except an increase in the dyspnoea.

Dr. Ellis saw her then, and a permanent opening was made in the left side below and about a hand's breadth behind the nipple; twenty ounces of pus of the same general character as that obtained by the first aspiration was removed. Following this there was no particular change in the symptoms except that she grew weaker, and death took place March 19th, the fifty-second day from the first chill.

Autopsy. Body that of a woman about forty-five years of age, rather large and fat. The skin has a slightly yellowish tinge. Right side of heart moderately full of blood, left side contains less blood; valves everywhere perfect; interior of this organ smooth, and everywhere of the same color; muscular substance is softer than usual, and pale. Right lung fills the cavity of its side of the chest, and is nowhere adherent, dependent portions of a dark-red color; it is everywhere crepitant, and apparently healthy. The left lung is bound to the side by a fibrous band running from front to back, about in the centre of the lung, dividing the pleural cavity in two nearly equal parts; the upper cavity is smooth and glistening; the part of the lung in the cavity is healthy; the lower cavity is lined with a rough, ragged, and dirty deposit, it contains about a pint of dirty pus which is inodorous. There is an opening into the cavity through the walls of the chest, between the eight and ninth ribs, that readily admits the finger.

Spleen a little larger than usual, and quite firm.

Kidneys larger than usual, and have a swollen look, capsule slightly adherent, cortical portion thicker than usual and much paler, the medullary, the whole organ is a little soft.

Intestines, stomach, and mesentery glands healthy.

Liver enlarged, pale, and soft. The acini can be readily made out, the cut surface is generally of a grayish color, with darker spots about the central vein, giving it a finely marbled appearance; on the upper surface a rounded elevation, about the size of a filbert; this opened is seen to be a collection of pus; the base of this cavity, about a half inch below the surface of the liver; there is no hardness about this point. The portal vein is apparently of a normal size and thickness, the part of it below the liver contains a mixture of pus and blood, the part in the liver in all its branches contains nothing but a creamy-yellow pus.

IMPORTANT POINTS.

The important points in the case seem to be these:—

A woman, apparently in perfect health, is about three weeks suffering from nausea after taking food, with occasional vomiting, and seems generally unwell. Three days after exposure has a severe chill with severe pain at the pit of the stomach, nausea, vomiting, and diarrhoea, followed by severe fever and great prostration. In a few days another chill with the pain extending to right side, in a few days more it extends to left side, and during the whole of the remaining sickness, pain, soreness, and tenderness upon pressure is

never absent, extending from the right to the left hypochondrium. About the sixth day jaundice makes its appearance, but gradually disappears, and is nearly gone at the end of the fifteenth day. Pain in the left side came on about the twenty-fourth day, after a severe chill; fluid was present so as to cause dyspnea and require aspiration in seven days, a permanent opening about the forty-third. Sweating was marked during the fourth and fifth weeks with a temperature, as indicated by the thermometer, from one half to one and a half degrees below normal considerable of the time. The last two weeks there were chilly sensations most of the day, but not a distinct chill.

The autopsy showed no trouble in the abdominal cavity which could have been the starting-point of the inflammation in the portal veins. The use of quinine had no effect in controlling the chills.

Urine. The urine was examined several times by Professor Wood, each time with nearly the same result. It always contained some albumen, a few granular and blood casts, urates in great quantity, its color was of a deep red, evidently concentrated, and generally had a peculiar odor, perhaps it might be called strongly urinous. I thought the fetid pus from the side resembled it somewhat. Professor Wood suggested acute parenchymatous nephritis similar to that dependent upon blood-poisoning.

RECENT PROGRESS IN MENTAL DISEASE.

BY CHARLES F. FOLSOM, M. D.

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IN the pathology of mental disease, although careful investigations are yearly adding new facts and confirming previous observations that there are always well-marked and definite changes in the brain in insanity of which paralysis is one of the symptoms and in chronic dementia, and that generally mental disease is associated with recognizable morbid conditions, which become more manifest the longer the duration of the disease, it must still be said that, except in dementia and paralysis, we know very little of the pathological conditions of the brain *giving rise to* insanity beyond the fact that they probably are chiefly cortical and diffuse rather than local.¹ In doubtful cases, therefore, there are no purely physical symptoms (pulse, temperature, etc.), which furnish strong presumptive proof of that loss of self-control which constitutes the chief distinguishing feature of insanity.

In the classification of mental diseases, the disposition to place etiology, symptomatology, and metaphysical distinctions on a lower footing than pathology and clinical history is more and more manifest—a subject which is considered at some length, with a comparison of the systems of classification, in the JOURNAL of July 22, 1880.

In the medical jurisprudence of insanity recent cases indicate that the strictly medical-expert theory is gaining strength, especially in this country, to the manifest benefit of the criminal class, but with a more than possible danger to society, whose interest naturally lies in the direction of maintaining the highest standard of responsibility consistent with justice, safety, and humanity.

¹ For a fuller discussion of this point see the JOURNAL, July 15, 1880.

The chief advances of late years have been due primarily to efforts for better treatment—in this country directed toward following the Scotch and English methods of less restriction, and in acceding to the popular demand for more elegant hospitals, and to the wishes of the superintendents for greater ease in administration. It we may judge by the last edition of Dr. Kirkbride's book,² our changes in asylum construction during the last twenty-five years, from the patients' point of view, consist in better ventilation, heating, and opportunity for classification, and more room, air, light, cheerfulness, and means for amusement. The same statements hold good, to a less degree, however, of France.

There is great misapprehension in the United States as to what has actually been done elsewhere in giving excessive liberty to the insane, arising from the fact that people who have had very few opportunities for observation and experience, and who generalize somewhat hastily from scanty knowledge, give their conclusions to the public through the daily press with a self-confidence that begets in the minds of the community unjust condemnation of institutions, in regard to which they hear little but disparagement, and because exceptional authorities, somewhat dogmatic even if of advanced views, who advise very wide departures from the common practice, are quoted (not always correctly) as if they so fully represented all the intelligent medical opinion on insanity that those disagreeing with them were simply ignorant or knaves. As a matter of course the friends of other asylums, here and abroad, in self-defense, go to the opposite extreme and exaggerate correspondingly the comparative merits of their own systems, while the community, having no government lunacy commission to which it can refer for impartial information, being naturally distrustful of public officers, and having no means of testing for itself the truth or falsity of charges against them, believes what is asserted the most loudly.

After some careful study of this matter in Europe in 1873, 1874, 1875, 1878, and 1880, I think I am safe in saying that the public asylums of Massachusetts, with which I am most familiar in this country, are in all ways superior to the vast majority of those in France except in the matter of scientific study and experiment, while mechanical restraint is so generally adhered to throughout the new republic by the best authorities, with only here and there a rare exception, that at a recent meeting of the leading psychological society in Paris, after full discussion of the subject during four sessions, all but one of the members present were strongly in favor of mechanical restraint in the treatment of the insane. The Germans do not provide their patients so many personal comforts nor such pleasant hospitals as we give ours, but surpass all other nations in scientific research, while they are rapidly developing the non-restraint system, in some places even more absolutely than is done anywhere in England or Scotland.

The readers of the JOURNAL are already, in a general way, acquainted with the vast advances which have been made in some European asylums, more particularly in Scotland, but it is only fair to say that our attention has been drawn chiefly to hospitals which are landmarks even in their own country, and that it

² On the Construction, Organization, and Management of Hospitals for the Insane. By Thomas S. Kirkbride, M. D., LL. D. Philadelphia. 1880.

is still possible to pass a long time visiting many asylums, even in much-praised England, without any feeling but disappointment that they are not better than they are, nor so good as ours,—for our patients at least. I feel quite sure, as did Griesinger, after a most painstaking investigation, personally, in various countries, that there are decided peculiarities of climate and race, and social differences that will always prevent the adoption of any universal plan of treating insanity everywhere by a uniform rule, although I believe that Americans, Germans, Irish, French, Scotch, and English are none so perfect in this matter that they cannot study to advantage the work of the others.

In Germany an asylum for two hundred patients was finished a few years ago at Marburg in accordance with Dr. Meyer's plan¹ of several (eight in this case) entirely disconnected buildings, containing from ten to forty patients each, with open grounds, out-of-door occupation, no high-fenced airing courts nor mechanical restraint, and with the light portion of the window-sashes made of wrought iron in all but the quiet wards so as to avoid the appearance of bars. At my latest information two other asylums were building upon the same plan, and in about a dozen there was absolute disuse of mechanical restraint. Professor Westphal's wards in Berlin, with which ours have been invidiously compared, having one attendant to each three patients, or about three times as many as in our State institutions. In Belgium the vast majority of the insane are treated in asylums similar to those of other countries with a rather liberal use of restraint, several hundred being let out to peasants in Ghel to work about the farms, with now and then an ankle-chain, until very lately at least, to prevent running away or active violence, and being sent to an ordinary asylum so soon as they become unmanageable under the peasant's discipline, a method not yet followed in any other country.

Recent Scotch and English advances have been so fully described in the JOURNAL² and in the Seventh³ and Tenth⁴ Annual Reports of the State Board of Health of Massachusetts, that it is not necessary to more than briefly allude to them here. Conolly never took the position that mechanical restraint should *never* be used in the treatment of the insane, but maintained that the very rare cases where its use is desirable occur so seldom that it is possible to manage large asylums for years without once resorting to it. With very few exceptions, this was the position of English superintendents twenty-five years ago⁵ and remains the same now, as it is also in Scotland, the only real change that has taken place being, according to my observation, the abandonment on both sides of the extreme views that were advocated by a few persons in the heat of the debate on Conolly's reform, and a gradual decrease in practice of the cases in which mechanical restraint would be considered the best means of treatment. Neither Dr. Bucknill's utter discarding of mechanical

restraint under all circumstances nor, at the other extreme, Dr. Shepard's use of it in eight individuals at Colney Hatch in the course of a year, with an average daily number of a little over one thousand patients, represents any considerable body of English or Scotch medical superintendents. In the best asylums in England and Scotland not far from three fourths of the inmates are occupied, many of them profitably, some hardly being able to do more than trundle a wheel-barrow under direction: in others very few patients work, and there are all possible intermediate degrees of practice. Those amusements are encouraged, and to a greater or less extent carried out, in which the insane can themselves take part. Mechanical restraint is so rarely resorted to that it has been said, and I have no doubt with truth, that it is possible to go the whole round of English or Scotch asylums without seeing any more of it than occasionally soft mittens, or long sleeves closed at the ends which simply prevent the free use of the fingers, leaving the arms free. I have never seen any other forms in frequent visits to many of their institutions. The large panes of plate glass, and the unbarred wooden sashes first used at Rainhill, now not uncommon in England and Scotland, have the great advantage that each ward, or even room, can be managed to suit the needs of its occupants, the windows may be precisely like those of an ordinary house, they may be arranged so as to open just wide enough not to allow the passage out of the human body, or they may be protected in cases of violence by a shutter which is so concealed as ordinarily to hardly indicate its presence. It is seldom used, however, and I found on the day of my visit to Woodilee, last year, that with about five hundred patients, only sixteen had their windows protected during the previous night, and none at the time of my inspection. These shutters, although so little used, are less unsightly and prison-like than those, some of which are quite generally found closed even in the daytime, in our own State. Dr. Tuke's open-door system⁶ has been maintained at Cupar by his successors, Dr. Fraser and Dr. Brown; it has been adopted in his own private asylum, and Dr. Rutherford has extended it to every ward in his new asylum for the insane of one half the City of Glasgow, the following description of which, in his own words, seems to me quite just. Some of the attendants even have no keys, but the doors of course are always locked at night.

"A year has again passed without the occurrence of any serious accident to patients or attendants; indeed, no untoward event of any kind has occurred to disturb the harmony of the institution. . . . With three hundred and eighty-two acres of land surrounding the asylum, there can be no lack of means of employment for the patients, and of such a kind as cannot fail to still further develop those principles of treatment in which this asylum has taken a decided lead. . . .

"The nature of the work necessarily varies with the season of the year. It consists of the cultivation of the farm and garden, together with ordinary estate work, such as road-making, planting, fencing, draining, quarrying, building, etc. In quarrying, building, and conveying the materials, about forty men and their attendants have been regularly employed during the past two years. . . .

"Besides the one hundred and fifty men who work out of doors under the care of ordinary attendants, and the twelve able-bodied men who act as house cleaners

¹ A full description is given, with a sketch of the hospital and grounds, in the *Archiv für Psychiatrie und Nervenkrankheiten*, vii, 224.

² August 12, 1875. August 26, 1875. September 9, 1875. October 14, 1875. December 9, 1875. April 13, 1876.

³ *Diagnosis of the Mind* (169 pages), by C. L. Folsom, M. D.

⁴ *An Asylum or Hospital Home* (2 pages), by T. S. Conston, M. D.

⁵ The Tenth Annual Report of the Lunacy Commission of England, pp. 123 to 209, in which the opening of one hundred and eighty-nine new, or altered, or enlarged, or public and private asylums, are given, and the present state of the question is fully discussed before the British Medical Association, as reported by Dr. T. L. Rogers in the *Journal of Mental Science*, October, 1874.

⁶ See the JOURNAL, August 12, 1875.

about thirty are employed as tailors, upholsterers, store-keepers, shoemakers, bakers, plumbers, blacksmiths, painters, joiners, engineers, and stokers, under skilled artisans, who are required primarily for necessary tradesmen's work in connection with the institution, and are attendants only in the sense that they employ the patients of their respective trades. . . .

"This full employment of the patients renders it possible to give greatly extended liberty, and to do away with all remaining forms of mechanical or chemical restraint, such as walled courts, locked doors, stimulants, narcotics, and sedatives. No airing court or inclosed space of a like nature has ever existed at this asylum. The doors of the wards open directly into the grounds, and the whole estate is the patients' exercising ground. From fuller employment and increased liberty, with their accompanying diminished manifestation of insane acts, there proceeds a greater capacity for self-control. On this principle, all the doors of this asylum were originally constructed to open with ordinary handles and without a key. An unfortunate accident occurred shortly after the opening, due to a patient escaping, not through a door, but through a window, and it was considered prudent to alter those doors opening to the grounds by removing the inside handle. Two years ago these locks were restored to their original condition, and the asylum has, as your committee are aware, since been conducted with open doors, with fewer accidents, a smaller proportion of attendants, and with fewer attempts at escape than formerly. It is with pleasure that I am able to say, that many Scotch asylums are now conducted largely on the open-door system, and some of them very largely; but Woodilee is, so far as I am aware, the only public asylum which is conducted *entirely* on the open-door system, for in it there is not even a closed ward, where so-called refractory patients are confined."

Of course it is necessary, under Dr. Rutherford's method, to have the patients kept — in herds, I was inclined to say — under the direct eye and control of the attendants, perhaps more than would be generally tolerated among Americans, who, sane or insane, are so sensitive to constant supervision as to be almost intolerant of it, and who have not all yet fully learned the difference between self-will and independence or license and liberty. As a matter of fact, the open doors of the "open-door system" mean freedom to go in and out to one fourth, or at most one third, of the patients. The others are under such close watch and direction of attendants that even in Scotland most of the superintendents consider their liberty to be quite as much restricted as by the locked doors, and regard the open doors as more useful for certain selected patients than as a system for all. The enlarged liberty now given to the insane in many asylums of Great Britain consists in substituting the watchfulness of trained attendants, with the educated self-control of the patients, for high fences and indoor seclusion, and contrary to what seems the prevalent opinion here, not in allowing irresponsible lunatics to wander about the country on parole. Dr. Sibbald's abandonment of high-fenced airing courts has been followed in Scotland universally, and to a less extent in England. In both countries fences five or six feet high are usually considered quite necessary. The fifteen hundred pauper insane boarded out in families¹ under the Lunacy Commission are

in the main well cared for, and with constant supervision the plan is a thorough success, now that the difficulties of securing good attention and of preventing a certain amount of illegitimate births have been obviated. Under the advice of Mr. Mould,² of Cheadle, the medical superintendent of one of the asylums near Birmingham, the trustees have recently purchased or hired several dwelling-houses within an area of two miles of the main building, by which means it is practicable to classify and treat the patients under much more favorable conditions than formerly. To a less degree also elsewhere in England and in Scotland, pleasant houses are used, especially in the summer, for the entertainment, or as a seaside resort, of parties of patients one after another.

That an enormous improvement has taken place in the condition and behavior of the insane from these steps goes without saying. The change from 1874 to 1880 in Dr. Clouston's wards at Morningside, for example, would have seemed to me almost incredible if I had not myself seen it. The great change in Scotland is due largely to the wisdom of Sir James Coxe and Dr. Arthur Mitchell, as shown in the policy³ they inaugurated in the lunacy commission of working with the utmost harmony and courtesy *with* the asylum officers rather than against them; but I fancy that still more has come from the genius of such medical superintendents as Clouston, Sibbald, Tuke, and Rutherford, even if their example has not always been followed, from the wide experience of the medical staff generally, and from the confidence of the community that the asylums will keep ahead of its just demands rather than behind them.

As already intimated, the men whose asylums are held up to us for immediate imitation are leaders in their own countries, and it is still doubtful how far their examples will be followed even at home, but Marburg, Gheel, Rainhill, Morningside, Cnpar, Woodilee, and Cheadle have important lessons, that the usual restrictions upon the lives of the insane can be very much reduced to their great benefit and with perfect safety, — a matter which is of no small importance to those who have known the misery of needlessly rigid confinement. In our country, where employment is as a rule abundant, attendants leave the asylums and seek less confining work if required to give as close attention to patients as the open system demands, and still it is almost impossible in most of our asylums to secure attendants enough, even without raising our standard of requirements. Where, too, patients require so many attentions in the way of serving food, care of clothing, etc., as ours, we need a larger proportion of attendants than in European pauper asylums, where a shirt is a shirt if only of the right size. Our rigid winters and intensely hot summers absolutely forbid for a considerable portion of the year that out-door exercise and employment which are thought in England essential to the success of the non-restraint system, and the demoralization created by confinement in-doors during January, February, and March is not easily counteracted before the burning heat of July and August excites it again. Our patients are of so many social grades

² See the Presidential Address delivered at the annual meeting of the British Medico-Psychological Society, by George W. Mould, M. R. C. S., in the *Journal of Medical Sciences*, October, 1880.

³ There is no better description of the workings of the Scotch Lunacy Commission than Dr. Arthur Mitchell's testimony, pages 461-490 of the Report from the Select Committee on Lunacy Law, London, 1877.

¹ See the recent Annual Reports of the Lunacy Commission of Scotland, especially Dr. Fraser's and Dr. Lawson's Reports.

that classification to avoid want of harmony is extremely difficult; they demand more than in Great Britain that the noisy and violent be secured from annoying or injuring the quiet; they are far less willing to be obedient to authority of physicians, and especially of attendants; they require better food, nicer clothing, more little attentions; fewer of them are accustomed to manual labor or willing to "lower themselves" to it, or to "work for the State," to which their relatives and friends also often object, and a *larger proportion* of them are of the worst type of insanity, although our worst type is no worse than the worst of Scotland and England.

When I first visited Europe, in 1873, I had seen in this country from six to eight per cent. of patients in mechanical restraint; I knew cases where the camisole had been continued months or even years after its use had ceased to be necessary or best, even on the ground of its original adoption. In Professor Westphal's wards in Berlin, where mechanical restraint is never used, I saw a vigorous, well-developed young girl of about twenty held in bed by three strong young students, during a maniacal paroxysm, in a manner which seemed to me indelicate and on other grounds objectionable, but with the merit that it was discontinued immediately it was not needed. Coming back to the United States I found in one hospital six women wearing strong camisoles and bound in chairs, the feet of three not resting upon the floor or anything else; in another, out of three hundred patients, six were in iron handcuffs, and three were fastened by a few iron links to the wall or to chairs in which they were put. Visiting England again, I found that what seemed to me dangerous doses of morphine, hyoseyamine, and digitalis were not seldom used in place of mechanical restraint, although with many of their best men that I could mention such was not the case, less drugs, if anything, being used than here. I thought there was in some asylums indication of violence which might have been easily prevented by mechanical restraint. Certainly, an occasional patient running about half-naked and shivering in a temperature of 60° F., or exhausted to the point of inability to fairly stand, or clothed by day and covered at night with thick duck quilted almost to virtual indestructibility, or kept several hours together in a cold bath, would suggest to advocates of the judicious use of mechanical restraint some justification of their method of treatment. After my return I found an insane man who had worn iron handcuffs day and night for several years, and another with iron handcuffs fastened to an iron chain around his waist, which were removed twice a week for a change of the clothing that he wore day and night. All these cases of exercise of mechanical restraint which I have mentioned are, in my experience, common enough in the treatment of the troublesome insane in almshouses, and very exceptional in the asylums of this country, as extreme drugging is said to be in England; but still it seemed to me that a system capable of such abuse, and indicating what, from my stand-point, was an entirely wrong conception of insanity, to say nothing of those institutions where mechanical restraint is habitually used by the attendants and not by the medical officers, should be abandoned; and yet I remember that when in Germany and England there appeared to be so many serious objections to the dogmatic adherence to "non-restraint" that the *judicious use* as a *medical prescription* in rare cases of the least objec-

tionable forms of mechanical restraint seemed on the whole best. After all, such matters depend more upon the manner of the observance of the rule than upon the rule itself to an extent which is not always indicated in printed reports or revealed to any other than expert visitors. The advocates of non-restraint admit that there are cases where individual patients might have been better treated with mechanical restraint, but maintain that the moral effect on the others is better for its absolute, or nearly absolute, disuse. They show, too, that the system of non-restraint has been an educational one upon the medical staff and attendants, by requiring them to devise substitutes for mechanical restraint in occupation, diversion, and careful medical treatment. So far they are certainly right, and with all the faults of their system it seems to me clearly better than that generally, but not universally, practiced in the United States.

We have passed the time when theory and speculation are most useful in treating this whole question, and must now await the teachings of experience. The asylums of this country and France and, to a less extent, those of Germany and parts of England can do much more than they are now doing in enlarging the freedom of the insane; we all can add to their means of comfort and happiness, and possibly raise the percentage of recoveries. In such climates as ours we should be obliged to exercise our utmost ingenuity to devise in-door occupation for the worst parts of the year, and with our people we would require more attendants. Those of our hospitals needing more and better-trained physicians will supply that want with the general elevation of the standard of medical education in our colleges and universities.

Whether or not we go as far as Dr. Clouston or Dr. Rutherford would advise, we cannot proceed far in increasing the liberties of our insane without educating the community to look upon mental disorder as a disease which is to be treated upon the principles of medical science and common sense, and to regard insane persons as pretty much like other people, with narrower powers of self-guidance and self-control, as they now persistently refuse to do. People must learn that it is wrong, as well as unwise, to lie to them, and the abominably wicked deception pretty uniformly practiced towards them outside of asylums must be given up for fair dealing. The insane must believe that they will be treated at least honestly, and when sent to an asylum committed in an honorable, straightforward manner, and not entrapped by underhand devices. Attendants must become accustomed to the new order of things. The doctors have before them the long, tedious work of overcoming the natural suspicion of those patients who feel that they have been cheated by their friends and caught in the hospital trap, of organizing a vast work with insufficient means in the face of unjust popular distrust, and of attempting to educate into some sort of habits of self-help the old asylum boarders, in whom years of mental and physical inactivity have produced corresponding helplessness and loss of power of self-restraint, to the demoralization of those newly committed, — all this, beside living and working among people many of whom have lost comparatively little in intellectual capacity while so given over to the violence of evil passions and impulses as to make them, not seldom, in the highest degree dangerous and even homicidal unless under proper control, and all of whom have been sent to the

asylum because they were beyond the capacity of treatment outside. It lies in the power of the community and of the State to either help or hinder the solution of this difficult problem.

The duty of the State in this matter is one which is engaging more and more the public attention each year, and the more any country has already done for the protection of its insane, the higher is its standard raised for future work. In England, during the past few years, there has been a strong movement for better safeguards against improper commitments to insane asylums, and for "an efficient and sufficient inspection of asylums such as this country has never yet enjoyed."¹ An intense opposition has arisen, too, in the medical profession and outside of it, to the asylums which are not directly controlled by the State, on the ground that "the business of the boarding-house" conflicts with the best interests of the patients,² a danger far less in the United States than in Europe, but one which can be fully provided for in either country by efficient State inspection. The feeling in this country, at least, is very decided that private asylums are not only useful but very much needed, and certainly there is no more danger that the superintendents of them will not adopt the best methods for the early cure of their patients than that other professional men will fail to see that their true interest lies in doing well and speedily whatever they undertake to do.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES UNDER THE CARE OF DR. R. T. EDES.

PROBABLE SECONDARY DEGENERATION OF LATERAL COLUMNS OF CORD. EXAGGERATED REFLEXES.

CASE I. Alexander D., aged sixty-one, laborer. During the last year has had pain in left hip, knee, and outer side of foot. Slight headache referred to right frontal and right occipital region.

Refers to some previous occasion when he had a sudden attack of pain but says he was not paralyzed. (It is difficult to disentangle this story from that about the cataracts which were operated upon four years ago.) The want of clearness is, however, so far as one can judge from continued conversation, rather a congenital trait than a symptom connected with his present trouble.

Patella reflex is exaggerated on both sides, but rather more upon the left. The ankle clonus is very well marked; ordinary reflex is exaggerated; he walks with the assistance of a cane, but with the "clinging" gait of spastic paralysis; the left leg weaker than the right; a very distinct reflex can be obtained from the tendon of the triceps extensor cubiti. Discharged relieved.

SUDDEN ATTACK OF HEMI-ANÆSTHESIA WITH SLIGHT MOTOR PARALYSIS: INCREASED TENDON REFLEX ON THE AFFECTED SIDE; DIMINISHED SWEATING ON THE AFFECTED SIDE; IMPROVEMENT WITHOUT ACTIVE TREATMENT.

CASE II. Peter O., aged forty-one. March 17th. Ten years ago had a chancre. Is a drinking man. Last January, the next day after shoveling snow, when he

was exposed to cold, began to notice numbness in right arm and leg, which has continued to the present time; diminution of power in same limbs; no pain.

March 18th. Tactile anæsthesia in right hand is very decided, two points being felt as one at one and one half inches apart; sensibility in right foot is diminished; ordinary sensation seems the same on both sides of the face, but says he does not feel any sensation in shaving on right side of face; sensibility to pain diminished on that side; the same condition of hemianæsthesia exists on the trunk; power of coördination diminished in right hand.

On the anæsthetic side, patella tendon reflex is much increased and ankle clonus is very decided; sensibility to Faradism not materially changed.

March 19th. Says he has more pain on right side than on left, and has a pricking sensation like pins and needles.

March 21st. Temperature of surface on both sides is the same as measured on thorax and on face.

Says that he does not sweat on paralyzed side; one quarter of a grain of pilocarpin was given subcutaneously causing profuse sweating; there was, however, a decided difference between the two sides, the anæsthetic (right) being very moist, while on the other the perspiration ran off in drops and streams; the temperature was at this time a little higher on the left side of thorax.

March 28th. Thinks he uses his leg better and that it has more feeling in it; the hand is also better; sensation, however, is still obscure.

April 11th. Discharged relieved, thinking that he is able to go to work.

Returned to the hospital about October 1st. Has been at work as a gardener through the summer. Now has a return of about the same symptoms.

GENERAL PARALYSIS; HEMIPARESIS; TENDON REFLEX NORMAL ON THE PARETIC SIDE, ABSENT UPON THE (COMPARATIVELY) NORMAL SIDE.

CASE III. Eben R., aged forty-six, was "dumped" at the hospital without a history. He answers questions well enough but it is difficult to get a very connected story from him. He has been employed in a hotel, but it is not clear in what capacity, whether as engineer or cook.

He complains only of weakness; says he was well up to a few days ago when he vomited, which he attributes to the irregular habits and abundant opportunities for eating incident to his occupation.

His manner is peculiar; expresses himself as satisfied with everything about him, including his own condition, although he is weak and passes his urine in bed; is at times delirious; a little slurring of some of his words.

A few days after entering there was apparent a decided weakness of the right hand, which he could not put on top of his head, and the movement of the facial muscles about the mouth was a little less marked on the right side.

In the absence of history of previous disease it was remarked at a clinical lecture that although it was possible that his mental and bodily condition might be the result of a slight hemiplegia, or rather a localized lesion giving rise to a hemiplegia, yet the probability was strongly in favor of "general paralysis." It was then found that friends had recently visited him who stated that he had not been in his right mind for some years,

¹ The Lancet, December 4, 1880.

² Ibid.

that he had been careless about his money, and his wife had not considered him capable of taking care of himself for some time.

A curious condition of tendon reflex was noticed. Upon the right (paretic) side the patella reflex was about normal. A certain amount of ankle clonus could also be developed in the corresponding foot, though not very persistent. With a slight degree of pressure there could be got five or six movements with about the usual rapidity and diminishing intensity. On the left side there was neither patella reflex nor ankle clonus.

This condition was supposed to be due to (1) the absence of tendon reflex found in a certain though not very large proportion of cases of general paralysis,¹ and (2) the exaggeration of tendon reflex and development of ankle clonus supposed to be connected with degeneration of the lateral columns of the cord either independently (when it is usually bilateral), or secondarily to cerebral lesion as probably happened in all three of the cases reported here.

If he had had no hemiplegia he would probably have had no tendon reflex, but the local cerebral lesion was able to produce an excitant effect on the lateral columns of the cord upon the right side sufficient to neutralize the effect of the general paralysis.

The following two cases illustrate a not very uncommon class, where the diagnosis remains doubtful on account of the favorable termination. It would not be at all difficult to think of them as incipient myelitis, both from the character of the exciting cause, usually exposure to cold, and from the symptoms pointing to an affection of the lower part of the spinal cord. If they afterwards passed into the classical transverse myelitis the initial symptoms would appear characteristic, but recovery leaves us in doubt as to just how far the lesions have advanced, whether to some slight organic changes, such as may readily be repaired, or merely to a disturbance of the circulation (congestion or anaemia?).²

CONGESTION? OF SPINAL CORD.

CASE IV. John Hogan, forty-two, boiler maker. Was in hospital last January with chronic bronchitis.

April 28th. Four months ago began to have cold feet; numbness and feeling of pins and needles; pain in calves; legs drawn up at night; can walk but cannot stand very long on account of weakness; no feeling of constriction about body; no pain in back; bowels constipated; has some cough and pain in chest.

Attributes his trouble chiefly to lying on his back on the cold iron when riveting boilers from the inside.

April 29th. Peculiar sensation in legs below knees; on touching legs with point of a knife apparently some hyperaesthesia; says he can feel the touch of the knife all over the leg; tendon reflex present but not very marked. Caps. Hot bath to feet and legs.

May 2d. Discharged well.

CONGESTION? OF SPINAL CORD; UNILATERAL FACIAL PARALYSIS.

CASE V. Edward B., aged forty six, long-boreman. Has had a cough with expectoration for which there are no physical signs to account.

¹ See paper by Dr. J. C. Shaw, *Arch. of Med.*, 1879, vol. ii., pp. 16-50.

² Those who feel entirely free from the doubt above expressed as to the precise condition of the cord may wish to consult many recent textbooks with special reference to the anatomy of anatomical e. A. J. G. and the anatomy of Dr. M. S. in the *London Lancet*, March 26th, April 21st, 1881, Feb. on the Influence of the Circulation on the Nervous System.

On March 7th he had severe pain across small of back and in both hips; later in both knees and elbows; joints were swollen, slightly tender; no reddening; frontal headache.

On the 13th a facial paralysis made its appearance on the left side for which he was transferred to the nervous and renal service. The facial paralysis was then complete. The movements and sensations in his hands normal; sensation and perception of pain in feet much diminished; complains of pain between the shoulder blades and in the calves of the legs and feet; walks with a staggering gait, but nearly as well with eyes shut as with them open; cannot, however, stand with eyes closed; falls backward.

A few days afterwards it was found that tendon reflex sufficed to produce some twitching of the rectus femoris, but not enough to lift the foot. It seemed clear that there was no necessary connection between the facial paralysis and the paraparesis.

The treatment for the paresis of the lower portion of the body consisted of rest in bed, to which the patient somewhat objected as he was by no means unable to walk, and in cups near the painful spot in the back. The Faradic current at first produced little, if any, reaction in the facial muscles, while the galvanic did so. On April 24th it is noted that the facial muscles reacted to Faradism.

He was discharged relieved, being able to walk quite well, free from pain, and with the facial paralysis much improved.

ANOMALOUS FEVER ACCOMPANYING AND SUCCEEDING MEASLES; ERUPTION PERSISTENT AND DUSKY; DEATH; NO SPECIAL LESIONS EXCEPT A RENAL THROMBUS OF TOLERABLY RECENT FORMATION.

CASE VI. Lydia M. A., aged twenty-four, dressmaker, Myrtle Street, Boston. Apparently strong and well developed. Is said to have been insane several times, once after some acute disease, last time two years ago. Was taken sick on April 14th with an eruption appearing first on face. Continued to work until April 16th, when she "took cold;" was then seen by Dr. J. B. Ayer. There was then an eruption in crescentic patches on face and body. On the 20th this had faded on the body, but had run together on the face. Temperature 102° F. That night she was very much excited, and the next day could not be managed. The eruption on face was then quite diffuse, on the body fading; eyes had been sensitive to light and had watered some but not as much as usual in measles.

April 22d. Tried to get out of the window. Temperature 98.2° F. Entered hospital.

April 23d. Dark-red, patchy eruption, with a somewhat petechial appearance. p. m. Not so delirious; tells a connected story. Has had (she says) no catarrhal symptoms, no cough, or sore eyes. Bowels constipated; temperature 101.5° F.

April 24th. Eruption fading from body, distinct on abdomen; hands lighter color; tongue red and dry; temperature, morning, 101°, evening 103° F.

April 25th. At time of visit patient lying in bed delirious, cheerful, and singing a song of which the words were mostly incoherent, but into which she incorporated, with tolerably correct rhythm, remarks in reply to those made by bystanders or to questions. Her hearing and mental perception seemed very acute. Measle-like eruption persists on lower part of abdomen chiefly, but also on chest, arms, and legs; face flushed

and of a dusky red; tongue dry but not black; lips dry and red; temperature from 103° to 104° F.; urine, color normal, acid, specific gravity 1027, albumen trace, abundant deposit of amorphous urates.

April 26th. Eruption fading; delirium about same; temperature from 101° to 102.5° F.

April 27th. Much quieter; eruption faded, but still perceptible; flush nearly gone from face; pulse 140, regular and feeble; expression is rather one of indifference and weakness than of stupor; respiration not hurried; temperature from 101.5° to 102° F. (bath and quinia).

April 28th. Almost unconscious; flush nearly gone from face; eruption on body dusky but distinctly visible; pulse 148; temperature from 102° to 104° F.

April 29th. Died.

Autopsy by Dr. E. G. Cutler. (Only the more essential points given.)

Lungs containing many hemorrhages. A dense organized thrombus, light and yellowish, which plugged the primary branch of the pulmonary artery on the left side. Left lung filled with small hemorrhages.

Spleen two and one fourth ounces. Rather light, with here and there punctate hemorrhages.

Intestines normal. Stomach with punctiform hemorrhages.

Kidneys. Left, four and one half ounces; tubules rather cloudy; artery healthy; vein contained a thrombus, which was quite adherent to the wall, it continued only into ascending vena cava, and was lighter colored and older in that portion. Right, three and three fourths ounces; vessels healthy.

Brain. Membranes were considerably injected, chiefly on the left side. On section, aside from tolerable amount of injection, nothing was found in the great centres.

Uterus and ovaries not abnormal.

TYPHUS; MEASLES.

CASE VII. Fanny B., aged twenty-five, entered the City Hospital, April 2, 1881. Her case was diagnosed as incipient phthisis, there being some slight râles below the clavicles. She was discharged April 28th. During her stay she had occupied for two or three days a bed next to one of the cases of typhus reported in the JOURNAL of September 8th. This was probably about April 14th to 16th. On the evening of the day of her discharge, April 28th, she was restless and thirsty at night. When first seen on May 2d she was feverish with a quick pulse and general pains. As her history pointed to pulmonary trouble, although no cough or expectoration was then present, her lungs were examined with negative results. On the next day a slight dusky eruption appeared on the face. On the body and arms an eruption of small pink spots, much like rose spots. There had been one loose defecation. The next day, May 5th, the eruption a little more copious; the face with a dusky flush, a little swollen; on the body the eruption is still papular. On May 6th eruption dusky and run together in dark-red patches mingled with spots more or less resembling rose spots. It covered the whole body and limbs. On the 7th and 8th it had begun slightly to fade. During this time she complained first of severe frontal headache, then became stupid with some mild delirium. The bowels, with the one exception already noted, were much constipated. At no time were there any pulmonary symptoms whatever. On the 10th of May the temperature

began to fall rapidly and steadily to the normal point, which it reached on the morning of the 15th, and there remained. As her strength was somewhat slowly re-established she reentered the hospital on May 21st.

The interest of this case lies solely in the diagnosis. She was seen two or three times by gentlemen connected with the Board of Health, one of whom pronounced it a case of "measly typhoid," another "typhoid measles."

To take the two parts of this diagnosis separately it is obviously much more difficult to eliminate the typhoid than the measles, but it seems to have differed from the former in the length of the disease, since a typhoid so severe as this does not usually terminate in so short a time, nor with so abrupt and definite a defervescence; in the absence of diarrhoea, not, to be sure, very conclusive; and especially in the character of the eruption, which although described as *like* rose spots at first, was most decidedly *not* rose spots at a later stage, and which involved very thickly the *whole* body. None of the several gentlemen who saw the case considered it a *typhoid* eruption, although some of them were equally sure it was not *typhus*. It certainly resembled very closely the eruption in one of the cases reported in the JOURNAL of September 8th. The period of its appearance was also earlier than is usual in typhoid.

As to the measles, the disease was, to be sure, present in the house where she lived, but if this attack originated there we must assume an incubation of either twenty-six days or twelve hours. When she was in the hospital the first time she was not in the ward where contagious diseases are placed. It is very doubtful whether the eruption of measles can be so modified by a debilitated constitution as to assume any such form as in this case. There were no catarrhal symptoms. And, lastly, when in the hospital the second time, in another ward, she was attacked with febrile symptoms on May 28th, succeeded by a (slight) loose cough and a highly characteristic eruption of measles on the 30th.

The slight physical signs at the apices of the lungs noticed when she first entered the hospital completely disappeared, and there have been up to the present time (September) no further symptoms of pulmonary trouble.

TYPHUS?

The following case was seen with Dr. Clement, of Roxbury. I regret that neither of us preserved any more complete notes.

CASE VIII. A man, English by birth, but having resided in this country for some years, had recently returned from a visit to the old country. He was first seen in Dr. Clement's office on April 7th, having worked the day before. His temperature was then 103° F. From the 12th to the 15th his temperature was from 104° to 106° F.; he had much active delirium; there was no diarrhoea; the eruption somewhat resembled rose spots, more thickly crowded than I have ever seen them, and covered the body.

On the 21st he was fairly convalescent, and advanced very rapidly to complete recovery.

No other cases occurred in the neighborhood.

—Virchow will soon be sixty years of age, and preparations are being made in Germany for a suitable celebration of the occasion.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

D. R. OLIVER, M. D., SECRETARY.

PROCEEDINGS OF SECTION OF CLINICAL MEDICINE AND MEDICAL PATHOLOGY.

MAY, 1881. DR. H. I. BOWDITCH presiding.
DR. F. C. SHATTUCK read a paper entitled

A CURIOUS ENDEMIC.

of which the following is a brief abstract:—

Early in October, 1880, M. D., a vigorous seaman, twenty-five years of age, consulted me at the outpatient department of the Massachusetts General Hospital. He came up from Provincetown for advice, and related the following interesting facts.

June 5, 1880, he sailed on the schooner *Nellie* Swift from Provincetown for the Grand Banks on a fishing voyage. The crew consisted, he says, of seventeen men and the captain. About August 1st one of the crew, a Portuguese, began to complain of soreness in the calves of his legs and a "dead" feeling in his ankles, which was soon followed by swelling of these parts. No headache or vomiting. This man was sent home. Soon after others of the crew began to be similarly affected, and, according to my informant, every single one of the ship's company has been thus affected since then in varying degrees of severity. The faces and bellies of some of the men swelled, and the captain "took water out of the privates" of some of them. One man is now at Provincetown so ill that he is not expected to recover. My patient complains chiefly of pain in his feet and legs, which have been considerably swollen. The swelling is now confined to his ankles and feet, and is less marked in the morning than in the evening. He is rather weak, and sweats easily, the sweat having a peculiar sour smell, he thinks.

Very careful physical examination failed to reveal any change in the viscera of the chest or abdomen. The urine was examined by Professor Wood himself, and found normal in every way.

He was given some simple remedy and told to come back in a week, which he readily promised, but failed to do. A week later, however, a friend and ship-mate of his came to me and told me that the first man was doing well. This man had also been affected in the same way as the other, — pain, numbness, and swelling of the legs, with general *malaise*, — but considered himself as about well when I saw him. Physical exploration and examination of the urine were negative in his case also.

Both men were carefully questioned as to the cause of this curious outbreak of disease, but no clue to it was obtained.

The schooner — as is the custom with many of the Provincetown fishing vessels — passed the previous winter in the fruit trade with the West Indies, visiting Nassau among other places.

They knew of nothing peculiar or unusual about the ship in any way. Other vessels from Provincetown started about the same time for the same fishing grounds, laying in supplies of water and provisions from the same source as the ship which single and alone had any sickness aboard unusual either in character or amount. Both of the men whom I saw were positive that the water was to taste and appearance

good, fully as good as they had been accustomed to on other voyages and other vessels. Their testimony on this point is at variance with that of the steward.

Learning that a number of the cases had been under the care of Dr. J. M. Crocker, of Provincetown, I wrote to that gentleman, of whose kind reply the following is an abstract:—

"PROVINCETOWN, October 15, 1880. Some five or six of the crew of the *Nellie* Swift have been under my care. Fifteen of the nineteen men belonging to the schooner have been attacked in precisely the same manner, though in different degrees of severity. The last case proved fatal last Tuesday. The feet, legs, and thighs were badly swollen; the penis and scrotum immensely so. There was dyspnea and the physical signs of effusion in the chest. The urine was scanty, high colored, free from albumen, but contained a few granular casts and was filled with fungi. At the autopsy serum was found in the pleural, pericardial, and peritoneal cavities; the heart was flabby, but otherwise normal; the kidneys were normal in appearance and size; the spleen was unusually small. There have been to my knowledge no hemorrhages, and no symptoms pointing to scurvy, save oedema of the ankles. The steward says that the drinking-water first used was thick and ropy, but none of this is now left."

The questions now arise as to the nature and cause of this outbreak of disease. There can be no doubt that it was due to a poison of some kind connected with the vessel, possibly with the water casks; for, it must be remembered, the water and other supplies of all kinds were drawn from precisely the same sources as were those of other vessels the crews of which remained perfectly healthy. But farther than this the facts at our disposal do not permit us to go.

While fully conscious of the meagreness of my report it still seemed to me worthy of being put on record, and the hope is indulged that some reader may be able, either from his experience or his reading, to throw light upon the source and nature of the disease.

DR. GARRETT suggesting trichinosis as a possible explanation, DR. ARBOTHNOT asked if it was usual for pain to begin in the calves, and if oedema was an early symptom. The reader thought not.

DR. CUSHING asked whether the solution might not be found in a peculiar weather condition existing at the time.

DR. SHATTUCK replied that this and apparently every other possible factor had been excluded, except what existed in the ship itself.

DR. BLODGETT said that the symptoms as narrated in the paper presented very little similarity to those of acute trichinosis. There was a notable absence of fever, no great pain, the swelling was of the nature of a serous transudation appearing in the form of anasarca, followed later by effusion into the serous cavities; and, more than all, the upper extremities were not reported to have been seriously affected. Two cases of trichinosis came to autopsy in Berlin, and were the subject of microscopic investigation by Dr. Blodgett. In one the parasites had been recently introduced into the system, and caused the death of the patient by the excruciating pain, the high fever, and consequent exhaustion attending their dissemination through the muscular system. In the second case the parasites had been taken into the system thirty years before, and were inclosed in regular envelopes which were often the seat of subsequent calcification, so that they appeared

as fine white points which were visible to the naked eye in the mass of the muscles. In this case there was the history of a sudden and acutely febrile attack, accompanied by great pain throughout the body at the time of the infection by the parasites, with a subsequent slow recovery, and ultimately death from another cause. In both these cases the trichinae were found abundantly in the muscles of the upper extremity as well as in those of the lower, seeming to be pretty evenly scattered throughout the body, of course being absolutely more abundant where the greatest masses of muscular tissue are found.

Everything seemed to point to the vessel itself as the source of infection in these interesting cases, though there was very little in the history of the vessel or of the patients which pointed to any recognized disease.

Dr. E. W. CUSHING asked if hamorrhages always occurred in scurvy; if the vessel might not have been infected, so to speak, so as to bring about a depraved condition of the blood in those on board, thus inducing the effusions which were the most prominent symptoms.

In relation to the remarks of Dr. Cushing respecting scurvy, Dr. BLODGETT said that the tongue and mucous membranes are usually affected in this disease, often to a very marked degree, while on this vessel there was no abnormal condition of these structures.

The chairman, in closing the discussion, said that the cases were certainly of unusual interest, and the report clearly showed that the cause must have been resident in the vessel itself or the supplies. He did not see how any diagnosis could be established without a complete report of the microscopic pathological appearances, the absence of which he deeply regretted.

Dr. E. G. CUTLER reported a case of

MEASLES FOLLOWED BY PLEURISY.

Mary McCree, a domestic in a family where several children had had the measles, was brought to the Carney Hospital, December 25th, with a well-marked case of the eruption. She had considerable fever, coryza, and photophobia, and the throat was somewhat sore. The 28th the eruption was disappearing, she felt quite bright, and the temperature was nearly down to the normal. She progressed fairly well, still remaining in bed, however, till January 3d, when she had a cough and pain in the right side, preceded by a slightly chilly sensation.

The temperature ran up to 102.6° F.; pulse 108. On the 5th the temperature was 103.2° F.; pulse 96.

There was found to be flatness on the right side from the base of the chest to just below the angle of the scapula, with absence of vocal fremitus and respiratory murmur behind. In front the respiration was exaggerated and at the side from the sixth to the eighth rib there was absence of respiration. Decubitus was on the right side.

For the next few days the effusion slowly increased till it reached the lower angle of the scapula behind, and in the axillary line ran up a hand's breadth further.

Four ounces of whiskey daily, quinine, five grains, three times a day, and iodine ointment were the remedies made use of. For the next few days sweating at night was a source of considerable annoyance, when, on the 20th, the effusion was found to be decreasing. On the 31st quinine diminished to two grains three

times a day, and iodide of potassium, one grain, given three times a day in bitter infusion.

February 3d, the effusion having come to a standstill, she was painted with cantharidal collodion, which raised several large blisters. This was continued for several days in the shape of flying blisters.

February 17th, cod-liver oil, a teaspoonful thrice daily, given in addition. Continued improvement. On March 6th the respiration was found to be normal over whole of chest, perhaps a little feebler over base behind. On percussion, resonance diminished over back below scapula over space as large as an orange. Painted with iodine ointment.

March 22d. Left hospital feeling well, and ready to resume work. Scarcely any difference detected in two sides.

In the ensuing discussion the subject of German measles was introduced, Dr. Blodgett reporting several cases, said to be röteln, terminating fatally. The chairman called for the opinion of the section on the question of its non-identity with measles, and if not as to any reliable diagnostic signs. The views held by most of the members speaking seemed to be strongly in favor of their identity, judging from their personal experience and from the lack of any generally accepted diagnostic points.

AN ACCIDENT WITH HYDROFLUORIC ACID.

[The subject of this distressing accident was Mr. Robbins, assistant in the chemical laboratory of the Institute of Technology. The patient is a man of very acute observation as well as a considerable degree of medical information, and I urged him to prepare an account of his experience with this acid, as it was the first case of injury of this kind I had ever seen. He acceded to my request, and the following paper, with a few unimportant changes, is his own account of this rare occurrence. ALBERT N. BLODGETT.]

"Fluorine as an element, is as yet unknown, it never having been isolated. The reason of this is that it is so destructive to all apparatus used for the purpose. It has been studied in its compounds and reactions, and its atomic weight has been determined indirectly. It is the only element which has no known compound with oxygen. It unites with many other elements as a monatomic acid radical and forms fluorides and also forms quite a number of double salts. Nearly all these compounds affect glass in the presence of moisture. Its hydride is a strong acid like that of chlorine and is a gas. It dissolves many of the metals to form fluorides, is easily absorbed by water, and hence the liquid acid is obtained by saturating distilled water with the gas. It has little effect upon platinum or lead, and is transported in gutta-percha bottles as it affects neither this nor wax nor paraffine, but its action upon other organic substances is often very energetic. I once attempted to redistill some of this acid as it is formed in these bottles, but neglected to dilute it one half as is usually done when it is wished to condense it without a freezing mixture. When heated, the gas began to come over without condensing. It charred the wooden box which surrounded the receiver and dissolved and volatilized a piece of writing paper which was exposed to it, leaving only a slight film of a gelatinous substance, probably the gum from the sizing of the paper. Concerning the action of this acid upon animal tissues little is known. Wurtz's dictionary gives the fullest account of it which I have been able to find. He says in sub-

stance that it corrodes the skin, giving rise to insufferable pain, and produces a deep ulcer which is very difficult to heal; small drops of it being sufficient to produce white and painful blisters. I had not read this, and was not aware of the great severity of the action of this acid, and I carelessly used the stump of a match, the wood of which was saturated with the acid above referred to, to remove the lime, etc., from the surface of a piece of porcelain so as to obtain the freest action on the part where I desired to catch a hole through it. When I first noticed that it was getting upon my fingers I washed them and greased them with tallow, and thinking they were sufficiently protected I went on with my work. For about an hour and a half I had the match in my fingers the greatest part of the time. Just before I got the hole through I noticed that the ends of my forefinger and thumb were beginning to be unresponsive, and I felt a curious sort of dull pain that perhaps might best be described by saying that my fingers "hurt" a little. When through, I washed them well, applied dilute ammonia water and washed that off, and then applied bicarbonate of soda, but these measures did not relieve the pain from soon becoming very uncomfortable, and I dressed the fingers in a mixture of linseed oil and lime water, as it felt more like a burn than anything else. This was done between eleven and twelve A. M. That afternoon I made an organic combustion, and the pain gradually increased till toward the last it seemed a question whether the furnace or my fingers were hotter. In the evening I began to feel alarmed and consulted Dr. Blodgett.

"At this time the ends of the fingers were white and very hard, so hard indeed as to dull the scalpel with which he endeavored to cut away some of the skin. The action was still going on, and as the depth to which it had penetrated could not be determined a dressing of cold cream was applied, and later vaseline was used, but neither seemed to allay the steady increase of the pain which now most nearly resembled the sensation of a burn when held near the fire. The only relief obtained was by the application of cold and this was only partial, and the only variation in it was from bad to worse, and at last it became the most severe pain I can imagine, and it was not till four o'clock the next morning, and with the aid of one hundred and ten drops of laudanum, that I was enabled to obtain sufficient relief for a broken nap. The next day the pain had subsided and the acid had penetrated quite a distance below the skin, rendering the flesh totally insensible and hard, having abstracted all the water from it. The other fingers were only slightly swollen, and the swelling did not extend back as far as the hand, showing that the blood was not poisoned at all. My usual good health was only temporarily and slightly impaired by the laudanum, but no other medicine was given. The course of treatment was to remove the destroyed tissue. This it was thought best not to do with the knife but with polishes alternating with frequent soakings in very hot water were constantly employed, which proved effectual, although slow, in its operation, it being fully twenty days from the time of injury till the slough was all removed. It was very dry and tough, and by no means inclined to separate from the surrounding tissues. In ten weeks I abandoned all dressings to the fingers and was able to use them a little. Only a small permanent loss of tissue has resulted, but now, after three months the parts are tender and the sensation is perhaps permanently destroyed. This agrees with the action of

this acid as stated by Wurtz, especially as regards the pain, but he does not mention the very important fact that no pain is felt for some time after contact with the acid, which in my case was between one and one and a half hours, and by this time the surface has become so hard that it is difficult if not impossible to check the action underneath, so that the damage is for the most part done before one finds it out.

"The difficulty in healing appears to consist in removing the slough, as it heals very quickly when this is out of the way, and after the first siege of pain, which is a long and severe one, the sore is no more painful than any other of equal size. I think that should I meet with the same accident again I should lose no time in washing it off as thoroughly as possible and then apply water-glass if this were accessible; if not I should use an alkali, and if possible soak the part in water as hot as could be borne, and then apply cold cream or some other dressing which will keep the part soft and also exclude the air.

"I have also heard of two other persons who have had misfortune with this acid; they were Dr. C. F. Folsom and a Mr. Lodge. The latter had the end of his thumb badly burned. It was three months in healing and quite a loss of substance resulted. I think that books on chemistry and teachers of the science should give greater precautions as to the use of this dangerous reagent. From the fact that this acid so effectually hardens animal tissue without distorting it I think it might perhaps be employed by the histologists as a hardening agent for the soft tissues, especially of the nervous system, as a means of preparing them for microscopical study. I have never known this experiment to be tried, and it would be necessary to use it in very dilute form, but as far as my own observation extends, the action on the tissues would be exactly what is desired."

Dr. E. G. CUTLER reported a fatal case of

CEREBRO-SPINAL MENINGITIS.

and demonstrated the brain and cord, which were typical specimens. (Reserved for publication.)

Dr. BLODGETT said he had recently treated a case in which the symptoms were confined to the back part of the head and the upper part of the spinal column, and were accompanied by wild delirium, and some retraction of the posterior cervical muscles, so that the patient was digging the head into the pillow. The case strongly resembled commencing "typhus fever" but recovered without further symptoms. There have been several threatened relapses, but these have always been averted.

A vote being taken as to the advisability of the meetings of this Section being continued during the coming year, it was unanimously decided to do so.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MARCH 12, 1881. Dr. REYNOLDS read a paper on

SAFEGUARDS IN PRIVATE OBSTETRICS.

which will be found on page 389 of this number of the JOURNAL.

Dr. MINOT said he agreed with Dr. Reynolds as to the importance of preliminary treatment in cases in

which the patient was not in a perfectly healthy condition, and he thought the physician should devote himself exclusively to the patient, both during the whole of labor and for a reasonable length of time afterwards. But with most general practitioners this is very difficult, if not impossible, in some cases, owing to the multiplicity of other engagements. He thought that, in cities at least, obstetrics should be in the hands of specialists, who should do no other work, and even refuse gynecological practice. Patients would be much better treated, and general practitioners would be relieved of a great burden.

DR. ABBOT said that while he agreed with Dr. Reynolds in his view of the importance of watching the condition of pregnant women before confinement, and treating any symptoms which might call for interference, he felt that such supervision should be exercised with a good deal of caution and tact to avoid exciting apprehension on the part of the patient and the friends. It was of the first importance that they should be kept in as cheerful a mood as possible, in view of the expected event. He cited two instances in his own practice where he apprehended the existence of albuminuria in the patient before labor, in which he refrained from asking for a specimen of the urine for examination on account of the peculiar timidity of the patients and those interested in them, and their knowledge of the significance of albuminuria. He was none the less prepared for symptoms which might arise from such a cause. In one there was a single convulsion after forceps delivery; in the other marked albuminuria occurring for the second time in the patient, leading to miscarriage. Both patients recovered.

DR. RICHARDSON remarked that in Dr. Abbot's first case preliminary attention might have averted the symptoms, and stated further, in reply to questions, that he thought that with due preparation convulsions may be very frequently — not with absolute certainty — avoided.

DR. MINOT stated that one of the duties of the physician was to point out danger, — at least to the friends. Under the circumstances detailed he thought it was his duty to procure and examine the urine.

DR. WELLINGTON said that it was practically difficult to attend minutely to the patient some time before her labor, and where he lived such attention would be considered a piece of impertinence, and the physician would risk being told to wait until he was called. Of course, if a patient were threatened with convulsions, or were otherwise in a bad way, there was no question of the propriety of prompt interference. He would ask if it were the custom in Boston, as it was not in Cambridgeport, to give such special preliminary attention to the expectant woman without summons.

DR. FIFIELD remarked that one may judge of the future by the past, and if the care of which Dr. Reynolds spoke were in a large degree required the number of orphans should be vastly larger than it is in fact. He had certainly understood that Dr. Reynolds would make this a universal law. He agreed with Dr. Wellington that such attention would generally be considered a piece of impertinence, and thought that the nurse would be able to give to the physician sufficiently early announcement of bad symptoms. In the matter of the care of the patient after labor, Dr. Fifield said that the exhibition of calmants, opiates, etc., was carried vastly to excess, and quoted Mr. Humphrey, sur-

geon, as having said that he seldom prescribed opiates in his wards, as they produced, in his opinion, only a *quasi* delirium, a mockery of sleep. Dr. Ramsbotham had remarked that no word was more abused in the lying-in room than "exhaustion." Dr. Fifield, in his experience as surgeon, had never yet seen after an operation attended by considerable loss of blood that the patient was in any degree benefitted by opiates. In fact, many patients had slept their last sleep from a conviction on the part of the medical attendant of the necessity of sleep. Then, again, there was a bugbear as to the moving of patients after labor. His father, who had had a large midwifery practice for sixty years, and was familiar with the practice of the fat and sagacious Dr. Rand, — who caused his patients to *stand* whilst sheets and clothes were changed, — was likewise in the habit of requiring his patients to rise and sit on a chair immediately after the placenta was delivered, while the bed was being made. He had never been called back to a case of flowing. Goodale, of Philadelphia, in his *Lessons on Gynecology*, page 350, has said: "Since labor in general is a strictly physiological process there can be no sound reason why a woman should not sit up in bed, or even slip into a chair whenever she feels so disposed. Such movements incite the womb to contraction, and empty it and the vagina of putrid lochia. When these are offensive upright positions are to be insisted on, being, in fact, better deodorants than detergent vaginal injections. 'Roman women took baths on the fifth day after labor.' Bed-pans are pernicious."

DR. LYMAN said that some had misapprehended Dr. Reynolds's position, but as he understood the paper he was very much inclined to coincide with the reader. The difficulties of sufficient attention to the patient had been very much exaggerated. Under ordinary circumstances there was no difficulty in obtaining a sample of the urine, for example, or in notifying the friends of any apprehended danger. The patient and her friends, or even the nurse, are not the proper judges of the amount of attention due to the patient, and in case of suspicion of danger of convulsions it is the bounden duty of the physician to examine the urine. Dr. Lyman expressed his belief in the "puerperal month" following confinement, the dangers of subinvolution, displacements, etc., many of which may be obviated with perfect ease. Those women who are able to take their rest escape these troubles in a large measure. If the patient don't choose to pay for what she may consider unnecessary devotion on the part of the physician he can give up the case. The raising up of a patient immediately after a delivery was fraught with very great danger, as from thrombosis, rendered more liable by the state of hyperinosis which exists with the puerperal state. Time must be given for the equilibrium to become established. For his own part, Dr. Lyman said, he would be glad never to see another case of midwifery, but it would be very difficult to exclude such cases from one's practice without excluding the practice itself. In conclusion, he would venture a statement, namely, that in a practice of thirty-five years he had never, to his knowledge, had a patient return to him, or go elsewhere, with any of these unfortunate sequelæ of confinement. This he felt bound to ascribe to excessive care for the few weeks after confinement, and not to pure luck. The vast majority of cases of subinvolution of the uterus arise from just this want of care — too early rising after labor.

RHODE ISLAND MEDICAL SOCIETY.

A QUARTERLY meeting of the Rhode Island Medical Society was held in Providence, September 15th, the president, Dr. O'Leary, in the chair.

Dr. A. Remick presented a report of the Richmond meeting of the American Medical Association, with special reference to the work in the section on diseases of children.

Dr. W. R. White read an account of the centennial meeting of the Massachusetts Medical Society.

A discussion on the relative value of bovine and humanized vaccine virus was opened by Dr. W. J. Burge with a paper defending the use of humanized virus.

Dr. E. M. Snow said that humanized virus only is used in public vaccinations in Providence. This virus has been perpetuated since the time of Jenner, and now produces a vesicle on the eighth day exactly like the original. Carefully kept records in Dr. Snow's office attest the efficacy of this virus, and show no bad effects from its use. Dr. Snow reported the following case as evidence that this virus now gives absolute protection: A mother suffering from small-pox was removed with two children to the pest-house, where the mother died. The children were successfully vaccinated, and neither of them had variola. Dr. Snow agreed with other speakers that bovine virus produces more effect on the arm, but was not satisfied that it affords surer protection.

Dr. O. C. Wiggin has always used the bovine virus, and following vaccination often sees a diffused erythema resembling erysipels. He remarked that many practitioners are too indifferent to the cleanliness of the child's arm and clothing, and too often neglect children after vaccination.

Dr. F. W. Palmer presented the subject of antiseptic surgery, exhibiting the Lister spray and antiseptic dressings, and explaining in detail the precautions to be observed before and during an operation and at subsequent dressings. This method faithfully followed has recently yielded surprisingly good results in a crowded surgical ward in Rhode Island Hospital.

Dr. Caswell said that for three years he had used the antiseptic system universally in hospital practice, and was convinced of its immense value. The discussions in London this year and last show an unsettled opinion regarding some of the details. He had used the various substances proposed as substitutes for carbolic acid, — thymol, boracic acid, etc., but though more agreeable they had proved unsatisfactory. He had tried Callender's dressing also, but instead of one to twelve, the proportion of carbolic acid to oil recommended by the author, he had used one to thirty or more. He had seen blisters follow Callender's dressing of one to twelve.

Several gentlemen presented facts relating to the spread of malaria in Rhode Island.

Dr. S. Hunt, of East Providence, saw intermittent fever last year in Barrington, and this summer it appears farther up the river in Watchemoket and Rumford.

Dr. Garvin said that the malarial wave had extended up the Blackstone River as far as Lonsdale, and presented a report of eight cases observed by him there this season.

Dr. Remick reported malaria very prevalent this summer in the southern part of the city of Providence, in the neighborhood of Mashapaug and Spectacle

ponds, and gave a tabular report of twenty-seven cases observed in that locality this summer.

Dr. Lawton, of Cranston, reported that he had attended thirty cases of intermittent fever in the same region during the past two months.

Drs. William W. Hibbard, of Providence, and Herbert J. Pomroy, of Westerly, both Harvard graduates, were elected Fellows.

Recent Literature.

Bovine Tuberculosis in Man. An account of the Pathology of suspected cases. By CHARLES CREIGHTON, M. D., Cantab. 8vo. Pp. 119. London: Macmillan & Co. 1881.

In this book the author hopes to show that certain cases of tuberculosis in man present characters sufficiently distinctive to establish a relationship with the form of tuberculosis which occurs in cattle.

The most marked peculiarity of this disease is the tendency to localization in the form of flat or pedunculated excrescences on the serous surfaces, and which has given rise to many of the popular names: Perlseucht, German (pearly disease); Meerlinsigkeit, German (duckweed disease); Pommelière, French (potatoe-like disease); angle berries, Scotland; grapes, England. The glands are usually greatly affected, and hence, also, "gland disease."

Tubercles are found in all the organs, but especially in the lungs, where, in the later stages, they become confluent, soften in the centre, and form cavities, irregular in outline, with smooth and slightly thickened walls not communicating with the bronchi. The section of a lung thus affected gives roughly the same appearance that is seen upon cutting open a "crumpet."

The microscopic examination of these tubercles shows that they are composed of cells, varying in size. The largest and most characteristic of these, called giant cells, contain numerous nuclei, usually arranged parallel with and close to the wall. Grouped about these giant cells are others more closely resembling epithelium, and called epithelioid. Finally a third class are to be distinguished, which do not vary materially in size from the white blood corpuscles. These different classes of cells are supported by a reticulum, which, from its prominence, has caused certain of these little bodies to be called fibrous tubercles.

The author considers that there is always a tendency on the part of an infectious disease to the reproduction both of its gross appearances and its histological details, and he thinks this "mimicry of infection" for bovine tuberculosis to have been seen in the cases which he records. These are twelve in number, and occurred in rapid succession at Addenbrooke's Hospital, in Cambridge, England. They have not been so carefully analyzed as could be wished, acute and chronic cases being thrown together. (The disease in cattle is always essentially a chronic one.) Some of them (take Case IV. for example) are based simply on the gross appearances, and there is no record of a microscopic examination which would remove the doubt, at once raised in the mind of every pathologist, whether the cases were not cheesy and miliary pneumonia. Although he gives the similarity in appearance with bovine tuberculosis he fails to make clear how his cases differ from the ordinary form, the existence of which he admits, however; and the curious coincidence

of the non-occurrence of any such cases since he commenced to recognize the identity makes him appear a prejudiced observer.

He goes outside of his own observation to point out that many recorded cases of anomalous forms of tuberculosis are probably bovine, and endeavors to show that an outbreak in a work-house school in Bristol, which was considered as one of typhoid fever, associated, in four fatal cases, with tubercles, was probably due to this disease acquired from infected milk. He is unable to prove that the milk was infected, while it was shown that the sanitary condition of the school was very defective.

Many points in the pathology of tuberculosis are not exact enough to establish the identity of various forms on such coarse anatomical appearances as have been given by Dr. Creighton, and it must be left to the future to decide the questions embodied in this attractive book.

The Microscope and its Revelations. By WILLIAM B. CARPENTER, C. B., M. D., L.L. D., F. R. S., F. G. S., F. L. S., Corresponding member of the Institute of France, and of the American Philosophical Society, etc. Sixth Edition. Illustrated by twenty-six plates and five hundred wood engravings. Philadelphia: Presley Blakiston. 1881. All rights reserved.

In presenting the sixth edition of this voluminous work to the public the author excuses the limitation of the various subjects on the ground that the book is intended as a guide to amateur microscopists. The present edition is considerably enlarged, containing fifty additional wood-cuts and several fine colored plates.

The book opens with a lengthy chapter on the Optical Principles of Microscopes, which gives a superficial and unsatisfactory idea of the laws of optics as applied to the microscope, and is unaccompanied by a single mathematical demonstration or illustration. To this follows more than fifty pages descriptive of the various English microscopes, illustrated by such a profusion of wood-cuts as to resemble the catalogue of a microscope dealer more than a text-book. This section contains little or nothing of value to the student and might profitably be omitted, as it is essentially an advertisement for certain manufacturers. One thing is quite noticeable in this book: none but English microscopes and English manufacturers are considered, no mention being made of Hartnack or other celebrated continental makers if we except M. Nachet. To an American student such an omission flavors either of ignorance of continental work, or of an unwarrantable egotism in regard to British microscopes, both of which are out of place in a treatise purporting to be cosmopolitan. More than fifty pages are occupied in a description of "accessories," and here some foreign workers, such as Professor Wayland, Professor Rogers, and R. B. Tolles, are mentioned, though no notice is taken of many valuable appliances for microscopic study which have originated outside of Great Britain within the last ten years.

The chapter on the Management of the Microscope contains much really valuable information in regard to the technique of the instrument, but is burdened with matter which is useless in a work designed for an amateur. But few "amateurs" are interested to know the extreme variations in the markings of *amphypleura pella-*

cida or *pleurosigma angulatum*, or the opinions of various observers concerning the scale of a gnat under a power of 1350 diameters.

The formulæ for preservative fluids, coloring solutions, etc., are copied from well-known hand-books, and are destitute of directions applicable to the various tissues and structures. There is really but little instruction concerning actual practical work with the microscope in this huge volume. One gets the impression that the author is a collaborator rather than a laborer in this field of research.

The chapters on the various forms of vegetable and animal life exhibit the same incomplete and superficial treatment of these subjects. The facts have apparently been gleaned from the labors of others, and are often incomplete and faulty. Thus, in describing the exhibition of the circulation of the blood in the frog, the author directs that the frog be rendered insensible by chloroform, apparently never having heard of curare, an agent vastly superior to chloroform for all the purposes of such a demonstration.

The subject of microscopical geology and crystallography is disposed of in less than thirty pages, but contains the inevitable wood-cuts and lengthy speculations of the author upon the natural history of certain fossil shells.

As a work of reference this book is valuable in the way of alluding to a great number of subjects, and often referring to authorities from which more extensive information may be acquired. As a guide in the laboratory or as an aid in any particular line of research it is well nigh useless.

The book is clumsy and unwieldy in form, but is printed in clear, bold type on good paper, and gives evidence of great care on the part of the publishers. It is supplied with a very full and complete index, and its general appearance is exceptionally good.

Clinical Lectures on the Diseases of Old Age. By J. W. CHARCOT, M. D. Translated by Leigh H. Hunt, B. Sc., M. D. With additional lectures by Alfred L. Loomis, M. D. New York: William Wood & Co. 1881.

This volume of Wood's Library of Standard Medical Authors contains twenty-one lectures on senile diseases delivered by Professor Charcot, some of them before his class at the Salpêtrière in Paris, and translated into English, with ten lectures by Professor Loomis on the same class of diseases and embodying his teaching at his clinics in Bellevue Hospital.

Charcot's lectures are too well known in the original to require any better recommendation, alike to those who are familiar with them and to those who are not, than the medium of a good translation.

Dr. Loomis' lectures add considerable to the value of the book, especially to the American student.

— Sir William McCormac's energy and executive ability are still finding an outlet in the affairs of the late International Medical Congress, of which, it will be remembered, he was the honorary secretary. The Transactions of the Congress, in three large volumes, will, it is said, be ready for delivery to members before the close of the present year.

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AMERICAN GOUT.

ALTHOUGH modern medicine has materially advanced our knowledge of the clinical history and morbid anatomy of gout,—that highly respectable and venerable disease which has been handed down as a precious heir-loom from our ancestors,—yet its pathology still remains pretty much in the same state as it was sixteen centuries ago, when Aretæus was prompted to declare that “its nature was known only to the gods.” One of the last strongholds of humoral pathology, it still defies the scalpel of the medical examiner to lay bare its essential lesion. Within a comparatively short period, however, we have observed that renewed interest has been attracted to this subject (which, owing to its antiquity and persistence, already boasts a formidable literature), and papers, not only upon unequivocal gout, but also upon its latent and undeveloped forms and the isolated manifestations of the arthritic diathesis have appeared in current medical literature, and have led to renewed discussions upon the pathology of gout and its rational treatment.

One of the latest contributions to this department of clinical medicine is from the pen of Professor Da Costa, entitled *The Nervous Symptoms of Lithæmia*.¹ In this instructive and practical paper, Da Costa calls attention pointedly to a morbid state which he considers as coming properly under the head of lithæmia,—a state closely allied to gout,—“that does not bring with it the inflammation, pain, and obvious swellings of the gouty paroxysm, but which works more silently, is characterized by the abundance of lithic acid or lithates in the urine, frequently coexists with signs of mal-assimilation of food, and with aches and pains unaccompanied by any perceptible changes of the aching part. Hepatic derangement is also often found; and from this end of the chain the links are stretched through many vague, almost nameless, symptoms to outbreaks of true gout or to structural change in heart, vessels, and kidneys.” This imperfect gout Da Costa considers as preeminently the American form of gout, and as explaining a host of obscure symptoms whose relations have been and still are often misconstrued. It is evident, however, that America, though offering a favorable soil for this manifestation of the gouty diathesis, is not its sole producer. It seems to be attendant upon the “*sturm und drang*” of modern life, and even Englishmen are exchanging the old-fashioned art rheumatism for the lithæmic forms. In the first volume of a book, which has just appeared, on Indiges-

tion, Biliousness, and Gout in its Protean Aspects, Dr. Fothergill, of London, has much to say on this subject and promises more in the second volume. The peculiar nervous symptoms of this state—the vertigo, intermittent headache or neuralgia, muscular cramps and twitches, perverted sensation or anæsthesia, the sleeplessness, nervous irritability which passes for “nervousness” or “hysteria,” and excessive mental irritability or unaccountable lassitude—may very readily be mistaken for signs of organic disease of the central nervous system, but attention to the clinical history, and above all examination of the urine, will reveal the source of the symptoms to be a blood charged with excess of lithates, and so guide the attending physician to a successful course of treatment. Hygienic and dietetic methods, of course, occupy a high place, and diuretic mineral waters, with occasional purgatives, are of great service in the therapeutic management of such cases, while the pharmaceutical remedies are the citrate of lithium, and perhaps the iodide of potassium, or colchicum. A warning is given against the free use of nervous sedatives and anodynes, which, Da Costa says, should be reserved for especial occasions and used sparingly.

A number of illustrative original cases reported in the article appear to fully sustain the views set forth in this interesting and suggestive essay, which, coming from one so well qualified to speak upon clinical medicine, must attract considerable attention, not only to the disease itself, but to the special manifestations of gout on this side of the Atlantic. Whether or not gout, like cancer, is on the increase among civilized nations, as a sort of penalty for artificial conditions of existence, is a question which has scarcely passed the stage of speculation, but it is one which already has attracted considerable attention, and is well worth further study.

THE SANITARY INSPECTION OF SCHOOLS.

DURING the past year 2074 persons died in the State of Massachusetts over five years of age and up to fifteen, or during the school years. In the next fifteen years 2213 died of pulmonary consumption out of a total of 5191 for all ages,—a disease the chief causes of which are innutrition and rebreathing over and over again air which has been vitiated, or, in other words, taking into the lungs what has been very properly called the sewage of the atmosphere. There can be no question that our public schools propagate contagious diseases to a certain extent among the very young, and that their insufficient ventilation or bad sanitary condition often deteriorates the constitution to the point of establishing diseases which sometimes produce death, sometimes a lasting invalidism, making the individuals wretched, and sometimes simply enfeebled health, which imparts weakened constitutions to children and children's children. As the “child is father to the man,” and the man is the father of the race, no better nor more important matter in preventive medicine can be urged upon the public at the present time than the proper medical inspection of our schools.

¹ *American Journal of the Medical Sciences* for October, 1881, page 416, et seq.

While the matter is still in debate in Boston, it may be worth while to consider what has already been done in another city about three fifths the size of ours in the sanitary inspection of schools, with reference to which the last report states that the importance of this part of the public health service increases from year to year.¹ It appears that the medical inspection of schools² began in Brussels in 1874. Previous to that time the schools were briefly visited by the physicians appointed to attend the poor, the inspections consisting chiefly in exchanging compliments with the head master, and signing their names to the register with the remark, "nothing to note," or in removing children suffering from parasitic diseases. When the Bureau of Public Health was established in 1874, five physicians were delegated to the sole work of medical inspection of the schools. They give their attention (1) to faults in construction, heating, ventilating, size of class-rooms, seats, desks, windows, etc.; (2) to the temperature and daily condition of the air and all the causes tending to vitiate it; (3) to all the circumstances affecting the health of the well child: gymnastics, care of eyes, ears, teeth, skin, body, length of lessons, time of study, light, heat, ventilation, books, swimming lessons, instructive excursions, immediate closing of the schools when the temperature exceeds 82° F., accurate anthropometric records as means of constantly learning the conditions as to health of all pupils, and investigations into the best methods of intellectual development; (4) to rigid regulations regarding infectious diseases, including vaccination and revaccination, and to careful directions for the training of children below the normal standard of health. The result has been that *no one of the infectious diseases has reached the height of an epidemic* in Brussels since the establishment of their inspection of schools, although other cities of Belgium and Europe generally have suffered severely; that the general health of the pupils has improved; that the scholars have much more nearly than before that training which is suited to them individually, and that the public charitable and penal institutions are thought to be less resorted to.

The mere mention of these facts should stimulate every city in the United States to similar work. Probably no measure of public hygiene or education would bring in larger returns for the labor and capital expended. We shall shortly publish some interesting statistics in regard to the health of school-girls in the city of Cleveland. We are glad to learn that the New York State Board of Health has already begun a partial medical inspection of some of their schools, preparatory to more general work in that di-

rection, and sorry to intimate that no board or municipality has yet undertaken such an important step in Massachusetts.

MR. WARING'S REPORT UPON THE CONDITION OF THE WHITE HOUSE.

THE report of the results of the examination by Mr. George E. Waring, Jr., of the plumbing and drainage of the White House at Washington has been made public in the columns of the *Sanitary Engineer*. The examination was made before President Garfield's removal to Long Branch and was, therefore, in some respects, less thorough than would otherwise have been thought proper. Mr. Waring reports that his observations indicate a very much less unsafe condition than current reports would lead one to expect. So far as exposed to view the workmanship of the plumbing within the house seems to be reasonably good. The arrangement of the various soil pipes and waste pipes is such as is usual where the construction has been added to from time to time, as occasion requires, and as different plumbers suggested. Much of it is defective, not a little of it radically so. Considered as a whole, while they are free from some defects often found in the better class of houses in our cities, the plumbing appliances of the Executive Mansion do not conform to what are now accepted as the necessary sanitary requirements of a safe dwelling.

Without stopping to describe in this brief preliminary report the details of the work examined, it may be useful to say that not one of the soil pipes has anything like proper ventilation, and more than one of them has no attempt at ventilation whatever; that the tank from which the upper part of the house is supplied with water is subject to direct contamination from the main soil pipe and from the ventilator of an interior water-closet; that one of the most important water-closets in the house is a pan-closet; and that two of the water-closet compartments, one of which contains a urinal, are practically without ventilation.

The rest of the report is occupied with a detailed description of the defects summarized in the above paragraph, with recommendation for their removal and for alterations required in other less flagrantly obnoxious parts of the plumbing and internal drainage. The external drainage is not considered at all in the present investigation, which from the circumstances of the case is necessarily to be regarded as preliminary.

We understand that the temporary changes suggested by Mr. Waring are being executed. It is probably unnecessary, after the experiences of the past summer, to urge upon Congress the propriety of making suitable appropriations for putting the residence of the executive head of the government in the best possible sanitary condition which its construction, its situation, and the present knowledge of sanitary science, admit of. The continuance of the present defects, long since recognized as dangerous to the health of the occupants of the White House, is to be attributed to a want of means for their correction, and not to the neglect of those entrusted with the supervision of the internal arrangements of the building.

¹ Rapport sur les Opérations du Bureau d'Hygiène et sur la Salubrité Publique de la Ville de Bruxelles pendant l'année 1879. See also the reports for 1878 and 1879.

² De l'Inspection hygiénique et médicale dans les écoles, par le Dr. E. Janssens, inspecteur du service de santé de la ville de Bruxelles. Bruxelles, 1880.

Ville de Bruxelles, Hygiène Scolaire. Instructions Sommaires sur les premiers symptômes des maladies transmissibles, formulées à l'usage du personnel enseignant des écoles communales par le Service d'Hygiène de la ville, 1880.

La Médecine préventive et l'Alimentation scolaire. Rapport du Dr. Bonjournat, membre du Bureau d'Hygiène de la ville de Bruxelles, 1880.

MEDICAL NOTES.

— Dr. J. S. Billings sails for home from Liverpool October 29th. The very appreciative reception accorded to him and to his address before the Congress in England was as little surprising as it was gratifying to his friends, who are many, at home.

— In the report of the city registrar of Providence for the month of September we notice that there is very much less typhoid fever in the city than usual at this season; there is very little scarlatina; there is no epidemic of diphtheria; the mortality from diarrhoeal diseases will cease with the coming cold weather, and on the whole, therefore, an unusually healthy autumn may be expected.

Intermittent fever, or fever and ague, is prevalent in some portions of the city. It is specially prevalent in that section of the city north of Mashapaug pond, between Fenner Avenue and Potter's Avenue, and in the neighboring portions of the town of Cranston. There is also some of the disease in the vicinity of Allen's Print Works and Branch Avenue. Cases have also been reported in other portions of the city, but not in any great numbers. There are probably more than one hundred cases of fever and ague in the city at this time. A more particular report upon the subject will be presented soon.

— Dr. Charles Pope, of South Shields, England, communicates to the *Lancet* a case of recovery after long immersion, in regard to which he says:—

"The interesting feature of this case is that the man was entirely under water, with the exception of his left hand and part of the forearm, twelve to fifteen minutes, and held in this position, his head and chest being tightly jammed against a wall by the weights which had fallen upon him and capsized his boat. His recovery can only be attributed to the mechanical pressure on his chest and the concussion interfering with respiration, and thus preventing his lungs being filled with water. There is no fallacy about the time of his immersion, as I have carefully investigated the matter; and the machinery necessary for removing the weights and extricating him from his perilous position required this length of time to be got in order.

NEW YORK.

— According to the official report prepared by Dr. John T. Nagle, Register of Vital Statistics, the mortality in the city from zymotic diseases during the quarter ending September 30th amounted to 1910, 338 of the deaths occurring in public institutions. The deaths from the various diseases were as follows:—

	Total.	In Institutions.
Small-Pox	73	62
Measles	79	7
Scarlet Fever	355	4
Diphtheria	443	7
Croup	117	2
Whooping Cough	95	—
Typhoid Fever	147	60
Typhus Fever	15	40
Malarial Fevers	185	15
Pharyngeal Fevers	7	—
CerebroSpinal Meningitis	80	5
Other Zymotic Diseases	284	136

During the quarter there were 3009 deaths from diarrhoeal diseases, of which 243 occurred in public institutions.

— At ten o'clock on the evening of October 16th, a wing of the homoeopathic hospital on Ward's Island was destroyed by fire. It contained the laundry and kitchen of the institution, and also the sleeping apartments of the laundresses and other servants, all of whom were gotten out in safety. The patients from the other portions of the building were removed without injury, and were kept in the open air until the conflagration was over, when they were transferred to the wards most distant from the burnt wing, where no damage had been done by the water.

— At a stated meeting of the Academy of Medicine, held October 20th, Dr. Charles S. Bull read a paper on "Lesions of the Orbital Walls and contents due to Syphilis."

— It is said that the health officer, Dr. Smith, who owes his position (which is supposed to be worth about \$37,500 a year) to political influence, annually subscribes some nine or ten thousand dollars for "campaign purposes."

PHILADELPHIA.

— The momentous question which for some time had been agitating the County Medical Society was finally set at rest by a formal vote. On the notices for the stated quarterly meeting held October 19, 1881, it was stated that the question of the eligibility of women practitioners of medicine for membership in the Society would come up for discussion, having, by a resolution passed at a previous meeting, been made the special order of business for this meeting. In consequence of the general notice a large attendance was secured. When the matter came fully before the meeting it was found that no organized opposition existed, and the matter was decided, almost without a dissenting voice, by the adoption of a resolution declaring that it was the sense of the Society that women practitioners are eligible to membership "under the same laws and regulations governing the admission of men." This important step was taken simply as an act of justice, and not without full consideration of the question. The traditions of the Society and the feelings of many of the members were, apparently, so opposed to it, that hitherto the board of censors felt unable to endorse female candidates, but *nous avons changé tout cela*, and the names of several women practitioners have already been presented and recommended for membership in the Society.

— An interesting discussion on hypnotism, opened by Dr. C. K. Mills, took place at the last conversational meeting of the County Medical. The board of directors have made arrangements for the discussion of some topics in connection with syphilis. On November 23d Dr. John Ashhurst, Jr., will read a paper on the Clinical History of Chancre and Chancroid, and Dr. John B. Roberts one on the Relation of Syphilis to Scrofula. December 14th Dr. J. Wm. White will present the subject of the Prevention of Syphilis by Legislative Enactment, and Dr. E. S. Keyes, of New York, the Treatment of Syphilis in its Different

Stages. It is believed that this series of papers will prove of much interest and value.

— A new medical weekly of national scope is to be established in this city about the 1st of January, 1882, by Henry C. Lea's Son and Co. It is to be a continuation of the *Medical News and Abstract*, of which Dr. J. Minis Hays is editor.

— Dr. John Conrad, for many years pharmacist to the Pennsylvania Hospital, but living for some time a retired life, died in Germantown, Philadelphia, in his seventy-second year, on the 15th of October, 1881. Dr. Benjamin Coates, a well-known Philadelphia physician some time ago, but for many years retired from practice, died at the age of eighty-four years at his home on the 14th inst. He had been a member of the College of Physicians since 1827.

Miscellany.

BOSTON DISPENSARY.

The statistics of this institution for the year ending September 30, 1881, are as follows:—

The number of new patients treated at the central office is 13,388, classified as follows:—

MEDICAL DEPARTMENT.

Men, 2286. Women, 4153. Children, 2400. Total, 8839.

SURGICAL DEPARTMENT.

Men, 950. Women, 437. Children, 336. Total, 1723.

DENTAL DEPARTMENT.

Men, 265. Women, 404. Children, 512. Total, 1181.

DEPARTMENT FOR DISEASES OF THE SKIN.

Men, 647. Women, 254. Children, 207. Total, 1108.

DEPARTMENT FOR DISEASES OF THE NERVOUS SYSTEM.

Men, 19. Women, 26. Children, 5. Total, 50.

DEPARTMENT OF LARYNGOLOGY.

Men, 179. Women, 174. Children, 137. Total, 487.

The number of visits made by patients, old and new, at the central office, is 27,226, classified as follows:—

Medical, 20,439. Surgical, 6787. Total, 27,226.

The number of new patients treated in the districts is 12,755, classified as follows:—

Men, 2169. Women, 4778. Children 5808. Total, 12,755.

The results of treatment in the districts are as follows:—

Discharged cured or relieved	11,621
Sent to hospitals or removed from the districts	790
Died	366
Remaining under treatment	61

12,838

Remaining under treatment at last annual report	83
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12,755

Number of new patients treated at the central office	13,388
--	--------

Total number of new patients treated at the central office and in the districts	26,143
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Number of cases of midwifery attended during the year	229
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Number of cases of midwifery attended since July, 1858	3,666
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Whole number of patients since October, 1796	788,237
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Whole number of patients since July, 1856	669,439
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Average daily attendance at the central office during the year	89
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Largest number present any one day, March 7th	189
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Smallest number present any one day, February 3d	23
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Number of recipes put up at the central office during the year	31,202
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Number of house recipes	22,212
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Number of district recipes	8,990
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Number of paid recipes	29,037
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Number of free recipes	2,165
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Surgeons: Thomas Waterman, M. D., Charles E. Inches, M. D., J. Foster Bush, M. D., Abner Post, M. D.

Physicians: Robert Dishrow, M. D., Reginald H. Fitz, M. D., Josiah L. Hale, M. D., Joseph P. Oliver, M. D., Robert M. Lawrence, M. D., John Dixwell, M. D., Thomas M. Rotch, M. D., Claudius M. Jones, M. D., William F. Whitney, M. D., Henry C. Haven, M. D., Charles P. Bancroft, M. D., Francis H. Williams, M. D., Henry W. Broughton, M. D., Harold Williams, M. D., James J. Minot, M. D., George M. Garland, M. D.

DEPARTMENT FOR DISEASES OF THE NERVOUS SYSTEM.

Physicians: Frederick W. Vogel, M. D., Charles F. Folsom, M. D.

DEPARTMENT FOR DISEASES OF THE SKIN.

Physician: Francis B. Greenough, M. D.

DEPARTMENT OF LARYNGOLOGY.

Physician: Thomas A. DeBlois, M. D.

DEPARTMENT OF GYNECOLOGY.

Physicians: William H. Baker, M. D., Francis H. Davenport, M. D., Charles M. Green, M. D., John W. Elliot, M. D.

DENTAL DEPARTMENT.

Dentist: James A. Reilley, D. M. D.

District Physicians: No. 1, George W. Copeland, M. D. No. 2, Frank H. Hooper, M. D. No. 3, William W. Gannett, M. D. No. 4, Morton H. Prince, M. D. No. 5, John B. Swift, M. D. No. 6, George H. Tilden, M. D. No. 7, John W. Farlow, M. D. No. 8, Flavill W. Kyle, M. D. No. 9, Henry L. Morse, M. D.

Apothecary: Frank H. Clark.

WILLIAM H. H. HASTINGS, M. D., superintendent.

A CASE OF INTERMITTENT FEVER.

MR. EDITOR.—In the JOURNAL of September 22d you call for the report of genuine cases of intermittent fever of New England origin. The following case has just occurred in my practice:—

My patient lives in a house built upon a slight elevation overlooking a meadow. About six years ago a road was built across the meadow, which appears to have interfered with the natural flow of the water, and since that time there has been, every spring and autumn, water in the cellar of the house amounting sometimes to a depth of several inches. With the exception of a case of acute pleurisy, in the spring of 1879, there has been no sickness in the house which could possibly be referred to this condition of the cellar.

I have dwelt at some length on the surroundings of the house for want of any apparent cause for the development of intermittent fever, but I find it difficult to discover any such connection because at the time this case occurred the cellar was dryer than at any other season of the year.

My patient was a girl of twelve, who has always been perfectly well. The first two weeks of August last were passed at Providence, R. I. With that exception she has never been twenty miles from Boston. On September 26, 1881, she got up with a headache and general feeling of sickness. Her mother supposed she had taken cold from exposure from driving about town in an open wagon two days before. A mild cathartic was given, but no physician was called at that time. On the 27th and 28th there was nothing worthy of note in the case. On the 29th she felt chilly in the morning, and was glad to be near the kitchen stove, although the weather was warm. There

was, however, no pronounced chill. The chilly feeling was followed by a febrile stage, as described by her mother. At night she felt quite well, and awoke the next morning expecting to go to school. At nine A. M., however, on September 30th she had a well-marked chill. Her mother, who, many years ago, lived in a malarious region in Iowa, said her daughter had all the appearances she had been accustomed to see in cases of intermittent. The chill lasted half an hour, and was followed by a state of fever.

I saw the patient at about noon, when she was in a profuse perspiration. Pulse 120, respiration 40, temperature 103° F. Ordered cinchonidic sulph., two grains, every three hours.

October 1st, four P. M. Has had no chill to-day, but, on the contrary, has felt, with the exception of some headache and ringing in the ears, as well as usual. Omit cinchonidic sulph.

October 2d, nine A. M. Had another chill. One hour later, pulse 120, respiration 36, temperature 104° F. Resume cinchonidia.

From that date until now there has been no return of the chills. Patient has been about house, and anxious to go to school. Except for the annoyance of an eruption of herpes labialis she has been as well as usual. She is still taking about eight grains of cinchonidia. J. WINTHROP SPOONER.

Hingham, October 7, 1881.

THE "LANCET" ON BULLETINS.

To us, as onlookers, it is abundantly clear that a physician in assuming responsibility for the effect of his bulletin is trying to bear a burden too heavy for him, and we believe our American brethren on looking back will cordially agree with us in this view. It comes to this, then, that a bulletin should be "the truth, the whole truth, and nothing but the truth;" and "the truth" should be simply a record of facts, well observed and precisely stated. The responsibility for the use of those facts then rests with the users of them — on the proper shoulders. So soon as opinions are added, sources of fallacy and error creep in, and the bulletin itself becomes the subject of debate. But it may fairly be asked if all the facts, especially those of serious import, need be stated, as symptoms of gravity are often merely temporary, and their public notification might cause unnecessary alarm. We are free to admit that in private practice such considerations may well be allowed some weight, but in his more public capacity the physician must regard himself as called upon to give a strict record of *all* the facts. In this country it is the custom to make bulletins err, if at all, on the side of extreme care to state all the unfavorable symptoms in the case. The result is the public have full confidence that nothing is being concealed and kept back from them — that they know the worst; and there is no room subsequently for a suspicion that possibly the medical attendants had not been quite alive to the gravity of the symptoms. Further, we think that, under such circumstances as we are supposing, the official bulletins should be the only public communications of the medical attendants in reference to the case. Let others, if they like, discuss the facts published; those responsible for the management of the case should be satisfied with announcing them in the official bulletins. Only those most able to give opinions know the full

danger of publicly expressing them, even on well selected facts, and the distortion such opinions are liable to undergo is notorious. But the public in reading bulletins want to be assured that they are put in possession as fully as may be of the actual facts of the case, and the physician or surgeon in charge may well content himself with the responsibility of stating them.

CLINICAL UROLOGY.

M. ROBIN reported to the Society of Biology in Paris two cases in which the patients suffered from diseases whose differential diagnosis, though very difficult by the ordinary means, was yet rendered easy by an examination of the urine. The first case was that of a boy aged fifteen, who presented obscure typhoid symptoms; the second was a patient of the same age with almost identical symptoms, except that in the latter case there was a slight hyperesthesia and a slow pulse. In the second case there was reason to suppose that the patient might be suffering from tubercular meningitis; examination of the urine resulted in the following observations: In the first case it was turbid, with a specific gravity of 1,013, and a slight excess of urea and uric acid was present. Nitric acid poured down the side of the test-tube containing the urine caused a number of superimposed zones to form in the following order: A stratum of uric acid, a transparent zone, a stratum of albumen, and underneath a blue ring due to the presence of indican. In the case of the second patient the urine had a reddish tinge, was clear, with a specific gravity of 1,032, and contained a very considerable quantity of urea; neither albumen nor indican was detected on the addition of nitric acid, but urohaematin was shown to be present. From this difference in the urine M. Robin diagnosed typhoid fever in the one case, and tubercular meningitis in the other, and post-mortem examination verified in each case the diagnosis. M. Robin states that this difference in the urine exists in all the cases which he has hitherto examined. In typhoid fever indican and albumen are always present, but only very rarely urohaematin. The latter substance, however, is sometimes present at the beginning of continued fever under certain conditions, such as pulmonary complications, hæmorrhage, facial erysipelas, or when the disease attacks a very robust individual, and assumes an inflammatory type. M. Robin concluded his remarks by stating that the presence of indican in urine affords a very valuable diagnostic sign of typhoid fever, for although we cannot say that the patient is free from the fever because the coloration is absent, yet when it is seen in the urine he must be said to be suffering from typhoid. — *Le Progrès Medical*, April 2, 1881.

WOMAN'S PLACE IN NATURE.

M. DELAUNAY has summarized the evidence supplied by the physical organism of woman, in proof of her "inferiority" to man. There can be no question on this point, the *Lancet* thinks, in the mind of the impartial student of anatomy, human and comparative. It is, however, necessary to explain what is meant by "inferiority." In its conventional use, and the meaning commonly attached to it, we have no right — even in a purely scientific sense — to speak of woman as in-

ferior. It is rather with her place in nature we should deal. All females are lower in the scale of development than males. M. Delannay makes a reservation in this respect when treating of the females of certain forms of life,—for example, insects, some fishes and reptiles,—but in doing so he falls into the common error of failing to keep in mind the *purpose* of the organism in reference to its ancestral or actual mode of life. In many lines of existence it is an advantage to be comparatively small and of little weight, and in the case of animals so situated the male is the smaller and the lighter. So is it with color, appendages, form, and the capabilities generally; these must all be studied for the purpose of estimating a direct relation to the mode of life. When this is done there will be found to be *no* exceptions to the rule that the male is superior, that is, superior in the sense of being better fitted for the purpose of the life of relation proper to the species, either in the history of its development or in its actual state. There is not, so far as we can see, anything new in what M. Delannay has to say on the subject. The evidence he adduces, of course, goes to prove that women are not intended for the higher forms of intellectual work, but in all their activities to be the help-

meets of men. One fact he mentions is sufficiently interesting to be reproduced, and it may strike some readers as novel, though it has long been recognized as an instance of the essential inferiority of woman's work, even in departments which she is especially prone to look upon as her own. He cites the historic fact that although there has been and are wonderful examples of the skill of women as practical musicians, and they take much pleasure in music, and devote much time to the acquisition of manual dexterity in playing on a variety of instruments, at the same time cultivating the sense of hearing and taste to a state of very high perfection, there has never been a great female composer! This is a significant circumstance, and might well form the topic of a homily in praise of that modesty which is not only the greatest glory of woman, but should be her protection against the misleading blandishments of her unsisterly sisters. Woman's place in nature is to "stand before" man, to be his "helpmeet," his counsellor, his friend in adversity as well as in prosperity, in the hour of sickness and weakness as in the time of health and strength, but she cannot usurp his place, and she is not his equal in stature of body or mind.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 15, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhoeal Diseases.	Diphtheria and Croup.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	690	295	32.46	11.74	8.84	9.57	2.90
Philadelphia.....	846,984	339	106	23.04	2.95	5.60	3.24	5.10
Brooklyn.....	566,689	296	145	27.70	10.81	8.11	10.47	1.69
Chicago.....	503,304	240	101	47.08	4.17	8.75	7.08	12.93
Boston.....	362,535	188	77	30.32	13.30	9.04	4.26	2.16
St. Louis.....	350,522	149	66	32.21	13.42	6.04	1.34	4.03
Baltimore.....	332,190	161	85	32.92	9.32	14.91	1.86	3.11
Cincinnati.....	255,708	107	50	23.36	9.35	4.67	4.67	3.74
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	95	39	28.42	10.53	6.32	8.42	5.26
Pittsburgh.....	156,381	87	39	54.02	5.75	4.60	1.15	5.75
Buffalo.....	155,137	118	64	50.00	26.27	13.56	2.54	5.93
Milwaukee.....	115,378	62	31	24.19	12.90	—	6.45	6.45
Providence.....	104,857	41	18	39.02	12.26	14.63	4.90	2.44
New Haven.....	62,882	23	4	4.35	—	—	—	4.35
Charleston.....	49,999	31	11	16.13	3.23	—	9.68	6.45
Nashville.....	43,461	30	15	36.67	23.33	3.33	6.67	3.33
Lowell.....	59,485	24	11	25.00	12.50	12.50	—	—
Worcester.....	58,295	17	8	29.41	23.53	—	11.76	5.88
Cambridge.....	52,740	28	8	21.43	7.14	3.57	3.57	10.71
Fall River.....	49,006	31	16	12.90	3.23	3.23	—	3.23
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	14	3	—	—	—	—	—
Springfield.....	33,340	13	3	—	—	—	7.69	—
Salem.....	27,598	11	5	27.27	27.27	—	—	—
New Bedford.....	26,875	12	8	25.00	16.67	—	—	—
Somerville.....	24,985	12	7	41.67	16.67	8.33	16.67	8.33
Holyoke.....	21,851	10	4	40.00	10.00	—	—	20.00
Chelsea.....	21,785	8	4	37.50	25.00	12.50	—	—
Taunton.....	21,213	13	4	30.77	15.38	7.69	—	7.69
Gloucester.....	19,329	10	2	20.00	—	10.00	—	10.00
Haverhill.....	18,475	5	2	—	—	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	4	1	—	—	—	25.00	—
Fitchburg.....	12,405	2	0	50.00	—	—	—	50.00
Twenty-three Massachusetts towns.	178,836	67	19	32.84	14.93	14.94	2.99	5.97

Deaths reported 2038 (no report from New Orleans): 1251 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 929, consumption 397, diar-

rhoeal diseases 302, diphtheria and croup 230, lung diseases 175, typhoid fever 136, small-pox 74, malarial fevers 69, scarlet fever 65, whooping-cough 19, cerebro spinal meningitis 16, puerperal fever nine, erysipelas seven, measles two. From *small-pox*,

Chicago 35, Pittsburgh 22, Philadelphia 11, New York four, Cincinnati two. From *malarial fevers*, New York 19, St. Louis 10, Philadelphia and Brooklyn nine, Baltimore six, District of Columbia five, Chicago four, Cincinnati and Nashville two, Boston, Charleston, and Holyoke one. From *scarlet fever*, New York 28, Pittsburgh 11, Brooklyn eight, Philadelphia seven, Chicago four, St. Louis three, Buffalo two, Baltimore and Providence one. From *whooping-cough*, New York and Boston five, Brooklyn three, Philadelphia, Chicago, Baltimore, District of Columbia, Providence, and Somerville one. From *cerebro-spinal meningitis*, New York four, Philadelphia, Chicago, Cincinnati, and Milwaukee two, Baltimore, Providence, Fall River, and New Bedford one. From *puerperal fever*, Boston four, Chicago three, Buffalo and Charleston one. From *erysipelas*, New York and Chicago two, Brooklyn, Milwaukee, and Providence one. From *measles*, Buffalo two.

Four cases of small-pox were reported in Boston, three in Cincinnati, and 37 in Pittsburgh; diphtheria 33, typhoid fever 31, scarlet fever one in Boston; diphtheria eight, scarlet fever one in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,040,574 (population of the State 1,783,086), the total death-rate for the week was 23.50 against 21.01 and 21.98 for the previous two weeks.

For the week ending September 24th in 149 German cities and towns, with estimated populations of 7,919,242, the death-

rate was 22.4. Deaths reported 3412; under five 1733; pulmonary consumption 425, diarrheal diseases 196, diphtheria and croup 139, scarlet fever 124, typhoid fever 65, whooping-cough 47, puerperal fever 16, measles and röteln 11, small-pox (Metz, Aachen) two. The death-rates ranged from 12.7 in Frankfort to 36.3 in Posen; Königsberg 25.8; Breslau 27.9; Munich 26.7; Dresden 21; Berlin 23.6; Leipzig 18.5; Hamburg 19.9; Hanover 13.5; Bremen 17.3; Cologne 21.2; Frankfort 12.7; Strasburg 19.2.

For the week ending October 1st in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 17.9. Deaths reported 2607: scarlet fever 130, diarrhoea 106, fever 81, measles 43, diphtheria 18, small-pox (London 15) 16. The death-rates ranged from 13.2 in Plymouth to 24.2 in Hull; Sheffield 15.9; Leeds 16.3; London 16.6; Birmingham 17.9; Bristol 18.9; Manchester 22.5; Liverpool 22.7. Edinburgh 17.1; Glasgow 18.2; Dublin 17.8.

For the week ending October 1st in the 21 chief towns of Switzerland, population 479,934, there were 28 deaths from diarrheal diseases; acute diseases of respiratory organs 20, diphtheria and croup three, whooping-cough three, typhoid fever three, scarlet fever two. The death-rates were, Geneva 17.5; Zurich 21; Basle 15.1; Berne 28.1.

The meteorological record for the week ending October 15th, in Boston, was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
	Mean.	Mean	Maximum.	Minimum.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Mean.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Duration, Hrs. & Min.	Amount in inches.
October, 1881																			
Sun., 9	30.156	52	65	41	82	33	19	45	W	NW	NW	8	14	12	G	F	C	—	—
Mon., 10	30.548	40	51	32	65	45	61	57	N	E	S	12	8	7	C	C	C	—	—
Tues., 11	30.304	51	60	36	68	64	86	73	SW	S	S	8	16	12	F	O	T	—	—
Wed., 12	30.024	65	82	54	75	54	70	66	SW	SW	NW	8	10	20	C	F	R	—	—
Thurs., 13	30.371	43	59	40	52	48	62	51	N	E	S	15	8	7	C	C	F	—	—
Fri., 14	30.173	57	65	40	76	67	81	75	SE	S	W	11	15	22	O	F	F	—	—
Sat., 15	30.233	65	79	56	28	27	57	54	W	NW	NE	16	14	4	F	F	F	—	—
Week.	30.258	52	82	32														3.51	.19

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 15, 1881, TO OCTOBER 21, 1881.

MAYRDER, D. E., major and surgeon, medical director, Department of the Missouri. Granted leave of absence for one month. S. O. 207, Department of the Missouri, October 11, 1881.

CONSON, J. K., captain and assistant surgeon. Confirms telegraphic instructions of this date directing him to report to the commanding officer, Battalion Fourth Artillery, at Fort Yuma, Cal. S. O. 4, Department of Arizona, October 5, 1881.

DICKSON, J. M., captain and assistant surgeon. Granted leave of absence for four months. S. O. 232, A. G. O., October 13, 1881.

ADAMS, G. W., captain and assistant surgeon. Upon relinquishing unexpired portion of his present leave of absence, reports from duty in Department of the East, and to report in person to commanding general, Department of Dakota, for assignment to duty. S. O. 230, A. G. O., October 11, 1881.

KIRKPATRICK, H. S., captain and assistant surgeon, Fort Porter, N. Y. Granted leave of absence for one month, with permission to apply for two months' extension. S. O. 182, Department of the East, October 11, 1881.

The profession in Boston is warned against an individual calling himself a physician, claiming to be sick and penniless, and seeking aid on the strength of a forged letter from Dr. Messer of Cincinnati.

The ninth annual session of the American Public Health Association will be held at Savannah, Ga., November 29th to December 2d, inclusive. AZEL AMES, JR., *Secretary*.

SUFFOLK DISTRICT MEDICAL SOCIETY. — There will be a stated meeting at 19 Boylston Place, on Saturday, October 29th, at eight o'clock. Medical communication. Review of President Garfield's Case, by Dr. J. C. Warren. All members of the Massachusetts Medical Society are invited to be present and to join in the discussion. H. C. HAYES, M. D., *Secretary*.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, 19 Boylston Place, on the first Thursday of November, at 10.30 o'clock A. M. Dr. Ephraim Cutter, of New York, will read a paper entitled Contribution to the Treatment of Uterine Hyperæsthesias by Iodoform and Cotton. Profession invited.

HENRY M. FIELD, M. D., *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — Practical Anatomy: A Manual of Dissections. By Christopher Heath, F. R. C. S. Fifth Edition, with twenty-four Colored Plates and two hundred and sixty-nine Engravings on Wood. Philadelphia: Presley Blakiston. 1881.

Eczema and its Management. A Practical Treatise based on the Study of two thousand four hundred Cases of the Disease. By L. Duncan Bulkley, M. D. New York: G. P. Putnam's Sons. 1881.

RECURS.

CLINICAL LECTURE ON DISEASES OF WOMEN.¹

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROF. T. GAILLARD THOMAS.

CASE I. URETHRAL CARUNCLE.

GENTLEMEN: The first case which I shall show you to-day is the counterpart of one which you saw earlier in the course; but I have thought it well to bring the patient before you both in order to impress the subject which it illustrates the more clearly upon your minds and also because I trust that this good woman will consent to have her trouble removed by a trifling operation before she leaves us to-day.

Her name is Catherine B., and she was born in Ireland. She is fifty-four years of age, and has been married thirty-four years; but has never been pregnant.

How long have you been sick, Mrs. B.? "Two or three years." In what way have you suffered? "Principally from pain in passing my water."

She informs me privately that she wants to sit at the water-closet all the time; so that she seems to suffer constantly from the most severe vesical tenesmus. I judge that this sums up pretty much all her trouble; but it will, at all events, be best to ask a few more questions in regard to her symptoms.

Are you troubled by anything else? "I have a little white discharge." Anything else? "No." How often do you have to pass your water? "All the time during the day, and three or four times at night." Do you know any reason why you have never borne children? "No."

Suppose now that a woman should come to the office of any one of you and tell you that she had great difficulty about urination, that as soon as she emptied her bladder she felt like emptying it again (in fact, was constantly straining and bearing down), and that the passage of the urine gave her intense pain. You would very likely suppose that there was a considerable amount of cystitis present, and this idea would, no doubt, be confirmed when you found a slight quantity of pus in the urine. Perhaps it would not occur to you that pus is very apt to be found in the urine of patients suffering from leucorrhœa; and so having arrived at a conclusion, although not having made a diagnosis, you would prescribe a course of medication for the cystitis. But such a patient as this might take medicine for years and not experience any relief; and when you had found that although she had been taking your medicines for a long time, she was not at all improved, it would probably occur to you that you had better make a physical exploration.

One great object that I have in presenting this case is to impress upon you the importance of making an examination when there is any trouble with the bladder or urethra; for it is just as essential as when there is any uterine difficulty. But suppose the patient refuses to allow any examination: are you on that account to refuse to have anything to do with the case. I would not advise you to do so, unless you prefer losing patients to keeping them. Although the idea of an examination is very repulsive to most women, and many of them hesitate about submitting to it at first, there

are very few patients indeed who will refuse when they have entire confidence in their physician, and the subject is presented to them in the proper light. It is better, therefore, in such a case to prescribe a placebo for a few days, and when the patient really begins to appreciate the fact that you cannot treat her intelligently until you have made an examination, in order to find out exactly what the trouble is, she will no longer hesitate about the matter.

As soon as we commence our exploration here, we find that there is a urethral caruncle present, similar to that found in the case of the old lady from Long Island, who came to us earlier in the session; and then we know at once why it is that this patient has been suffering so intensely. The irritation set up by it corresponds to that caused by an elongated uvula; which can only be perfectly cured by the snipping off of a portion of its tissue. So here, in order that the patient may be relieved of her distress, this little caruncle (which is a kind of small polypus growing from the urethral walls and hanging outside of the orifice of the canal) should be drawn down and removed either by twisting or cutting. With the exception of the sterility, this caruncle accounts perfectly for all the symptoms. It is on account of the presence of this very insignificant-looking little growth that the patient has been suffering all this distress for more than two years past; the only relief that she gets being when she is in bed at night, as lying on the back seems to lessen the amount of irritation. As to the sterility, it is impossible at present to say what has been its cause; but as the woman is now fifty-four years old, and long past the menopause, this point has no longer any interest for us. I am glad to announce that the patient very sensibly consents to have this little growth which is causing her so much trouble removed to-day, and, accordingly, as soon as she has been etherized, I shall have the opportunity of doing it in your presence. Such an operation I perform here principally for the sake of showing you the character of these urethral caruncles, because it is impossible to afford so large a class the opportunity of seeing much of the procedure, which of itself, indeed, amounts to almost nothing.

The patient being now completely anesthetized, and the parts exposed, those of you who sit sufficiently near can see the growth very well, I think. By means of the forceps, I first draw it out from the urethra, and then my assistant, Dr. Ward, will put a ligature around its pedicle for me; after which I propose simply to clip it off. We find that the little mass is so very soft, however, that the thread cuts directly through it, and so we are obliged to remove it by piece-meal; taking great care to get the forceps quite down to the base of the growth. I now adopt a procedure which is not at all difficult under the circumstances, and which is often of considerable service in cases like this; namely, the dilatation of the urethra by means of the little finger until the latter can pass up into the bladder itself. When the sphincter is stretched thoroughly, it has been found that a urethral caruncle is very much less likely to return. The canal is now dilated to such an extent that the fundus of the bladder can easily be reached, and now sweeping my finger over the internal surface of the viscus I find that there is nowhere any new growth upon it. Of course, if there were a stone, its presence would easily be detected by the same procedure. As you perceive, the hæmorrhage is quite free from the base of the caruncle, and sometimes, when it

¹ Reported by P. Brynberg Porter, M. D.

is not interfered with, this continues for ten or twelve hours. When we have taken the precaution of applying a styptic, however, there will be no risk whatever in sending the patient to her home.

I find that the os uteri is very small in this instance; but as this may be due merely to the physiological atrophy of the whole organ which follows the menopause, we would scarcely be justified in assigning the sterility which has been noted to this cause.

CASE II. ANTEVERSION OF THE UTERUS AND CHRONIC OVARITIS, WITH PROLAPSUS, DEPENDENT, APPARENTLY, ON LACERATION OF THE CERVIX.

Our next patient is Ellen O'K., thirty-five years of age, and a native of the United States. She has been married ten years, and has had two children and one miscarriage.

How long have you been sick, Mrs. O'K.? "About seven months." What have you complained of during that time? "Pain in my back and loins and down my limbs." What else? "A kind of lump in my side." Can you feel this all the time? "Not always." Is there anything else that you complain of? "My head troubles me a great deal." In what way? "There is a great lightness in it." How are you in regard to your monthly sickness? "I am not very regular." Do you suffer very much at this time? "Yes, a great deal." Have you the whites? "No." And that is all that you complain of? "Yes."

Before going on any further with the case, I may mention that the miscarriage which has been noted occurred subsequently to both her normal labors. It took place eighteen months ago, but you will notice that the patient dates the commencement of her present trouble only seven months since. The latter of her two children was born three years ago. The prominent symptoms in this case are: the fixed pain in the back, so common in uterine disease, pain extending down the thighs, dysmenorrhœa, and some rather indefinite trouble about the head.

On making a vaginal examination here we are at once struck with the abnormal condition of the cervix. In the first place it is found far back towards the sacrum, and, secondly, there is a laceration in it extending quite up to the vaginal juncture on both sides. Neither the cervix nor the body of the uterus were very sensitive to the touch, but as soon as I resorted to conjoined manipulation the patient began to complain of great suffering. This struck me somewhat by surprise until I discovered two round masses down in Douglas's cul-de-sac, when the sensitiveness on pressure, as well as the constant pain in the back, of which the patient complains, were at once fully explained.

The patient's position was now changed to the side, and Sims' speculum introduced, when the diagnosis which I had previously made was confirmed. The everted lips of the torn cervix were seen to be very red and angry-looking, and from their surfaces was pouring a profuse leucorrhœal discharge. Yet, you will remember, the patient said she had no leucorrhœa at all. This is not uncommonly the fact, and one of the points which I wish to make in connection with the present case is that it is not ordinarily safe to trust a patient's statement in regard to the absence of leucorrhœa. The diagnosis here, as I said, was verified by means of Sims' speculum, and was as follows:—

- (1.) Extensive double laceration of the cervix.
- (2.) Anteversion.

(3.) Prolapse and engorgement of both ovaries.

Such a condition of affairs is, of course, quite sufficient to account for all the symptoms complained of by the patient, including the dysmenorrhœa and the head symptoms.

There is another point of great interest in connection with the case, and that is, When did all this occur? Such a laceration of the cervix as this could not have been caused by the miscarriage (which, as the patient informs me, was only at the third month of utero-gestation), and in all probability it took place at her last natural delivery, three years ago. Why the symptoms of which she now complains should not have made their appearance earlier it is difficult to say, but such a circumstance is by no means uncommon in medical experience. Thus, disease of the kidney resulting from scarlatina often escapes notice entirely for a long period after the attack which gives rise to it.

What is the prognosis here? In a general way I may say that whatever we may do for this patient, we certainly cannot cure her. I believe it to be impossible to put her in as good a condition as she was before the birth of her last child, but, nevertheless, I do not doubt that she can be relieved of all her symptoms. Where, then, shall we begin the treatment in this case? With the ovaries? I think not. In my opinion all the ovarian trouble here present has had its origin in the laceration of the cervix uteri. Our first duty, then, is to restore the cervix as nearly as possible to its normal condition by means of an operation. The patient should be kept strictly confined to bed for ten days, during which time her bowels should be kept soluble, and copious vaginal injections of hot water should be frequently employed. While thus being kept in a state of complete rest, the uterus should be replaced, and thus would be caused a removal of pressure from above and of traction from below by the heavy vagina. In a fortnight (or perhaps it might be necessary to wait a month) the cervix should be sewed up, and we would then have accomplished two things:—

(1.) The engorgement of all the pelvic organs would be relieved.

(2.) A source of future irritation would be removed.

If the patient were losing too much blood at her menstrual periods, it would be of service to apply the curette to the lining membrane of the uterus, but as this is not the case here such a procedure will not be necessary. It is possible that this uterus, having once been restored to its normal position (it being so much lighter now than formerly), would remain there, but if it did not an appropriate anteversion pessary could easily be worn as long as it might be required.

The return of the ovaries to their previous condition would necessarily be a slower process, but although the cause of irritation would then have been removed, it would not do to leave the matter entirely to nature. Warm vaginal injections, of from five to fifteen minutes' duration, should still be kept up, and complete rest should be enjoined at the time of the menstrual periods. In addition, tincture of iodine should every week be painted over the whole roof of the vagina by way of mild counter-irritation, and the continuous current of the galvanic battery should be locally applied two or three times a week. The latter, as I have often mentioned to you, sometimes accomplishes a great deal in these troublesome cases. While the constant current does not relieve the engorgement itself, the latter I believe to be due to a large extent

to nervous derangement, and this electricity has a beneficial effect upon. The whole treatment may be described as of an "alterative" character, and in order that it can be carried out fully and faithfully I should recommend by all means that the patient should enter some such institution as the Woman's Hospital, and remain there for at least three or four months.

CASE III. OPERATION FOR LACERATION OF THE CERVIX IN A CASE OF PROCDENTIA UTERI.

You will now have an opportunity of witnessing one of those operations which I told you previously it would be impossible for me to show you at this clinic, on account of the difficulty of any considerable number of individuals seeing anything through a speculum; but this is a very exceptional case, since I can perform the operation for the repair of laceration of the cervix while the uterus is entirely outside of the body. Such being the fact it can be seen in a more or less perfect manner by even such a large class as that now before me, and I may premise that the operation is to be performed in precisely the same way as if it were done through a speculum at the upper part of the vagina. As I have provided a carriage in which to take the woman home, she will incur no risk in thus having it done at the college.

The patient now being brought in, thoroughly anesthetized, you can perceive that the uterus has been kept up in very good condition by the pessary which she has worn during the week that has passed since she was here, and when I now permit the organ to descend by removing it, I think you will all be struck by the marked improvement which has resulted simply from her wearing the instrument for a week. The uterus has, apparently, diminished in size to the extent of one half, and the edges of the lacerated cervix are much less everted and swollen than they were a week ago to-day. All of you, however, I think, can perceive the rent, which is of quite an extensive character. You no doubt remember the rough simile which I used in describing the nature of the operation for the repair of laceration of the cervix. It is just as if you were going to form an adhesive union between two fingers, for instance, and, in order to accomplish this, you would first denude the surfaces to be united, and then secure them in apposition by means of sutures.

I think it best to begin at the lower part here, and having pared the two surfaces by means of the scissors, I plunge the needle, threaded with silk, in on one side, carry it across, and bring it out on the other side. A silver wire suture is then drawn through to take the place of the silk, and care having been taken to see that the parts are in perfect apposition, I twist it by means of the little instrument I show you here, and my first suture is completed. The other sutures are put in and secured in the same manner, and now you perceive that I have completely closed this portion. I next proceed to the upper part, and, having pared the surfaces, bring them into apposition, and put in my sutures as before. Finally, the laceration on the other side of the cervix is treated in the same way, and then the operation is finished. Most of you can now see, I think, how perfectly this lesion, caused by parturition, has been removed. The cervical canal has not been interfered with by the operation, and there is not the slightest danger of its becoming closed or rendered smaller, for the reason that its walls have

not been denuded, and there is, therefore, no danger of an adhesive union taking place between them.

The operation is a prettier one, and requires the exercise of more skill, when the cervix is in its normal position instead of outside the body, as in this instance, since it is then impossible, of course, to use the fingers to such an extent as I have done here. It also demands a perfect familiarity with the use of Sims' speculum on the part of the operator. This is a comparatively trivial operation, and yet it does a great deal towards the cure of such a case as this. The patient is now to be kept quiet, and injections of carbolyzed water should frequently be made through the speculum. At the end of about nine days the sutures will be removed, and the woman will then be ready for the next operative procedure. The second step in the case will be the taking of "a gore," so to speak, in the anterior wall of the vagina by the operation known as elytrorraphy, and then the final operation will consist in the restoration of the destroyed perineum, after which I think the case can be discharged perfectly cured. These two latter operations are, of course, of too serious a character for me to think of performing them here at the college, but I shall hope to have the pleasure of affording some of you, at least, the opportunity of witnessing them elsewhere.

Original Articles.

A CASE OF ABSCESS OF THE LUNG.¹

BY C. E. INCHES, M. D.

APRIL 14, 1881. Visited for the first time B. A., aged eighteen years, who, from the report of his mother, has been a very hard-working young man, having during the past three months, in addition to other work, spent a portion of each day in a fishmonger's, where it was necessary to have the temperature nearly as low as the outside air. During all this time he suffered from constant headache and also from constipation and malaise. There was no cough. His habits appear to have been good with the exception of excessive smoking with constant spitting.

A week ago, on April 7th, Fast Day, he visited the theatre with some male companions and in scrambling hurriedly over the seats to obtain a good place he fell, striking his right side against the back of a seat. He described the blow as very severe, felt ill, and the pain and distress grew rapidly worse. At the termination of the performance he went home to bed where he has remained since, now one week. According to the statement of his mother, a very intelligent woman, he became suddenly very ill the night of the 7th; vomited constantly after eating or drinking; was in a high fever; had great pain in head, epigastrium, and right side; he also suffered from wakefulness, delirium, cough, and loss of appetite. As far as can be learned this was the history of the case during the week. A physician had been called in who pronounced it a case of typhoid fever and recommended that he be sent to the hospital for treatment.

At my first visit I found the patient in bed lying on his back, which was raised to an oblique angle. He had suffered a great loss of strength. The seat of the injury from the fall, as pointed out by the patient, was

¹ Read before the Boston Society for Medical Observation, June 6, 1881.

over the epigastrium and below the right breast, principally about the sixth and seventh ribs, and there was pain in breathing and coughing and on pressure, but a most careful examination failed to detect any deviation from the normal position of the bones at this place. Percussion over them and in the vicinity showed dullness, and on auscultation there was diminished respiration with crepitant râles. The abdomen was flat with no rose rash and there was no gurgling in the iliac fossa. Headache severe; intelligence good; stomach less irritable, though he often vomits; pulse 120, but character not bad; temperature not taken, but to the hand felt hot.

April 16th. No apparent change in any of the symptoms, except that the vomiting has ceased and he is now able to take a considerable amount of milk; pain severe in epigastrium and right side; morning temperature 101.2° F. in right axilla.

April 18th. Reports himself as feeling better; his eyes are bright and he looks intelligent, though there is delirium at night; morning temperature 100° F. in right axilla; tongue thickly coated except a narrow raw-looking strip around border.

April 20th. He appears better to his attendants and states that the pain in right side is less severe, and is now of a dull heavy character when he has one of his rather numerous paroxysms of coughing.

May 2d. Has not been seen since April 20th, twelve days. His attendants report that he improved slowly until yesterday, when his cough became severe and distressing; his appetite, which had been good, was lost, the delirium returned at night and there was a recurrence of the severe pain in side; respiration 32; pulse 96; no dyspnea.

May 5th. Was summoned early in the morning, the patient being reported as much worse, and found the patient in a half-recumbent posture in bed, pale, exhausted, coughing at times violently, and raising large mouthfuls of greenish pus mixed with a rather small proportion of mucus of the same color and having a fetid odor; on inquiry I found that on the previous evening, feeling somewhat oppressed in breathing, he blew his nose forcibly and that over a pint of a foul-smelling fluid poured from his mouth without vomiting, and that during the night he continued to raise large mouthfuls of the same fluid, which was of a most sickening odor. Percussion showed no tympany, but on the contrary marked dullness over right back from the fourth rib down. Along the abdominal border of the chest the note was clear. On auscultation crepitant and subcrepitant râles were heard over the second and third lobes, increasing in the latter. The intercostal spaces retain their concavity. There is not now nor has there been at any time jaundice. Respiration 30; pulse 96, weak and fluttering; no febrile action, the skin quite clammy; no abdominal swelling. An increase of sputa is reported, some of a reddish hue, and in the most recent several small clots were noticed.

May 6th. Patient perspiring freely, sputa profuse, of a green color and frothy, and streaked with blood; no sleep on account of constant and severe cough and pain; tongue is clearing and moist; respiration 27; pulse 96.

May 7th. For the first time the sputa has been kept there being over twelve ounces for the past twenty-four hours. It is all of a greenish color, moderately fetid, none dark-brown or blackish, but some of a reddish color. There is still dullness on percussion and

natural resonance cannot be found in the right chest. Over the lower part of left lung are heard now bronchial râles, though heretofore nothing abnormal was observed except at times exaggerated respiration. Patient cannot sleep; cough and pain very severe; pulse 98, small.

May 8th. Has slept a little during the night, which is the first since the discharge of pus on the night of the 4th. The region of the injury is still sensitive on pressure; sputa eleven ounces during the twenty-four hours; respiration 32; pulse 108; profuse perspiration.

May 9th. The chest was measured this morning and the two sides were found about equal; he slept six hours last night, though his rest was disturbed by moans and mutterings; the right hand and arm have been swollen and useless for several days, but he is able to use them this morning; pulse 88, weak and intermittent; sputa over ten ounces.

May 10th. Was quiet yesterday until night, when cough commenced and continued until five A. M., with an expectoration of a pint of sputa containing at least an ounce of blood. Early in the morning he was so exhausted that a fatal result was feared from inability to raise the secretion, but at ten A. M. he seemed brighter and stronger. The body is bathed in perspiration and there is a miliaary eruption; pulse 99, feverish, not intermitted; amount of urine increased.

May 11th. Passed an easier night; sputa, eight ounces, odor not remarkable for several days; respiration in left lung rather coarse but nowhere deficient; pulse 80; tongue moist and clear; appetite good.

May 12th. Has slept six hours; cough less; sputa six ounces; pulse 78; urine normal in appearance.

May 16th. General appearance much improved; breathing in left lung vesicular; respiration quick; appetite excellent; sleeps well, as cough has diminished; pulse 84.

May 23d. Sits up in bed, and attempted yesterday to get out of it, but legs were unequal to the task; dullness over right back diminished; on auscultation bubbling of fluid was found, subcrepitant râles, and at different places what appears to be vesicular breathing can be distinguished; cough is less; sputa three ounces; his appetite, which has improved recently, is now enormous; pulse 96; tongue clean; respiration 25.

Treatment. In a case of this description, being called a week after the beginning of the attack, and after the febrile period was nearly over, active efforts were in order to reduce it by cold water, quinine, etc., and there was little else to be done except to quiet the pain and support the strength. The former indication I was not very successful in meeting, as I did not feel justified in giving to a very considerable extent opium or chloral, especially after the bursting of the abscess. At that time the secretion was excessive, and was raised with difficulty, and it was not justifiable to quiet the cough, the active agent of its removal. The diet was principally sherry wine and milk, but not taken together. At the worst periods he often drank during the twenty-four hours twelve ounces of the former and twelve glasses of the latter. The right side was constantly painted with the tincture of iodine, and was soon blistered and kept so. This, though beneficial by exhalation of the vessels of the skin, perhaps conferred a greater benefit on the mind of the patient, who was enabled to refer some of the pain of the diseased lung to his blistered side. The body was sponged

frequently with alcohol and warm water, and the bowels kept open on alternate days by enemata unless they moved naturally.

This was probably a case of croupous pneumonia in the first instance. The sudden seizure the night of the 7th of April with the symptoms then and afterwards, as narrated by the family, the subsidence of acute symptoms about the eighth day, the time of my first visit, and the gradual convalescence from that time until the formation and breaking of the abscess again endangered the patient's life, are quite compatible with such a diagnosis. He was a sick man at the time of the injury at the theatre, and the disease would have exploded whether that had happened or not, even if the ragged edge of a broken rib had been forced into the right lung. The only stress to be laid on this injury is that the constant pain and tenderness on pressure, lasting between four and five weeks, over the sixth and seventh ribs, in front, render it possible that there was contusion of the lung, it being inflated at the time of the accident, and from this contusion sprang a localized pleuritis, which at no time was anything else but local, since from the patient's account, whose head was always clear in waking hours, no history of pains spreading and radiating over whole of right chest was obtained, and, moreover, the contused lung tissue might have been the nidus of the subsequent abscess. It is true, of course, that local pleuritis and pulmonary abscess are sequelae of croupous pneumonia. This abscess was situated in the third lobe of the right lung, an unusual place, since the usual recorded habitat is in the first, but the first in this case was not affected except by bronchial râles, probably due to a great amount of secretion coming from below. I regret not finding accounts of the size of such abscesses judged from their contents. This one must have been very large to contain all the pus coming from it. The family insist that during three weeks he spat a gallon of mucus-pus, and when the abscess broke their estimate was two quarts. Even to me, knowing how much more in quantity a fluid appears when spread upon bed-clothes, towels, etc., the amount was surprising. I know there is difficulty in thinking such a cavity could exist in the lung sufficient to allow of so great a discharge as that of the 5th of May. With the subsequent abundant daily discharge there is less trouble on account of the well recognized secreting power of the walls of a pulmonary cavity. An empyema might, by breaking through the pleura pulmonalis, have accounted for it, but too many symptoms are adverse; these were: absence of general pain in the affected side; of dilatation either from effusion or pneumo thorax, later; the dullness which did not alter on change of position, though percussion, to verify this, was not tried till some time after the bursting of the abscess; the want of unnaturally loud and deep resonance on percussion, such as would have existed had the air gained admittance through a rent of the lung into the pleural cavity, which it always does; neither, which is about as invariable, was there collapse with cyanosis. Was it pulmonary gangrene? There were no dark-brownish or black sputa. The fetor, which soon disappeared, never possessed a true cadaveric odor, but was similar to that of the contents of a large and neglected abscess elsewhere, nor was it manifested in the breath; and there was an absence of symptoms of systemic poison, as would be likely to arise were so large an extent of lung tissue gangrenous.

The case is too recent to admit of decision as to whether this was acute tuberculosis. There is, however, no heredity in the case. The headache and malaise during the winter may have been due to overwork — and perhaps, also, to poisoning by nicotine, as he was an inveterate smoker — rather than typhoid-fever poison.

September 21, 1881. Re-examined to-day, and found slight diminution of respiratory murmur back from sixth rib downward; no râles, also slight loss of resonance on percussion in same locality; no retraction of right side of chest (three measurements); general condition excellent; has been at work for two and one half months.

RECENT PROGRESS IN ORTHOPEDIC SURGERY.

BY E. H. BRADFORD, M. D.

RESECTIONS OF JOINTS AND ANTISEPTIC DRESSINGS.¹

ALL reference to the subject of antiseptic surgery is of particular interest at present, and the opinion of a surgeon of so extended an experience as Ollier upon the subject is of unusual value, as his judgment can embrace a series of successful results before antiseptic surgery was introduced. He claims for the advantages of "Listerism" that (1) a successful result is to be expected with greater certainty under antiseptic treatment than without, as the septic processes, leading to osteomyelitis and denudation of bone, can thereby be prevented. (2.) The reparative processes of the bone and of the periosteum in subperiosteal resection is greatly fostered by antiseptic measures. (3.) Secondary changes in the muscles can be better avoided in the new than in the old surgical method.

The writer, however, does not advise complete closure of the wound after antiseptic resection.

THE QUESTION OF AXILLARY OR ISCHIATIC SUPPORT IN JOINT DISEASES OF THE LOWER EXTREMITY.²

Dr. Judson states his decided preference for a splint with ischiatic support for the following reasons: Locomotion with crutches requires the use of both hands, while both are free when the splint is worn; the hip-splint is always present, while crutches may be temporarily discarded, and also the ischiatic region is better adapted anatomically for a firm resistance than the axilla.

The persistent and long-continued use of crutches was first recommended by Mr. Edward Ford, and later by Mr. Brodie, and an ingenious apparatus of Mathieu was devised on the principle of axillary support (practically modified crutches).

Dr. C. F. Taylor advised, in 1867, the use of crutches, with an elevated sole on the well foot, a method of treatment which has been more recently advocated by Dr. Hutchinson, of Brooklyn, by Drs. Wyeth and Stillman, of New York, Dr. De F. Willard and Dr. Levis, of Philadelphia, and crutches form an important feature in the treatment advised by Mr. Thomas, of Liverpool.

Ischiatic support was apparently first applied in the construction of orthopedic appliances by Ambrose

¹ Ollier. *Revue mensuelle de Chirurgie*, December, 1880.

² Judson. *New York Medical Record*, July 2, 1881.

Paré; in modern times it has been tried by Bonnet, Martin, Bigg, Henry G. Davis. The first really efficient apparatus devised according to this principle is that described by Dr. Andrews, of Chicago, in 1860; this was subsequently modified by Dr. David Prince.

Dr. Davis's splint was, however, modified by Drs. Sayre and Taylor. The splint used by the latter is the one preferred by Dr. Judson as the decidedly most efficient.

An additional advantage of ischiatic support in the treatment of chronic joint affections is that it enables the continued employment of traction, the value of which has been considered in another paper by Judson.¹ Admitting that it is improbable that traction or extension (as it is ordinarily called) can exert any appreciable "distraction" or separation of the femur from the acetabulum, and that it is doubtful whether reflex muscular spasm incident to hip disease can be efficiently controlled or tired out by "over-stretching" by means of adhesive plaster applied over the integument or soft parts, the writer claims that as a means of simple fixation traction is of great value. This fact was recognized by Desault in the treatment of fractures. In applying the principle to the treatment of hip disease, he claims that the ordinary extension splint retards and arrests motion, so that in walking the chief motion is at the lumbar region of the back. A hip-splint so applied does not secure absolute immobility, but it does fixation, or a reasonable degree of immobility. This fixation, he claims, is sufficient to allow the reparative process to take place.

ANCHYLOSIS OF THE HIP-JOINT.²

The writer describes an apparatus which he has found useful in correcting the deformity after division of tendons and muscles or cicatricial tissues (namely, the adductor longus, tensor vaginae femoris, rectus, sartorius), followed by forcible rupture of the more deeply-seated adventitious impediments to free movements.

It is designed for the purpose of thoroughly fixing the pelvis while the limb is being brought down to the line of the body. The apparatus consists of a block of wood carved so as to accurately fit the buttock of the patient, who is secured by heavily-padded straps passing over the ilia. At each side of the block is a narrow bar of steel extending to the knee, where a padded steel band grasps the femur. In this bar two ratchet screws are inserted, which permit of motion of the bar in the direction of abduction and adduction, flexion and extension.³

OSTEOTOMY FOR GENU VALGUM.

Dr. Poore⁴ prefers Macewen's operation to that of Reeves after a personal experience with both, because the danger of opening the joint is less in the former than in the latter. Macewen's method, as is well known, consists in the division of the femur by a chisel inserted just above the joint on the outer side. Poore is inclined, however, to think that some of the precautions used by Macewen are unnecessary.

One of the operations was done with the strictest antiseptic precautions; sixteen were done without thorough Listerism; in one of the latter only was

there any considerable suppuration, and in only one case did the temperature rise above 99.5° F. In this case it rose to 102° F., for one evening, without known cause, without, however, any injurious results.

Dr. Poore immediately after the osteotomy applies a plaster-of Paris bandage, and cuts a fenestrum over the wound three days later. The pain after the operation is slight.

In the discussion which followed this paper⁵ Dr. Weir thought that Delore's method of forcible straightening deserved a better acceptance in this country than it had yet received. In young patients, before the union of the epiphyses, the operation is particularly indicated, but beyond the years of thirteen and fourteen it is to be neglected. Mikulicz, in experimenting, ruptured the external lateral ligament in cadavera nineteen to twenty-three years of age ten times in nineteen cases. Santi ruptured it nine times in twelve experiments. In living adults or adolescents considerable weakness of the joint has followed the operation.

In two of Delore's cases, on autopsy (one being seven and the other three years of age), death occurring one on the second and the other on the thirtieth day after the operation, separation was found to have taken place at the epiphyseal junction.

Dr. Sands described Colin's osteoclast, devised for the treatment of genu valgum. This consists of three wooden stocks which embrace the middle of the leg, the middle of the thigh, and the knee; the latter is movable transversely, and the power is applied by means of compound pulleys acting on the end of a long steel lever. The limb is placed so that it is impossible for it to rotate, and the force is applied gradually. In two cases operated upon Dr. Sands found the result excellent in one, imperfect in the other; in this, however, the operation was repeated. In the cadaver the lesion produced by the instrument was found to be a partial separation along the epiphyseal junction without rupture of the ligament.

CLUB-FOOT. OPERATION OF DIRECT INCISION.⁶

Dr. Phelps, of Chateaugay, reports this operation as having been successfully tried by him in a case where tenotomy alone did not suffice. An incision was made across the sole of the foot, dividing all the tissues resisting.

THE TREATMENT OF PELVIC ABSCESS IN HIP DISEASE.⁷

Habern classifies these abscesses as follows:—

- (1.) Those which are dependent upon disease or perforation of the acetabulum.
- (2.) Those from the rupture of the capsule in purulent coxitis on the inner and upper insertion. The pus passes over the pubic bone into the fossa ilia.
- (3.) That form which results from an extension upwards of an abscess formed between and beneath the adductors, and spreading along the ilio-psoas muscle into the pelvis.

(4.) Para-articular abscesses without communication with an inflamed joint.

The first form is, according to the writer, an exceedingly common one. This is due to the frequency of primary osteal disease of the acetabulum, an affection which is much more common than has usually been

¹ St. Louis Courier of Medicine, May, 1881.

² Richardson Brown. Boston Medical and Surgical Journal, Jan. 2, 1881.

³ For a fuller description of the apparatus the reader is referred to the author.

⁴ New York Medical Record, August 13, 1881.

⁵ Loc. cit., page 187.

⁶ New York Medical Record, August 13, 1881, page 169.

⁷ Centralblatt f. Chir., April 2, 1881.

supposed. Out of one hundred and thirty-two resections of the hip-joint at Volkmann's klinik, in fifty a caseous focus of the acetabulum was found (with a sequestrum in thirty-one). In twenty-three there was a focus of the femoral head, neck, or trochanter; in seven foci in both; in twenty-nine such a destructive condition that it was not possible to state the site of the primary disease; in twenty-three cases probable evidence of primary synovial disease.

This variety may extend either directly into the rectum or at the side of the intestine pointing in the ischio-rectal region or may spread downward on the posterior side of the thigh, in some cases as far as the knee. Secondary disease of the acetabulum may also occasion pelvic abscess.

RESECTION OF THE HIP-JOINT IN COXITIS.

A committee of the Clinical Society of London were appointed to consider this subject, and the report may be said to represent the surgical opinion of London, as to the ultimate results of operative interference and from conservative treatment. The number of cases of excision investigated was three hundred and twenty. The percentage of mortality was forty per cent., that of recovery forty-two per cent. In fifteen per cent. death followed directly from the operation; in thirteen per cent. from phthisis; in six per cent. from albuminoid nephritis; in four per cent. from other causes not connected with the affection of the hip. The treatment of those who recovered lasted one and three fourths years, the duration of the affection three years, and the average shortening of the limb was two and three fourths inches.

The mortality of the suppurative cases treated conservatively was thirty-three per cent., the percentage of cure was forty-two per cent. Death occurred in twenty per cent. from hip disease, from phthisis nine per cent., from various causes three per cent. The duration of treatment of those who recovered was two and one half years, of those who died one and one half, and the duration of the disease of those who recovered was four years. The amount of shortening in cases with a good result was one and one fourth inches, in average cases three and one fourth inches; absence of some shortening was rare.

In non-suppurative cases the cures were sixty-nine per cent. of the whole, twenty per cent. remained incomplete, and ten per cent. died. The course of the affection was three years.

The committee considered the following as indications for resection:—

- (1.) Necrosis of the head of the femur and the separation into loose sequestra.
- (2.) Firm sequestra of the head of the femur, the neck, or the acetabulum.
- (3.) Extensive caries of the femur or pelvis with fistulae.
- (4.) Pelvic abscess with disease of the acetabulum.
- (5.) Old chronic synovial suppuration with disease of the cartilages of the acetabulum.
- (6.) Luxation of the femur on to the ileum with chronic suppuration and fistulae, a condition indicated by early suppuration and general symptoms.

Resection is also indicated in albuminoid degeneration, in cases with a great deal of suppuration and continued loss of strength in spite of care, rest, and also in pelvic suppuration for the purpose of better drainage.

Pelvic abscess can frequently be recognized by palpation from the rectum.

The result of excision is usually greater mobility than after conservative treatment, and the gait is much less certain, and more limping.

Resection should be done below the large trochanter only when the latter is carious, and great attention should be paid to the preservation of the insertion of the glutei,¹ which should never be cut across, but always along the course of the fibres. In pelvic disease, however, the trochanter should be removed for better drainage.

König, of Göttingen,² looking at the matter of early resection from a German standpoint, substantially agrees with the opinion of English surgeons. Considering fungous disease of the joints as "joint tuberculosis," and as generally the result of localized disease of the epiphyses (*Herderkrankungen der Gelenkenden*), and admitting that early resection may be of value as the best preventive against general tuberculosis, he asks the question whether this may not be effected by other means without destruction of the joint, that is, by incision and scraping of the tuberculous foci in the bone without absolute resection. The question which a surgeon has to answer before deciding on resection is whether the protection of the patient's general condition demands the sacrifice of the joint. He claims that a large number of patients with undoubted tuberculosis of the joint get well without any generalization of the disease, and also that by statistics it has been satisfactorily shown that the danger of general tuberculosis is not greatly lessened by resection.

He reports a number of successful cases resulting in a useful limb, where he cut down upon the bone suspected as affected, tracks the fistula into the bone, and with the chisel and sharp spoon thoroughly removes the affected bone without destroying the joint.

TREATMENT OF SEVERE CLUB-FOOT.³

When the removal of a portion of bone from the tarsus is regarded necessary for the cure of club-foot, the choice of the method of operation is not at present an easy one.

Ried, in a recent article,⁴ stated his preference for removal of the astragalus over the excision of a wedge-shaped portion of the tarsus, for the reason that the shape of the foot in the result would be better after the former than the latter operation, but he admitted that the question was still to be settled by future clinical facts.

Wagner reports seven operations by Lücke, of Strasburg, all of which were successful. These were all performed in a variety of ways, and the conclusion formed is that excision of the astragalus is the preferable method, from which the best result is to be expected in the shortest time. In case, however, of partial bony ankylosis in the tarsal bones (a condition rare among children) excision of a wedge-shaped portion of the tarsus is to be preferred.

Excision of the os enuoid alone is rarely sufficient for the correction of the deformity. In combination with removal of the head of the astragalus in certain cases a good result may be expected.

Removal of the head of the astragalus and also of

¹ British Medical Journal, May, 1881.

² Archiv f. klin. Chir., xxvi. Bd., 4 Heft, p. 822.

³ Wagner. Inaugural dissertation, Strasburg, 1881.

⁴ Mentioned in the Report on Progress in Orthopaedic Surgery Boston Medical and Surgical Journal, October, 1880.

the tip of the fibula gave an excellent result in the hands of Lücke.

LOCATION, AGE AND SEX IN CARIES OF THE SPINE.¹

The writer premises with the statement that the apex of the spinal projection may be regarded as corresponding with the point of maximum vertebral destruction. In three hundred cases he found that every vertebra was diseased except the first cervical, where disease is not readily recognized. There may be said to be three centres of maximum liability: First at the sixth and seventh cervical; second, about the eighth dorsal; and third, at the second and third lumbar. The frequency of disease is greatest in the dorsal region, and nearly as great in the lumbar, but less frequent at the cervical.

The points of least liability to the disease are from the first to the fourth dorsal and the eleventh and twelfth dorsal, besides the two extremities of the spinal column.

These facts the writer explains (assuming that traumatism is the chief inducing cause of Pott's disease) by showing that the regions of greatest liability to disease are the regions most exposed to jar. The dorsal convexity is the most vulnerable region of the spine, not only because of its mechanical relation to the curve of the spine, but also as owing to its connection with the ribs and sternum it is more liable to receive a jar communicated from blows than the cervical or lumbar region. The pressure, however, of the superincumbent mass neutralizes this immunity in the lumbar region.

The upper dorsal region is to an extent protected by the arms and scapula, which, not being fixed to the spinal column, break the jar of a fall. The upper lumbar may be regarded as being placed at the point of the "natural hinge" between the upper and lower halves of the body.

In regard to age, in 375 cases 226 were under five years when the disease began; 68 were between five and ten, 24 between ten and fifteen, and so on, the number diminishing in each decade. The disease began in 77 cases before the second year. Out of 412 cases 235 were boys, 177 females.

HYPNOTIC CONTRACTURES.²

Among other phenomena of the state of hypnotism those of contracture have recently been studied by Charcot. This condition is easily produced in a hypnotized patient by mechanically stimulating the tendon, the motor nerve, or the substance of the muscle. The contracture is very firm. When the hand is the part affected it cannot be opened by any force; it relaxes, however, by stimulating the opposing muscles. If the patient is awakened while the contracture persists the contracture may disappear or may persist. If the latter is the case irritation of antagonizing muscles will not cause relaxation of the contracture unless the patient be again hypnotized.

If the limb is made anæmic by an Esmarch bandage before the patient is hypnotized the contracture cannot be made to take place until the circulation of the blood be restored by loosening the bandage.

TRANSPLANTATION OF BONE.³

MacEwen has recently succeeded in transplanting

bone in a case of necrosis of the humerus. Two thirds of the shaft in a child four years old had been removed fifteen months before and there had been no replacement nor bone formation. Small fragments of bone were inserted in a groove made in the soft tissues of the arm where it was supposed the shaft should be. These fragments of bone were those which had been removed from patients with curved tibiae. The result was that solid new bone was developed, the new portion united firmly to the old. The wound was kept during the process of plantation and bone culture perfectly aseptic.

Mr. Macnamara, of London, has recently made a similar attempt in reproducing bone, but the result has not yet been reported.

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² *Lancet*, May 7, 1881. *American Journal of the Medical Sciences*, July, 1881.

³ *Lancet*, May 12, 1881. Also *Bruns. Archiv f. klin. Chirurgie*, Transplantation von Knochenmark.

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Hospital Practice and Clinical Memoranda.

MASSACHUSETTS GENERAL HOSPITAL.

CASES IN THE SERVICE OF DR. J. COLLINS WARREN.

REPORTED BY C. B. WITHERLE, M. D.

COMPOUND DISLOCATION OF FORE-ARM.

A. C., a boy of eleven, entered with a dislocation of the fore-arm backwards. The condyles of the humerus projected through a linear wound at the bend of the elbow. The coronoid process of the ulna was fractured. The injury had occurred about four hours before entrance.

The dislocation was reduced, and the joint thoroughly syringed with a five per cent. solution of carbolic acid. A drainage tube was inserted, and a Lister dressing applied.

The temperature was 101° to 103° F. for five days after the injury, and then fell to normal. There was a slight discharge of pus from the wound, and considerable swelling about the joint. The active inflammatory symptoms subsided after the first week. The wound had nearly healed four weeks after the injury, and the patient was discharged wearing a splint and Lister dressing. He returned for examination eight weeks after the injury. The wound had then entirely healed, and there was motion in the injured joint to about half the normal extent. The patient was again seen six months after the accident, and the joint was found to be perfectly normal both in motion and strength.

COMPOUND DISLOCATION OF ASTRAGALUS.

Seven weeks before entrance the patient, a man aged twenty-eight, fell from an embankment, and received a dislocation of the right astragalus. The bone projecting from a large wound on the outer side of the ankle. The attending physician reduced the dislocation, and put on a plaster bandage extending to the knee. A window was left over the site of the wound. On entrance to the hospital the bandage was removed. There were found several sinuses on the inside of the ankle, and an abscess on the inner side of the leg, extending nearly to the knee-joint.

Examination under ether showed that the entire astragalus was necrosed. A sinus on the inside of the joint was dilated and the astragalus removed through it. The abscess of the leg was laid open from end to end. The leg was then placed on a Goodwin splint, with the knee bent. Oakum was used for dressing,

and the wounds syringed daily with carbolic acid. The patient's condition, both local and general, steadily improved from this time. The wounds had entirely healed ten weeks after the operation. A dextrine bandage was then applied, and the patient allowed to use crutches. The bandage was worn for three months. During the two months since its removal the patient has worked at his occupation of clerk in a grocery store, and uses a cane only when he takes a long walk. There is no motion at the ankle-joint.

UNUNITED FRACTURE OF LEG.

In April, 1878, J. S., a man aged fifty-five, was run over by a cart, the wheels passing over both legs. On entrance to the hospital there was found a Pott's fracture of the right ankle and a simple fracture of the left leg, just below the knee, with severe comminution for a distance of three inches. The fractures all united without unusual delay except at one point in the left leg. The injury was thus converted into a simple fracture of the left tibia and fibula. The bones at the point of non-union were wired in May, 1880, but failed to unite. The patient was discharged wearing a dextrine bandage. He reentered in October, 1880, with no signs of union. The fracture was cut down on with antiseptic precaution, the periosteum retracted, and the ends of the tibial fragments cut off so as to leave square surfaces. These surfaces were then brought together with a wire suture. The fragments of the fibula were not interfered with.

The patient made a good recovery from the operation. The wire was removed in January, 1881. At this time the bone at the seat of the fracture was not united, though there was considerable progress towards good union. A dextrine bandage was applied, and the patient allowed to use crutches. In July, 1881, the bandage was removed, and the tibia found firmly united.

PERINEPHRITIC ABSCESS.

D. B., a man aged forty, entered with very severe pain in right lumbar region, of about two weeks' duration, constant and steadily increasing. He had had symptoms of stricture for about a year and four months before entrance, his urethra had been dilated, according to his statements, from about No. 4 to No. 12 (English) measurement. He had still a slight gleet. The urine passed freely, and contained nothing abnormal except a little pus, probably from the urethra. The temperature the evening of entrance was 103° F.

One week after entrance the patient thought there was a slight swelling in the right lumbar region, but this could not be distinctly made out by any of the several surgeons who examined. The fever and pain were, however, steadily increasing, and it was decided to operate. Antiseptic precautions were observed. An incision about three inches long was made parallel to the edge of the quadratus lumborum. A Bigelow-Sims dilator was then pushed through the lumbar muscles, and on being spread open pus immediately flowed, about eight ounces being discharged. A drainage tube was then introduced, and a Lister dressing applied.

Recovery was slow, but was interrupted but once, then by the too early withdrawal of the drainage tube. The wound closed entirely three months after the operation. At this time a slight contraction of the urethral meatus was divided, after which a No. 16 (English) sound passed easily into the bladder. Five months after the operation the patient was able to resume

work, having had no return of the inflammatory symptoms.

Dr. Warren finds that the use of the sinus dilator simplifies many operations performed for the purpose of reaching pus. An abscess of the prostate pointing in the rectum was opened in this way without the use of the knife. In making the permanent opening in empyema a fold of skin may be pinched up at the desired point and divided with the knife, the dilator is then thrust through the intercostal muscle and pleura, and the opening thus made is spread to the desired width.

New Instruments.

DOUBLE IRRIGATION, INJECTION, AND DRAINAGE TUBES.¹

BY HENRY O. MARCY, M. D.

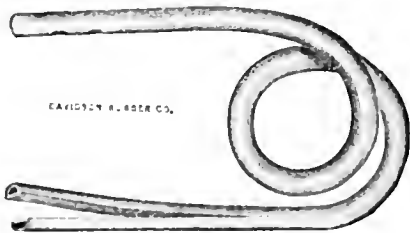
IN the recent progress of surgery, thorough drainage of wounds and suppurating cavities is considered scarcely less important than even their antiseptic treatment.

The instruments for which I ask consideration, are designed in a large degree to aid, under certain difficult conditions, a somewhat similar purpose.

There is no novelty in double tubes, the value of which has long been appreciated by the profession, but, so far as known, they have been hitherto constructed of metal or other stiff material, and on this account their utility is greatly lessened.

Since the curing of rubber in glass moulds, thus giving such perfection of finish and durability to its surface, the rubber catheter has in a large measure, for most excellent reasons, supplanted the use of the older and more expensive instruments. It seemed to me possible to furnish a tube of various dimensions, double through its entire length, and of equal beauty of finish.

After experimentation in this direction, the Davidson Rubber Company, of Boston have succeeded in preparing for me tubes varying in measurements. They are French scale, 18, 22, 25, 27, 35, 40, and in length from fourteen to twenty-four inches.



The thought which most prominently prompted their usage was to obtain, in any cavity, not only a thorough cleansing from its contents, the removal and destruction of septic material, but especially to give to its surfaces the results caused by the secondary effects of heat and moisture, results well known to the profession in the external use of poultices, the vaginal douche, etc.

This, for some years, we have been accustomed to make available by the use of double metallic tubes, as, for example, the intra-uterine douche, and in cystitis. The double canula, known widely as Dr. Bixby's

double tube, is by far the best hitherto met, and in the use of which was felt the great desirability of a similar effective instrument which should be flexible. However advantageous, such instruments cause pain and suffering, while they are more or less difficult and dangerous of introduction.

With the double rubber tubes these disadvantages are almost completely avoided. The applicability of such tubes readily suggests itself as wide and varied.

In diseases of the bladder the No. 18 is sufficiently small to enter the adult male bladder unless the passage thereto is constricted. Even with a considerably enlarged prostate it enters quite easily, and the benefit of the continuous current is very speedy and marked.

The relief comes, not only from the washing out of mucus and decomposing urine and the destruction of bacteria, but, continued, as has been my habit, for one half hour, night and morning, at the temperature of about 100° F., the congestive thickening and vascular supply of the mucous membrane are greatly diminished, the prostatic irritability is largely held in control, and permanent improvement ensues.

In hæmorrhage from ulcerations or other processes the results are even of greater value. In illustration I cite briefly the following case: Mrs. T., aged sixty-four, always well until within one year. Noticed trouble in passing water about six months since. Micturition frequent and painful; sediment thick and ropy. About a month before consultation began to pass bloody and coffee-colored urine, and clots were in the deposit. Despite every attention of the family physician she grew steadily worse, until at visit, and for two weeks preceding had been in bed. Was emaciated, very anæmic and feeble. It was apparent the patient could not much longer sustain the continued loss of blood. A careful examination revealed no evidence of renal complication, but there was a contracted bladder, with thick walls, a roughened surface, and hæmorrhage was increased after examination. Retained catheter for a considerable period to allow of complete rest of organ, but without benefit. Used hot-water current one hour without lessening the hæmorrhage, although it gave no suffering; then arranged for its continuous use at a carefully regulated temperature of 100° F., slightly carbolyzed, which was continued forty-eight hours, after which the bladder was allowed to be emptied voluntarily. There was no return of the hæmorrhage; the urine remained free from pus and mucus. Rapid convalescence followed, which was continued for more than six months.

In acute cystitis the results have been even more gratifying.

In the large class of cases, where the uterus has become the receptacle of septic and decomposing materials, the tubes have proved of great value. After childbirth, I have found the larger sizes the most convenient and advantageous. Their introduction is easier, as a rule, and the clots and *débris* come away with greater readiness. The intra-uterine douche under such circumstances has appeared to me of such service that it may challenge comparison in beneficial results with the vaginal douche, as recommended by Dr. Emmet, which has been found of such marked advantage in uterine and pelvic inflammations, that already it has generally won the confidence of the profession. Hitherto intra-uterine injections have been usually considered as dangerous, because a free return current has not been secured, and, on this account, even in the most marked

¹ Read before the American Medical Association, May, 1881.

cases of septic poisoning from decomposing materials retained in the uterus, the removal of the cause is undertaken only exceptionally. Guided by the dogmatic conservatism of the past, and the fear of patent Fallopian tubes, many a patient has been allowed to die.

In narrowing of the rectum from inflammatory conditions of the pelvic organs, the relief and benefit have been in every case most marked. In these instances the tube enters the colon, and the water is left, without strain upon the intestinal wall, at a point above the inflamed or involved part; not only is the large intestine emptied of its gas and contents, and the tenesmus and pain removed, but the poultice-like effect of the continuous current is very efficacious in reducing the congestive and inflammatory processes of any of the pelvic organs.

The comfort and advantage have been equally marked after various pelvic surgical operations, where gaseous distentions are often so troublesome. In one case, where I removed the uterus and both ovaries, this procedure, commenced upon the second day, was not only painless but of such service that it was continued until convalescence was assured.

The use of the double current through such a soft flexible tube renders it easy and effectual to cleanse the pleural cavity in empyema, to wash out long, irregular sinuses, deep gun-shot wounds where necrosis of tissue must follow the track of the bullet and frequently shreds of clothing, small pieces of bone, etc., are retained.¹

In nutritive enemata I have felt considerable gain has followed the introduction of the fluids thus high in the transverse colon, and can but recommend their use for further trial. The subject of the absorption of nutritive enemata has deservedly occupied the attention of the profession, and is invested with a new interest by the recent statements of a number of independent observers that something of a reversed peristaltic action takes place. It has been even claimed that the entire intestinal tract may be permeated by injections. The deduction would seem logical, the higher the enemata can be safely and conveniently carried the more surely will the absorptive and restorative processes be aided thereby.

In certain chronic diseases of the large intestine I have been equally confident of the benefit secured by this continuous use of hot water, and, although I have not as yet had occasion to use water thus applied in dysentery, either hot or cold, it would seem that a trial thereof might be thoughtfully recommended.

The longer tubes are of easy application for the evacuation of the stomach. Said a friend, "they are not introduced, they are swallowed;" at least almost equally easy do they enter the stomach, in marked contrast with the ordinary stiff tube of the stomach pump. A tube of this character and an ordinary rubber syringe are all that are necessary for the speedy and effective emptying of the stomach; and feeding by this means is, in like manner, easily accomplished. This I have had recourse to in a number of instances with children as well as adults.

The *modus operandi* is too simple to require detailed description. For the secondary effects the siphon is the simplest and most convenient method, from a height sufficient to insure a slow but continuous current.

¹ One of these tubes was used in washing out the deep sinns in the case of our late President.

Usually it is well to lengthen the tubes by connections of rubber tubing as deemed convenient.

Although I have written in an exceptional enthusiastic manner, I assure the profession I have kept within the limit of the seeming just deductions from my experience in these directions, lest it might appear that I was a partial and untrustworthy witness for truth. I am convinced that results will confirm more of good than I have indicated.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. M. RICHARDSON, M. D., SECRETARY.

JUNE 6th, 1881. DR. INCHEs read the regular paper on

A CASE OF ABSCESS OF THE LUNG.²

DR. BOWDITCH asked if there had been any examination as to the position of the heart. That was an important point in the diagnosis between pleurisy and pneumonia.

DR. INCHEs replied that there had been no percussion with that view. There had been, however, no disturbance of pulse or respiration.

DR. BOWDITCH asked whether the lower part of the back was resonant or flat.

DR. INCHEs replied that it was flat.

DR. BOWDITCH then asked if it was not singular that after the discharge of pus there was no evidence of it in the lung; it seemed to him strange. The facts did not convince him that there was not, after all, a considerable effusion into the chest. The fluid may have got through the pleura.

DR. INCHEs thought there would necessarily be air in the pleural cavity in case of perforation into the lung. There was no trace of it. As to the absence of gurgling and moist râles he would say that no examination could be made at the time without endangering the life of the patient. None could be made between the twelfth and the twenty-third days. When it was safe to examine gurgling and bubbling sounds were heard.

DR. MARTIN, of Roxbury, said that, thinking the regular paper was to be on a case of gangrene of the lung, he would briefly report two such cases which had occurred in his practice:—

The first case was that of an Irishman, forty-five years old, who had had slight cough for several weeks. With the cough was an increasing debility. At the first examination, the only symptom being slight cough, Dr. Martin found the right lung very flat with bronchial respiration and broncho pleurisy; no crepitation; no signs of pneumonia. He was told to go home and take nourishing food and quinia. In twenty-three days patient had great hæmorrhage from the lungs and fetor. He continued to have these hæmorrhages very profusely. Supporting treatment with ergot and digitalis were ineffectual. In order to correct the terrible fetor Dr. Martin took a gallon of impure carbolic acid and ten pounds of unslacked lime, and having put into several dishes from one to two pounds of lime he poured on these one pint to six ounces of carbolic acid. The acid slacked the lime and a very sharp vapor was thrown into the air which was very decidedly perceptible to the person

² See page 415 of this number of the JOURNAL.

breathing it. It corrected the fetor and the hemorrhage ceased in three hours, which had been going on for ten days. The whole aspect of the case was improved. The treatment was simply to inhale this vapor. There was no doubt that it had great effect on the diseased parts of the lungs, or at least that it arrested the progress of the disease and corrected the fetor. The patient recovered. This was twenty years ago. He has had no trouble with the chest since.

The second case occurred recently. A man of sixty had gangrene of the lungs in full blast. He had been under the care of a female practitioner who had given him much treatment without effect. The fetor in the room was so great that it was very difficult to remain in it. The patient's system was not much affected. Pulse good and temperature not much elevated. The upper part of the right lung was the seat of the trouble. Some flatness at upper third of right chest, where there was also gurgling sounds. Supporting treatment was given and salyelic acid by which the fetor was much ameliorated so that in three or four days it was with difficulty perceived. He took bark and nourishment and got better. The interesting point in the case was this: In the same house there was an idiot who had burned her thigh a year before. There was a granulating patch left about as large as the palm of the hand, which had not cicatrized. Dr. Martin saw this girl about two weeks after being called to the man with gangrene. A white substance of a glutinous nature had appeared on the surface of the sore. From the centre to the circumference this white deposit diminished in thickness. Nothing like the original surface was to be seen. There was neither trouble in the throat nor any constitutional disturbance. After that the tissues beyond became much inflamed and swollen. Sustaining treatment, quinia, stimulants, etc., had no effect, and she died. It was evidently a blood poison. Before death took place this white substance had decomposed. There was no sloughing, no formation of pus. The edges turned black and broke up, part drying and part softening. The patient with gangrene, after he was thought to be out of danger, with little cough, etc., suddenly died. There was no diphtheria in the region, and nothing bad about the drainage. The cause of the diphtheritic membrane seemed to be the air thrown out of the gangrenous lung. The effect of the carbolic acid (in the first case) was very remarkable.

VACCINIA.

With regard to the vaccinia of Cohasset Dr. Martin said that after having been disappointed some thirty times in investigating what were supposed to be epidemics of vaccinia some cases were reported to him by Dr. Cushing. Having been so often disappointed he declined to go to see them, but asked that some of the crusts should be collected and sent to him, that he might test them. The crusts were sent, and though he had no faith in them, there being in their appearance nothing indicative of vaccinia, he made six inoculations with them into a heifer. At the end of a week one vesicle had appeared. With this six points were charged. Next day one child was vaccinated without any hope of result. A week later went to see the child and was astonished to find two very fine vesicles peculiar to cow-pox. There was no doubt as to the authenticity of the case. Dr. Martin then wrote again to Dr. Cushing and got one half a crust more. Eight inoculations into the heifer were made with this crust from which two

vesicles were obtained. From these successful vaccinations were made. From the second remove fourteen vaccinations on children were made in one day and a vesicle resulted in each case. These vesicles were very beautiful in every way. There is a great difference between the various original stocks of cow-pox virus, which can only be detected by an expert. The peculiarity of this was that on the eighth day the point of inoculation still consisted of a number of small vesicles which had not become confluent. Dr. Martin then went to Cohasset and found the disease at about the sixth day in one cow and at the fifth in another. The whole history of these animals was exactly consistent with that occurring in the milk animals generally. All the cows milked by hand were affected. Those suckling did not have it though it would appear about ten days after the cow had stopped suckling its calf. It never appeared on the dry cow or on heifers that had never borne calves. The disease is never found on any part of the cow except the roots of the udders.

Dr. Martin later visited another large dairy in Cohasset, where he found eight to sixteen cows with traces of the vesicle, the crusts being still adherent. Others had cicatrices; twelve to fifteen had been affected. He found, also, a man with a vesicle at the fourth day, which had been inoculated through a hang-nail of the thumb. The local physician informed him that during the last five years he had had twelve cases of dairy men who had pustules on their hands.

There was no doubt that Dr. Cushing's cases were true cow-pox, and as such were very important and interesting.

Another interesting point with regard to these cases was that the history of the epidemic at Cohasset goes back several years. In 1872 Dr. Tarbell came to him and said that there was an epidemic in the dairies of Hingham. The cases occurred among half a dozen imported Jersey cows. From the history of the cases and position of the scars there was no doubt that these were cases of cow-pox. This takes the history back nine years.

There have been many cases of cow-pox reported in America, but in every instance the cases have been found to be something else. If any authentic cases of vaccinia have ever been reported they are very rare. He did not think any ever had been reported in the United States.

The case of *variola equina* was of very great interest. Such a disease is so rare that the majority of writers deny its existence. Jenner said that the disease in the milk cow was inoculated from the horse, or at least stated that the virus was transmitted to the udder of the cow from the hands of a milker who had been taking care of horses affected with variolous disease. He thought he had discovered the connection between the variola of the milk cow and the diseased horses, but was never able to produce it by inoculation. Many times he took virus from the heels of greasy horses and inoculated other animals, but was never able to get cow-pox in this way. Other writers reported that they had made similar experiments and failed. Jenner was ridiculed. Another observer, however, had happened to come across a man on whose hands were vesicles looking like the vesicles of cow-pox. From these vesicles he took the responsibility of inoculating children, and produced a vesicle that could not be distinguished from variola *pura*. The animal was discovered, and from it chil-

dren and heifers were inoculated, the disease thereby being produced. One of the plates of Jenner shows a child inoculated from the heel of a horse. These experiments, however, were lost sight of, and ridicule again brought against Jenner. At Paris horses were found with a fine eruption about the nose and nostrils, with pustules in the hair. From this children and young heifers were inoculated. A magnificent pustular eruption was produced in the child.

On the 9th of April Dr. Martin was called to see a hostler at the Highland Railroad stables. The man was found with a very red face, which was not the redness of erysipelas but rather that about a very vivid vaccination. After washing the discharge from the nose a pustule was seen to be just inside the opening of the nostril. On further examination a pustule was found on the thumb of one hand and the little finger of the other. The next day, after washing the hands with ether, two perfect vesicles were found. The areolæ had just begun to appear, and had extended one eighth of an inch. Some points were charged that day with clear pellucid fluid from the vesicles. Dr. Martin was so fully convinced of the character of the eruption that he vaccinated two children and a heifer, the inoculations being perfect in every case. The vesicle was perfect in form, and contained a small amount of fluid. Afterwards four more points were charged, and from these eight magnificent and perfect vesicles were produced. On the heifers the inoculations produced characteristic vesicles.

DR. CUSHING asked about the horse from which these vesicles probably came.

DR. MARTIN said the hostler had been washing scratchy horses. He had never had the same thing before. The man was terrified at the proposal that he should show the horse. Dr. Martin then went to Mr. Page, who had charge of the stables, and was told by him that the horses suffered from two different diseases. One was the scratches, and the other the grease. The latter is attended by much more inflammation, and has a very large and watery discharge. It occurs quite frequently, though much less so than the scratches. It consists of a sort of ulcerative centre, from which a watery fluid is exuded. There are also many minute vesicles. With regard to the use of animal virus Dr. Martin said that he began its use strongly prejudiced against it. He did not believe in it, and had no faith in its good results. He soon abandoned all other means of procuring virus, and now uses none except from the heifer.

Adjourned.

BOSTON SOCIETY FOR MEDICAL SCIENCES.

JAMES J. PUTNAM, M. D., SECRETARY.

NOVEMBER 23, 1880. DR. WARREN made a communication accompanied by specimens illustrating a mode of

PUSTULE FORMATION IN THE SKIN

differing from that hitherto described in the textbooks.

After recalling the usual forms of pustule, in which the rete is raised up by inflammatory products, the inflammation occurring in the skin itself, Dr. Warren referred to his own previous observations on the structure of carbuncle, in which he had shown that the pus, which is formed fairly beneath the skin, reaches the

surfaces largely through the little columns originally containing adipose tissue, thus producing the well-known eribriform appearance of the surface. Besides this avenue of escape for the pus, Dr. Warren had discovered that the papillæ also serve as channels through which still smaller masses of pus reach the surface of the skin.

When examined in an early stage of the process these papillæ are seen to be in an edematous condition, containing fluid and a few wandering cells, and distended into a polypoid shape, and sometimes to project a little above the surface of the skin.

The contents soon become thicker, the overlying portion of skin is invaded more and more, till at last it breaks down and the contents of the papilla escape. Under the microscope these are found to consist of cheesy, degenerated matter, like that of an old exudation. The carbuncular inflammation is thus really beneath the skin, the products filtering through the latter just as through a sieve.

In reply to Dr. White and to Dr. Fitz, Dr. Warren said that he was aware that this form of inflammation was not truly pustular, in a strict sense, since the pus was formed not in but beneath the skin. He had intended to use the word pustule only in a very general way, as surgeons are apt to employ it.

DR. WHITE thought this distinction between pustule formation and abscess, founded on the seat of the inflammation, should be kept strictly in view. In the former the papillary layer is only secondarily involved.

DR. WARREN said that he had not intended to approach the matter from the point of view of classification at all, but only to show that this form of inflammation, which is usually spoken of clinically as pustule formation, and in external appearance precisely resembling a pustule, takes place in the manner described. The question naturally arises, he said, whether other supposed pustules are not formed in this way.

DR. PUTNAM reported a case illustrative of the

LOCALIZATION OF CEREBRAL FUNCTIONS,

and showed a portion of the brain of the patient, who had been attacked four months before death with hemiplegia, from which the arm had almost entirely recovered while the leg had remained in *statu quo* to the last. At the autopsy the remains of an old hæmorrhage were found just beneath the cortex of the paracentral lobule near the gyrus fornicatus. The white substance in the neighborhood was softened. There was no other apparent lesion of the brain on either side except that described, which was on the side opposite to that of the paralyzed limbs.

DR. WHITNEY¹ made a communication, illustrated by microscopic specimens, on the

PLEURO-PNEUMONIA OF CATTLE.

It will be published elsewhere at length.

In reply to Dr. Fitz, Dr. Whitney said he could not say whether in the later stage of the disease the whole lining membrane of the bronchi is thrown off, but certainly this happens to the epithelial layer.

DR. FITZ said that he remembered having heard Virchow speak of this cattle disease as the type of acute interstitial pneumonia, and certainly its resemblance to human pneumonia, and especially the so-called dissect-

¹ Vide Third Report on Contagious Pleuro-Pneumonia. By Dr. Charles P. Lyman, published by the direction of the Department of Agriculture at Washington.

ing pneumonia, is very striking. The enormous size of the lymph space is very interesting. He thought this affection analogous to phlegmonous erysipelas, both being forms of lymphangitis.

In further reply to Dr. Fitz, as to whether the gelatinous material described might be an artificial product, Dr. WHITNEY said that he had seen it in specimens from fresh as well as from hardened lungs, but had not isolated it.

TUMOR OF THE ORBIT.

Dr. WILLIAMS showed a tumor removed from the orbit and believed to be sarcomatous in nature. He could not tell from what tissue it grew; certainly not from the eyeball. Dr. Jeffries, who had examined the patient, said that he did not look as if affected with cancer. The portion of the growth which could be felt was soft and suggested a cyst, which was believed, however, not to be the case. Considering its age and extent it was singular, if sarcomatous, that the eye had not been attacked.

Dr. FITZ said that the growth under the microscope showed more intercellular space in proportion to the cellular part than is common in sarcoma, and quoted Dr. Whitney as having found other parts looking myxomatous. It seemed to him not improbable that the tumor really grew from the fatty tissue at the back of the orbit.

Dr. WILLIAMS said that most of the tumor was more dense than this part, but that he had entertained the possibility of its being myxomatous.

Dr. WIGGLESWORTH related a case of

LOCAL COMMUNICATION OF FAVUS

from a cat to a poorly-nourished little girl who had been in the habit of holding the animal in contact with the part at present diseased, in order to illustrate the greater vulnerability of the skin at different ages and in different states of vitality. He referred to experiments of Dr. White and himself with regard to the inoculation of favus, showing how difficult this is in healthy subjects.

Dr. WHITE thought that so far as vegetable poisons are concerned the condition of the skin made no difference. With favus it may be otherwise, but certainly *tinia tonsurans* will run through a lot of healthy as well as of diseased patients. *Tinea versicolor* also he had seen in the healthiest of persons. He thought the reason it is believed to occur oftenest in consumptive cases was that such persons are so often stripped for examination of the chest. With regard to age as determining susceptibility, Dr. White thought it was different; it was only the effect of constitutional diseases to which he had been referring.

TUESDAY, JANUARY 18, 1881. Dr. BOWDITCH described some experiments, which will be published in *Foster's Journal of Physiology*, 1881, that had been made by Dr. Southard and himself, to determine more accurately than before¹

THE RELATIVE VALUE OF TOUCH AND SIGHT IN DETERMINING THE POSITION OF OBJECTS IN SPACE.

In addition to the methods previously described cards were used bearing concentric circles ruled round a black point which served as the object for localization. A sharp-pointed instrument was used instead of

a pencil, and the distance between the holes pricked in the card and the black point aimed at furnished a measure of the accuracy of localization.²

The experiment was also tried of allowing different lengths of time to elapse between the localization by sight or touch and the movement of the hand toward the object, the eyes being closed during the interval. In this way it was found that after about two seconds the accuracy of localization was greater than at first, but that after this it speedily declined.

Dr. WADSWORTH asked how long a time Dr. Southard worked at one sitting, and suggested that some of the results might, perhaps, be explained as being the effect of fatigue.

Dr. BOWDITCH said that Dr. Southard used every precaution in the way of control, experiments, etc., to eliminate the action of this influence. In answer to a further question of Dr. Wadsworth, Dr. Bowditch said that Dr. Southard had found that he worked the most accurately on days when he was feeling bright and well.

In reply to Dr. James, Dr. Bowditch said that arrangements had been made in some of the experiments so that the same distances at different parts of the chart should correspond to the same visual angles in the eye of the experimenter.

In reply to Dr. Wadsworth, Dr. Bowditch said that not enough experiments had been performed to determine whether, when the attempt at localization was made with the opposite hand to that which had placed the object, the error was greater or less according to whether the hand was forced to move towards or away from the median line of the body.

In reply to Dr. Cabot, Dr. Bowditch said that no doubt the results would be different with different observers, but also, in reply to Dr. Putnam, that each individual quickly reached a point beyond which he did not improve farther.

Dr. JAMES recalled the fact that Vierordt had worked out a curve of memory in an analogous set of experiments to these, and had made it out to be almost identical with that established by Dr. Bowditch.

ERUCTATIONS.

Dr. GARLAND made a communication on the subject of eructations,³ referring to a paper by Weissgerber, and giving the results of observations upon himself. The act consists in the noisy ejection of air previously swallowed. This swallowing of air may take place with great rapidity and to an enormous degree, especially with hysterical patients. Under these circumstances the air usually passes only into the œsophagus, but it may be carried into the stomach.

In reply to Dr. Bowditch, Dr. Garland said it was not definitely known how the sounds were produced, perhaps by the sudden opening of the upper end of the œsophagus.

Dr. Garland said it seemed to him as if the movement of drawing the air into the œsophagus coincided with elevation of the larynx.

Dr. JAMES, on the contrary, thought that in his case it coincided with falling of the larynx.

Mr. MINOT said he had been told that Greeks of the lower classes were in the habit of drawing tobacco smoke into the stomach instead of into the lungs, and retaining it there for fifteen minutes or so.

² Vide the previous experiments.

³ Boston Medical and Surgical Journal, June 2, 1881.

¹ Vide these records, October, 1879.

THE STERNUM AS AN INDEX OF AGE AND SEX.

DR. DWIGHT read a paper on the Sternum as an Index of Age and Sex,¹ in which he showed the statements made by Hyrtl and by Luschka, to the effect that the greater relative length of the body as compared with the manubrium is a distinctive mark of the male skeleton, to be so often wrong in individual cases that it is of no practical value.

Neither is the time at which the different parts coossify distinctive of the age of the subject, although it is often claimed to be so.

DR. PUTNAM showed a new modification of Pond's sphygmograph, allowing of the application of a measured pressure upon the artery.

A CASE OF CUT-THROAT, SHOWING THE ACTION OF THE FALSE VOCAL CORDS IN DEGLUTITION.

TUESDAY, FEBRUARY 15th. DR. A. T. CABOT reported a case of cut-throat, in which an opening was made into the glottis through which the action of the false vocal cords in deglutition could be well seen. The cut falling upon the thyroid cartilage, just beneath the notch and just above the insertion of the false cords, had passed horizontally backward, dividing the upper portion of the cartilage from the lower, so that an interval of nearly half an inch separated the two parts. This cut, though nearly horizontal, was a shade lower on the left side than on the right, and while the right false cord was intact the upper surface of the left had been shaved, and the sacculus laryngis slightly opened in its upmost part while the edge of the cord was uninjured. This had left a minute fistulous opening into the top of the ventricle of the larynx without impairing, however, the movements of the cord on that side. So far as could be told the arytenoid cartilages had escaped injury, and their movements were perfectly free. The parts of the thyroid thus separated were firmly fixed in their new position, and could neither be approximated to each other nor still further separated. A laryngoscopic examination through the mouth showed the epiglottis erect in its normal position in relation to the tongue and parts around, from which it would seem that the separation of the parts was due rather to the descent of the lower fragment than to the ascent of the upper.

At the time that the patient came under Dr. Cabot's observation, the wound had so far healed that only an opening large enough to admit the tip of the little finger was left immediately above the insertion of the false cords.

Except at one corner, the mucous membrane of the larynx was healed to the skin around this opening, thus leaving a window through which the action of the larynx in phonation and deglutition could be easily watched. In phonation the false cords were held widely apart, while the true cords approached each other and vibrated. It was in deglutition, however, that the mechanism was of especial interest.

When the patient swallowed, the first visible act was the closure of the false cords. These applied their edges tightly together, while the last glimpse of the true cords showed them widely separated. As the act of deglutition progressed the mucous membrane over the false cords wrinkled and was pressed forward as if the cords beneath had shortened. At this stage the

parts were drawn together and puckered as the neighborhood of the anus or other opening provided with a sphincter is during the action of that muscle. Finally, when the glottis rose, this folded mucous membrane was pressed firmly against and partly protruded through the external opening. Any saliva or liquid which was in the upper part of the glottis at the time was forcibly ejected from the opening during this final act. If bread was swallowed a small portion of it almost always found its way past the epiglottis down on to the false cords, and was thrown out through the opening. Its escape upwards into the mouth was apparently prevented by the epiglottis. In a normal condition of the parts, when the epiglottis is not separated by so great an interval from the false cords, and when a more convenient escape is not offered as in this case, it seems probable that the portions of food which fall below the epiglottis are pressed past and above it during this final rise of the glottis at the end of deglutition. If this were not the case, and if a particle of food remained upon the false cords, it would, when they relaxed, fall into the deeper parts of the larynx, and excite cough.

A consideration of the muscles² in the neighborhood makes it seem probable that the approximation of the false cords is produced by the action of the crossed fibres of the *posterior arytenoid muscle*, which, passing round the upper extremity of the arytenoid cartilages, extend upward to the epiglottis. Upon the contraction of these fibres the summits of the cartilages would be caused to bow towards each other, which would bring the false cords together, while the true cords might remain separated, as they were seen to do in this case.

The further sphincter-like action of the ostium laryngis would be caused by the contraction of the *musculus ary-membranosus*, an exceedingly delicate muscle lying beneath the mucous membrane of the *vestibulum laryngis*.

Recent Literature.

A Treatise on Diseases of the Nervous System. By JAMES ROSS, M. D. Illustrated with lithographs, photographs, and two hundred and eighty wood-cuts. Two volumes. New York: William Wood & Co. Pages xx., 594; xii., 1000.

This work is an exhaustive treatise upon the diseases of the nervous system; almost all writers of any note in the departments of anatomy, physiology, and pathology have been consulted and the results of their investigations are given. The illustrations are only in part original, by far the greater proportion being copied from writers of standard authority, as Charcot, Erb, Henle, Flechsig, Duret, Gowers, Duchenne, etc., and are well chosen to explain the subjects considered.

There is given first a general account of the structure and functions, then of the physiology of the nervous system as a whole; then follow the divisions in which are considered the diseases of the peripheral nerves, of the sympathetic, of the spinal cord, and of the encephalon. Each of these divisions contain introductory chapters in which are considered the anatomy, physiology, and pathology of these great divisions. These in-

¹ Published in the *Journal of Anatomy and Physiology*, vol. xv., 1881.

² The actions of these muscles are accurately described in Luschka's *Monograph upon the Larynx*, page 154.

introductory chapters are carefully written and are exhaustive; in them are grouped together certain facts and explanations with methods of examinations which are very convenient for reference and which cannot be found elsewhere in their entirety. The descriptions of special diseases are less full and satisfactory.

The chief criticism to be made upon the introductory chapters is that many elementary subjects are treated at too great length and with too great minuteness. The author has apparently tried to include everything, and has left little or nothing for the student to learn elsewhere, seemingly not considering that much of what he says will have been learned before reading his book. He has referred frequently to the views of others, giving abstracts thereof, in such a way that his style is in some places rather constrained and cramped.

The methods given for examining the motor apparatus and the sensory apparatus are good; the description and explanation of conjugate deviation of the eyes and rotation of the head and neck is very full and satisfactory. There is little to be added to the anatomical and physiological introductions to the diseases of the spinal cord and brain, which occupy respectively eighty and one hundred pages. These divisions are fully illustrated, the illustrations assisting materially to an understanding of the text.

In the division devoted to the peripheral nerves neuralgia of each nerve or set of nerves is considered separately; the same is true of spasm and contraction. It would be a saving of space and conduce to unity of description if the various forms of neuralgia had been considered together under one heading, the different varieties being mentioned simply as subdivisions.

The description of some of the diseases of the spinal cord are not quite what they ought to be. One would infer that infantile spinal paralysis begins with fever and convulsions more frequently than is really the case, the paralysis is said to be more "frequently general, involving the muscles of the four extremities, as well as a great part of the muscles of the trunk, especially those of the vertebral column, and sometimes those of the neck." Such general extension of the paralysis at the commencement is exceptional and cannot be said to be frequent.

Under Diagnosis, the difference between spinal paralysis and infantile cerebral hemiplegia is not clearly enough drawn; the latter being frequently mistaken for the former, a fuller description of the diagnostic differences would have been more satisfactory. Under treatment the description of the method of using the galvanic current might have been much improved.

The description of locomotor ataxia is complete in detail, but the grouping of the symptoms is rather too artificial and a student would not easily discover which are the earlier symptoms upon which a correct diagnosis can be formed in the initial stages of the disease. When speaking of the morbid anatomy the author says, on page 239: "The microscopical changes in the cord consist in the early stage of thickening of the interstitial tissue, increase in the number of nuclei along with the formation of enlarged and highly developed Dieter's cells;" while on page 241 he says: "All, however, are agreed that the process begins in the nerve elements themselves, and extends from them to the interstitial tissue." These two statements certainly do not agree together.

The symptoms ascribed to lesions of the cerebellum are more complex than some of the best authorities

consider them; the description includes phenomena due to pressure upon neighboring parts.

Some divisions of nervous disease are treated much less fully in proportion to their importance in practice than others; this is more especially true of chorea, delirium tremens, saturnine, and post febrile neurosis. Not only is the description of these defective, the treatment is also unsatisfactory.

"System-disease or a systematic lesion," is used to designate affections of certain regions. *Systemic* would seem to be a better adjective.

We have mentioned in detail some of the imperfections of this work, but the symptomatology of the different diseases is sufficiently accurate to guide the physician in his practice. The chief objection to the work will probably be found on account of its size and cost.

S. G. W.

Hand-Book of Vertebrate Dissection. Part I. How to Dissect a Chelonian. By H. NEWELL MARTIN, M. D., and WM. A. MOALE, M. D. New York: Macmillan & Co. 1881.

It is not improbable that the feelings of many of our readers on taking up directions for the dissection of turtles will be somewhat analogous to those of Mr. Dick in *David Copperfield* when told that his room was too small to swing a cat in. "You know, Trotwood, I don't want to swing a cat. I never do swing a cat. Therefore what does that signify to me!" If, however, any one should wish to dissect a turtle thoroughly, and to make the most of the material, we can recommend this book very highly. There are accurate directions for everything, and the student who will follow them conscientiously will, with the aid of some collateral reading, acquire more than a slight insight into vertebrate anatomy. Other works of a similar character on the dissection of the pigeon and the rat are already in progress. The series when completed will be very valuable.

T. D.

Fashion in Deformity. By WM. HENRY FLOWER. London: Macmillan & Co. 1881.

The above is the title of an excellent little book, intended for popular instruction rather than for the use of a student. The facts collected are well put, and the absurdity of the human mind in certain phases well illustrated.

In speaking of the deformities of modern society, the writer rather strains the comparison in making the mother who puts modern shoes on her child or who furnishes herself and her daughter with tight corsets the exact counterpart of the flat-headed Indian or the Chinese.

The savage or semitic follows blindly a barbarous custom, but the Caucasian has grown up unaccustomed to seeing the human kind without clothes, and the result is that every woman thinks her figure is, or ought to be, like the fashion plate, her corset "moulded to the figure," and her foot tapered to a point.

She does not wittingly distort, but aesthetically strives to attain to a faulty ideal.

Little tracts like this will, it is hoped, help to correct the public taste, and give us a more intelligent custom.

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THE NATURE OF THE DIPHTHERITIC CONTAGIUM.

It is generally known that now for nearly two years Prof. H. C. Wood and Dr. Henry F. Formad, under the auspices of the National Board of Health, have been engaged in researches into the nature of the diphtheritic contagium. The result of their labor is now in the hands of the National Board, and will soon be published in full. In an address delivered October 11th, before the Academy of Natural Sciences in Philadelphia, Dr. Wood made a preliminary statement and communicated some of the facts and inductions which had been developed by their investigations, but requested that criticism be withheld until the full report is published. The following is a brief abstract of the lecture:—

In the spring of 1880 work was begun by inoculating rabbits with diphtheritic membrane, taken from actual cases, but with varying results. Where the membrane was merely introduced under the skin diphtheria was reproduced in only a few; some died of tuberculosis, secondary in character, in others no special effect was observed. When the poison was placed in contact with the mucous membrane of the rabbit's trachea, however, a false membrane was frequently abundantly produced, identical with the original in its microscopic and other appearances. It was further demonstrated that other irritants produced the same pseudo-membrane, in fact that "any tracheitis of sufficient intensity is accompanied by this product." Some micrococci were always found in the membrane thus formed, possibly less frequently than in true diphtheritic exudation. The production of false membrane, therefore, has nothing specific in it. These results have been already published, but the following have not.

As the result of a personal visit and investigation into an epidemic of diphtheria which occurred at Ludington, Michigan, Dr. Formad found a small town, part of which was built over a swamp which had been filled with saw-dust, and the soil of which was still so wet that few houses had cellars. It was in this district that diphtheria had prevailed; almost all the children had it, and about one third died. Autopsies revealed, besides the usual macroscopic appearances, a characteristic condition of the blood. "In every case the blood was found more or less full of micrococci, some free, others in zoöglæa masses, others in the white blood corpuscles." The viscera also contained

micrococci, especially the kidneys. These elements had not been found in some cases previously examined in Philadelphia, but during the last summer similar appearances were detected, showing differences in the disease, in degree not in kind.

Experiments upon rabbits determined that "the micrococci first attack the white corpuscles, in which they move with a vibratile motion. Under their influence the corpuscles alter their appearances, losing their granulations. They finally become full of the micrococci, which now are quiescent, and increase until the corpuscle bursts and the contents escape as an irregular, transparent mass full of micrococci, and form the so-called zoöglæa masses. In the diphtheritic membrane the micrococci exist frequently in balls, and it is plain that these collections are merely leucocytes full of the plant. The bone-marrow of the animal was found full of leucocytes and cells containing micrococci."

By another series of observations it was demonstrated that the rabbits had perished with diphtheria, and further that the micrococci "must be either the poison itself, or the carriers or producers of the poison."

From a series of culture-experiments it was determined that the virulence of the poison may be materially modified by artificial culture, that the malignancy of the case furnishing the poison proportionately affects its vitality under artificial culture, and that after drying and exposure to air for several weeks the viability is reduced, "the micrococci not only looked like those from ordinary angina, but acted like them. They were not dead, they had still the power of multiplication, but they no longer grew in the culture fluid beyond the third or fourth generation." It is concluded that, therefore, the power of rapid growth in culture-fluids and in the body of the rabbit is not a specific character of the diphtheria micrococcus; and, further, that there is no specific distinction between it and the micrococcus usually found on the tongue and digestive tract.

The lecturer's theory of diphtheria is as follows: "A child gets a catarrhal angina or tracheitis. Under the stimulation of the inflammation-products the inert micrococci in the mouth begin to grow, and if the conditions be favorable the sluggish plant may be finally transformed into an active organism, and a self-generated diphtheria results." It is plain that if this be correct there must be every grade of case between one which is fatal and one which is checked before it fairly passes the bounds of an ordinary sore throat. Every practitioner knows that such diversity does exist. Conditions outside of the body also may favor the development of inert into active and virulent micrococci, which are capable themselves of originating the disease when brought in contact with the upper air-passages, especially the tender throats of children. In this way sporadic and endemic or epidemic diphtheria may be explained.

The influence of this theory, if it shall be confirmed and accepted, will be felt particularly in two directions: in the first place more attention will be

paid to the favoring and predisposing conditions, with a view of prophylaxis; and, secondly, local antiseptic applications to the throat in diphtheria will assume relatively a highly important place in the treatment, and be placed upon a sound scientific and clinical basis. What these conditions are, and what the best agents to be used to kill the micrococci, are questions still under consideration.

CRIMINAL INSANITY AND LEGAL RESPONSIBILITY AS ILLUSTRATED BY GUILTEAU.

THERE seems to be now more disposition in various quarters to entertain the possibility of Guiteau's insanity than at first. The suggestion that he would prove insane was certainly not well received when the *JOURNAL*, notwithstanding the unpopularity of such a view, felt constrained to give expression to it shortly after the commission of the assault on the President. Some of those, however, who are compelled, upon a better acquaintance with the facts in his history when considered apart from the sentiments inspired by his crime, to admit a certain degree of mental obliquity, find that this is entirely compatible with responsibility and that the gallows would still therefore be not only a fitting and necessary, but also a *just* termination to his trial. This view of the subject being propounded in the abstract in an article by Dr. William A. Hammond in the November number of the *International Review* on the Punishability of the Insane, has proved very popular. It is there announced that the opinion of Dr. Isaac Ray and others that a lunatic should not be held responsible for a criminal act committed within three days before or after the occurrence of a fit is "too absurd to require an attempt at refutation," and the conclusion is reached that an individual may be medically insane, and yet not a lunatic in a legal sense. His brain is diseased, either temporarily or permanently; his mind is not in all respects normal in its action, — and yet he is responsible for his acts. Many of the insane are clearly irresponsible, and their punishment is demanded only by the imperative necessity which exists of securing the safety of society by preventing their committing criminal acts. This should be done in that way which experience shows is most conducive to the accomplishment of the end in view, even if it involves the taking of the life of the lunatic.

In closing this ingenious article the writer deprecates the morbid sentimentality relative to the rights of certain kinds of lunatics who are no better than wild beasts — having previously, in another part of his article, reflected that the protection of society might with propriety regard the hydrophobic dog and the lunatic in the same light — and concludes that the question in the case of the criminal should not be "Is he insane?" but, "Is he responsible?"

A writer in the *Nation* begins what he says in an article on Guiteau's Case very pertinently thus: Whether Guiteau is responsible for the assassination of the President or not, it is obviously of great interest to the community that the question should be thoroughly sifted — not only for the sake of the proper

administration of justice, but to determine the status in the community of the class to which Guiteau belongs.

A little farther on the article continues: —

The case is one in which "expert" testimony will be probably of the least possible value. The testimony of medical experts on the subject of insanity has fallen of late years into great disrepute in courts of justice, partly because it is highly paid, and can therefore generally be produced in any quantity on either side which has money at command, and partly from the fact, which no one who is at all familiar with medical inquiries into insanity can have failed to notice, — though, curiously enough, it has attracted little attention from the courts, — that the medical and the legal view of insanity are not only different but are radically opposed to each other. In any criminal case the only thing the law cares to find out is whether the accused is responsible for the act charged against him. If he is not, punishment would be unjust to him, and could have no deterrent effect upon others similarly situated. In order to determine the question of responsibility there are three common tests applied, which are very simple, and usually easy of application: first, did he know the nature and quality of his act; second, has he the capacity to distinguish right from wrong; and third, did he act under a delusion as to some matter of fact which, supposing it to be no delusion, would have justified the act?

Now these are not the tests necessarily applied by physicians at all. Their inquiries are directed to the investigation of the condition of a man's mind, not in reference to responsibility for a particular act, but with reference to his mental state as compared with what they regard as a healthy normal condition. Any departure from this is a symptom of mental disease. This difference would be of less consequence if it were in some way brought clearly into view in court. If medical experts were asked, for instance, to testify under oath whether on a given state of facts they were of opinion that the accused was responsible for the act he is charged with, they could answer intelligently. But, for the technical reason that to do so would be to let witnesses invade the province of the jury, this, under our system of law, is not permitted, and expert witnesses are generally asked whether, on a given state of facts, the man was "sane" or "insane." Now it admits of very simple demonstration that the answer to this question may be wholly irrelevant. It not infrequently happens that persons actually confined in asylums are brought into court to testify to matters within their knowledge. They are of course "insane," and yet at the same time they may be good witnesses, and would be responsible for perjury if they should commit it. In the same way a perfectly valid will may be made in an asylum, for the capacity of the testator, like the responsibility of the criminal, is dependent solely upon the amount of intelligence he possesses with regard to the particular transaction involved — in one case the disposition of his property, in the other the crime.

But in Guiteau's case there will probably be little necessity for medical expert testimony on either side, nor would the jury be likely to be affected by it one way or the other. If several members of his family have been, as is stated, insane, this fact, once proved, would do more to establish a doubt in the minds of an ordinary jury than all the testimony of all the experts in the country with regard to hereditary insanity. The question as to his responsibility must in all probability be determined by the application of the ordinary legal tests to which we have referred — by a consideration of the man's appearance, demeanor, conversation, past history, and his own explanation of his conduct.

In a communication to the *New York Medical Record* of October 29th, apparently suggested by an editorial in the same journal of October 22d, another writer, taking the medical view of insanity, and probably himself one of the experts referred to by the *Nation*, after summarizing very forcibly some of the striking points in Guiteau's history indicative of his insanity, says: —

The claim made in several journals that Guiteau is legally responsible, because "he knew what he was about," now shows a fear of death, took measures to secure himself against mob violence, etc., sounds rather like the prevailing cant among a certain class of lawyers than the deliberate opinion of scientists. No competent alienist ever attached weight to the apparently and at times actually methodical actions of lunatics except to consider those very lunatics more dangerous than their weaker-minded comrades, and therefore believed it incumbent to seques-

trate such lunatics, before all others, for the safety of society. There is not a scintilla of doubt in my mind that if Guiteau, with his hereditary history, his insane manner, his insane documents, and his insane actions, were to be committed to any asylum in the land, he would be unhesitatingly admitted as a proper subject for sequestration. The conclusion concerning his legal responsibility following from this is so self-evident that it will require no rebuttal of the "mad dog" argument urged in interviews and even in acknowledged works of merit, on my part, to distinctly set it forth. If the ridiculous dictum were to prevail that lunatics are to be held responsible for all acts whose nature they appear to understand, our experts might sink to the intellectual level of the jury that pronounced Gosling sane, because he seemed to be well posted on the trial, without any loss to the science of medical jurisprudence. Gosling, in some respects at least, would at that time have behaved less absurdly than Guiteau; within sixteen months thereafter he died of paralytic dementia in a private asylum near Philadelphia!

A thorough study will convince an impartial and competent jury of medical examiners, before whom such a case should be laid, that Guiteau is not only now insane, but that he was never anything else, that his crime was the offspring of insanity, and that in every act he will betray the characteristic features of querulous monomania. They will also conclude that, inasmuch as his insanity is not the result of his own vices, but based on a defective organization inherited from a diseased ancestry, anything like responsibility, complete or partial, is out of the question.

It will be a matter of regret if the Guiteau matter ever comes before a jury. The temper of the whole land, and justly so, was never before so much excited against an individual as against this assassin.

We have thought it worth while to reproduce the preceding extracts concerning Guiteau's insanity, and the abstract question of insanity and responsibility which it necessarily brings up so prominently, as the *JOURNAL* was both prompt and outspoken in expressing its belief in the probability of the man's insanity, and subsequently in entering a plea for a full and fair investigation of all the points bearing on his case.

It seems tolerably evident that no other sentence than hanging will prove satisfactory to the vast majority of the public, who believe that the infliction of the death penalty is the surest protection against the repetition of this kind of crime by this kind of man. If such a sentence should be the result of a trial it is very desirable that it should be reached on definite grounds, that there may be not only a criminal the less but a precedent for future guidance the more, that a step may be taken toward reconciling medical insanity and legal responsibility, and if it is clearly accepted that the best thing to be done with the insane murderer for the good of society is to destroy him, as we would the hydrophobic dog, that we may at least enjoy the simplicity of this conclusion, and, perhaps, by extending slightly the application of the principle, profit by it in a corresponding modification of the provision made for our insane asylums.

THE SANITARY ASSOCIATIONS OF LYNN AND OF NEWPORT.

THE second and third annual reports, respectively, of the Sanitary Association of Lynn and of the Sanitary Protection Association of Newport have recently appeared. Both Associations find that many of their pearls are not cast before the right species of householders, and that much of the good seed which they have sown has fallen on sterile ground. At the

same time the officers of these excellent organizations seem thoroughly in earnest, and find somewhat to encourage them in their efforts for the welfare of their fellowmen, and we do not doubt that at no distant day these efforts will be crowned with a fuller measure of success and appreciation.

The Association of Lynn has issued during the past year two sanitary tracts, a large number of copies of which were distributed throughout the city. One of these tracts, No. 3, was *On the Evils of our Present Privy System*; the other, No. 4, *On the Tubular Wells of Lynn as a Source of Water Supply*. The latter was the outcome of a special investigation as to the character of the tubular-well water, then furnishing a part of the public supply, made by Dr. William B. Hills, the chemical analyst of the Association. The amount of work accomplished in the sanitary inspection of buildings has been somewhat less than last year, and is certainly not large; this indicates a certain apathy on the part of the members to avail themselves of the advantages offered by the Association. It is proposed for the ensuing year to adopt two additional rules pertaining to the inspection of buildings; one making it compulsory, in a mild sort of way, upon the members to submit their premises to an examination, and the other requiring the inspectors to send in their reports in every instance within one week after the inspection is made. Those who are benevolently inclined are reminded that the Association for the trifling sum of one dollar has undertaken to provide for persons of moderate means a full and thorough report concerning the sanitary condition of their premises, with recommendations as to needed improvements.

The Newport Sanitary Association reports that though much has been accomplished the ends brought about are as yet far from commensurate with the continuous, tireless, up-hill dragging of those having at heart the desire for public as well as private interest in sanitary protection. The secretary states that there has been a marked change in the people of Newport during the past year in their desire for sanitary knowledge, and in their households the result of this knowledge is equally noticeable.

At the present time the Association numbers sixty-eight members. Thirty-five inspections have been made and fifteen samples of water analyzed.

The services of the Association have been called for and given in a new direction, namely, in suggestions in relation to the plumbing and sanitary arrangements, and a supervision of the work while being done, in dwellings during construction.

The great advantage of such a course to those who are ignorant of what is necessary to sanitary requirements, and who are therefore unfitted to pass judgment upon the plans of the contractor, is at once patent.

In its endeavor to bring about improvement of the health arrangement of the premises of the people in general, and thinking that perhaps many among the poorer classes, who, for the lack of interest in such matters, could not be easily reached, would be induced

by the hope of a reward to place their houses in the best condition possible and to keep them so, the Association distributed twenty-five hundred circulars, offering prizes to the extent of one hundred dollars for such action on the part of landlords and tenants. But even money was powerless to awaken sufficient interest in the people to cause them to compete for these prizes.

For the benefit of members, monthly examinations of the city water are being made, and although the water is not entirely what could be wished, yet it compares so favorably with the wells that its use is recommended in preference to the latter.

A committee has been appointed to investigate the source of the city's supply of water, with a view of recommending, if practicable, a plan for the improvement of the quality of this supply.

The ice supply of the city has been the subject of investigation by the Association for some months past. A portion of the supply of one of the ice companies is derived from a pond into which drains the overflow from the cess-pools of several premises.

The attention of the city government is again called to the foul conditions still existing in many parts of Newport and to the necessity for a thorough system of sewerage, and in conclusion the city council is assured that it only requires the cooperation on its part which the members of the Association have a right to demand to demonstrate the equal value of the work they are prosecuting to the general public and to private individuals.

These private sanitary associations have found an appreciative field of operations in Edinburgh and in other cities of Great Britain and the Continent; there is no reason why they should not prove of as much use here, and we hope the future reports of the two organizations named by us may be of a character to encourage the formation of similar bodies elsewhere.

MEDICAL NOTES.

— The third quarterly meeting of the Worcester North District Medical Society was held at the Fitchburg Hotel, Fitchburg, October 25, 1881. Interesting papers upon The Theories of Pyæmia, were read by Drs. C. H. Rice and E. P. Miller, of Fitchburg. The Society were much gratified by the presence of the president of the State society, Dr. H. W. Williams, of Boston, who took part in the general discussion of the papers.

NEW YORK.

— At the annual meeting of the Medical Society of the County of New York, held October 24th, the following officers were elected for the ensuing year: President, Dr. Frederick R. Sturgis; vice-president, Dr. W. Gull Wyllie; secretary, Dr. Wesley M. Carpenter; assistant secretary, Dr. P. Brynberg Porter; treasurer, Dr. O. B. Douglas. The report of the censors was largely devoted to a recital of the disposition of cases that had come up under the medical law of 1880 regarding individuals practicing illegally in the city.

The interest that the Society had shown, through its board of censors, in the attempt to suppress fraudulent practitioners was demonstrated that in nineteen cases such persons had been convicted; although the grand jury had unfortunately not been sufficiently alive to the importance of the matter to bring the offenders to justice in every instance. In his annual report, as chairman of the committee on hygiene, Dr. John C. Peters mentioned that, after a careful inspection, he had found almost all the streets remarkably clean for New York, and perhaps most other cities. The city was also remarkably free from bad street-smells, he said, and very few ash and garbage barrels were seen about. The sweepers were working actively and well, the carts and horses seemed good, and many loaded carts were seen at or going to the dumps. In other times the river streets had been so filthy that it seemed as if very little pure air could reach the centre of the city after blowing over them from the North and East rivers; but now the air was, comparatively, very good.

— At the last meeting of the Academy of Medicine a letter to the president, Dr. Barker, was read from the French surgeon, M. Declare, in which he presented to the Academy a copy of his book, published in 1865, on the use of carbolic acid in the treatment of wounds and septic diseases, and claimed priority over Lister. He had been present at the meeting of the Academy a fortnight before, when Dr. Sims read his paper on the recent progress of peritoneal surgery, but was not sufficiently familiar with English to make any statement of his claims at that time. The publication of his book in Paris, in 1865, a copy of which he sent to Professor Simpson the same year, he held, was the starting-point in the general adoption of the antiseptic treatment; while Lister's book did not appear till 1867, two years later, and six years after he had made a demonstration of his methods of treatment in Paris before two surgeons, one of whom sent the details of the case experimented upon to Lister in Edinburgh.

— In consequence of the unprecedented drought that has prevailed during the past three months and the deficiency of storage capacity, the city has come to be in a perilous situation in regard to its water supply, and Mayor Grace has issued an appeal to the citizens, in which he exhorts them to stop the indulgence of a lavish or wasteful use of water, and to bear with patience the restrictions which must necessarily be imposed in regard to it. In order to husband the supply as far as possible, the Commissioner of Public Works, Mr. Thompson, has given orders to close the public drinking hydrants for man and beast, to stop the use of hose for washing sidewalks, stoops, areas, and house-fronts, to discontinue the sprinkling of streets, boulevards, roads, and park-drives, to furnish no more water to shipping, except in cases of extreme necessity when the water cannot be obtained elsewhere, to shut down still further the outer gates of the main distributing reservoir, and to reduce the pressure from the high service works. Mr. Thompson has also requested the police commissioners to issue imme-

diate orders to the members of the police force to visit every house on their respective posts and notify the owners and occupants of the imperative necessity and duty of stopping at once all leaks and waste of water, and that in every case where this notice is disregarded the water supply will be promptly cut off. There is at present, however, no fear of a deficiency of water in case of a great conflagration, since the full pressure at the Central Park reservoir could be put on at a moment's notice. It has always been the aim of the department of public works to keep this reservoir full for use in case of fire, and this course has not been deviated from in this emergency. The fire department is in telegraphic communication with the reservoir, and men are stationed there who would raise the gates immediately on receipt of an order to do so. The fire commissioners have also arranged with the owners of three tug-boats, which are fully equipped with powerful steam-pumps and hose, for their services in case of a fire in which salt water can be used. Brooklyn, as well as New York, is suffering from a scarcity of water, and the same precautionary measures to prevent waste are being adopted there.

Under the above circumstances it is rather an inappropriate time to put up a new public drinking-fountain; but on the 25th of October a very beautiful one in bronze, located at Union Square, was formally presented to the city by Mr. D. Willis James, who has taken a leading part in the providing of better homes for the working classes and other benevolent enterprises. It was principally owing to his exertions that the immense block of improved dwellings for the poor, between Seventy-First and Seventy-Second Streets, on the east side of the city, was erected.

— The following statement of fees collected for account of the health officer of the port from January 1, 1870, to September 30, 1881, was prepared by the collector of customs for the legislative committee investigating the health and quarantine departments:—

1870.....	\$29,058.00
1871.....	35,275.50
1872.....	35,581.00
1873.....	40,183.00
1874.....	40,306.50
1875.....	34,580.00
1876.....	36,763.00
1877.....	40,040.00
1878.....	46,813.00
1879.....	51,441.00
1880 (first three months).....	10,367.50
1880 (last nine months).....	39,520.00
1881 (first nine months).....	35,197.50

Total (eleven years nine months).... \$475,136.00

— One of the sergeants of the Central Park police having been attacked with a virulent type of small-pox, the entire force have been vaccinated and the police quarters in the park disinfected and fumigated by order of the Board of Health. The disease seems to be becoming epidemic in Jersey City; as many as twelve new cases being sometimes reported in a single day. The health officials complain that owing to the lack of facilities and of preventive legislation they are unable to isolate the cases. There is only one small-pox ambulance in the county, and patients, at all events, cannot be taken to the hospital without their own con-

sent; so that the chief resource of the health authorities is to quarantine the patients as well as possible at their homes. In the tenement-houses, of course, this is often impossible.

— Mrs. J. N. Schoonmaker, of Pittsburgh, has bequeathed \$10,000 to the New York Society for the Relief of Ruptured and Crippled.

PHARMACEUTICAL NOTE.

EPSOM SALTS. ADMINISTRATION.

A considerable proportion of Epsom salts can be added to an effervescent draught of Rochelle salts without its disagreeable bitterness being perceptible. Preparations of this character have lately come largely into use. — *Am. Jour. Pharm.*, September, 1881.

ZOEDONE.

The English chemists have lately been giving a good deal of attention to the making of "temperance" beverages, among which *zoedone* is one of the most popular. This is an effervescent phosphorated ferruginous water, which was invented and patented some three years ago by David Johnson, F. C. S. It is described as a most pleasant and refreshing drink, in which the peculiar iron taste is said to be very successfully masked by a peculiar flavoring syrup, which alone is kept a secret. The quantities of the active ingredients in each small champagne-bottle are given by the patentee as follows:—

Calcii phosphas	grs. 2 1-2
Ferri phosphas	gr. 1
Potassii phosphas	gr. 1-5
Sodii phosphas	gr. 1-12

Miscellany.

A PLEA FOR UNITED STATES MEDICAL EXAMINATIONS.

MR. EDITOR: The plan of having a United States Medical College at Washington has been strongly advocated before now, and while this is most desirable, it seems hardly possible of realization, for many reasons, in the present state of congressional action, which almost amounts to "not one cent for science but millions for mud-creeks" (to alter the old-time motto slightly). On the other hand it appears to the writer an immense advantage at a slight cost could be obtained by a plan similar to the following:—

Medical boards of examiners, consisting each of ten Army and Marine Hospital Surgeons, to meet twice a year at the capital of each State, allowing two weeks for each session.

Certificates to be required from some regularly incorporated college or school of medicine that the candidate had passed four continuous years in medical study, including not less than six months' service as house officer or assistant in some general hospital having at least one hundred beds; that the candidate was twenty-one years of age, and that the degree of doctor of medicine had been conferred. An acquaintance with English, Latin, and German. The examinations to be written and oral: the written to test the theoretical, and the oral the practical knowledge in each branch. The oral to consist almost entirely in

identifying anatomical dissections as specimens, proving physiological facts; surface-marking and operative surgery on the cadaver, with medical, surgical, and pathological diagnoses upon patients and specimens, including operative obstetrics on cadaver or phantom. *Materia medica* and the actual mode of administering drugs *not* to be made a part of such examination, certificates from the professors in those branches being *accepted* and required. This would leave no basis for outcry of special schools against old-school persecution. But the physiological action of alkaloids, and doses of poison with antidotes, could well take their place.

The written examinations to be the same for all coming up at the same time; the oral chiefly from specimens, dissections, and cases determined by lot.

The idea being to make the whole examination prove that the candidate must have dissected, seen, handled, and recognized similar specimens or parts to those presented, and investigated clinical cases intelligently.

The certificates and examination being satisfactory, a diploma should be given, certifying that the candidate has passed the United States Medical Examinations, and is entitled to place U. S. in parentheses after his title of M. D. upon his sign, card, or door-plate.

A fee of fifty dollars to be charged for each examination, half of which would be refunded in event of failure to pass.

A severe penalty to be inflicted upon such as unlawfully used the above distinction of (U. S.) after their proper medical title.

The examinations in anatomy, physiology, chemistry, and poisons might be passed after two years of medical study, and the remainder after the four years were completed.

Enough temporary surgeons could be approved for substitute duty at the military posts, so that the service would not suffer by the absence of the regular army surgeons.

This outline is somewhat similar to the German "Staats Examen," and that of the Royal College of Physicians and Surgeons of England, being in America *permissive* instead of *compulsory*. The plan could be modified in detail without doubt to make it more efficient.

An appropriation of fifty thousand dollars by Congress annually would confer this great benefit upon the States and undoubtedly cover all expenses. After a few years the individual States would doubtless make such examination a condition for license to practice medicine within their limits.

The advantages of such a system would be: The total separation of the educating and examining boards, and a severe and impartial investigation of the students' practical knowledge by men not connected with any of the medical schools, and who have nothing to gain or lose by the success or failure of candidates. The fact should be recognized by the State, that the public at large is absolutely unable to judge of the real ability of a physician. The "personal equation" counts for everything, capability by itself for very little.

The great army of martyrs to ignorance, who silently go to their graves through acts of commission or omission on the part of their medical attendants, would steadily decrease, and some of our prolific medical schools would be obliged to raise their standards even at the loss of numbers and receipts. There is no doubt that

there would always be capable men enough to satisfy the demand. The experience of every other civilized country in the world proves this, as well as the fact that it is good economy to allow none but well disciplined men to practice medicine and surgery. Yours truly,

W. B. PLATT, M. D. (Harv.), M. R. C. S. (Eng.)
BALTIMORE, October 18, 1881.

ANNUAL MEETING OF THE AMERICAN ACADEMY OF DENTAL SCIENCE.

THE fourteenth annual meeting of the American Academy of Dental Science was recently held in Boston. The president, Dr. T. L. Williams, on calling the meeting to order said:—

This society has only arrived at its fourteenth birthday, but it is old enough to profit by experience. It has seen simple manual skill grow to become less rare than it was two decades ago; though its æsthetic application is yet far too uncommon. And there is reason for congratulation on the present awakening of the conviction, held by the founders of dental surgery, that sound opinions and safe practice may be expected only from a thorough knowledge of the principles and sympathies that in health and disease govern the human system, of which the mouth is a most important part. And, I may add, without this knowledge, the finest manual skill may be useless, or, indeed, mischievous. For the axiom in engineering is equally true in the practice, that the greater the skill misapplied, the more aggravated the blunder. But by a general zeal for knowledge of the fundamental principles of practice, we may hope for a higher advance than ever. And it is mainly by such knowledge that this Academy can deserve its name as a scientific body.

After the reading of the minutes of the previous meeting the reports of the secretary and treasurer were presented, the former showing that there are now on the roll the names of thirty-two members, six having been admitted during the past year, two having resigned and one died during that time. Appropriate resolutions on the death of Dr. Daniel Harwood, one of the oldest members, were adopted.

The following-named officers were elected: President, Dr. T. H. Chandler; vice-president, Dr. George T. Moffatt; recording secretary, Dr. H. F. Hamilton; corresponding secretary, Dr. E. B. Hitchcock; treasurer, Dr. L. D. Shepard; librarian, Dr. H. C. Merriam; censors, C. P. Wilson, J. H. Batchelder, and J. T. Codman.

PREVENTION OF PYLEMIA.

By no ventilation in the world can septicæmia, pyæmia, and erysipelas be blown out of the hospitals; not even by the most assiduous care in ordinary life can they be avoided, but only by the conscientiousness and prudence of the surgeon. If ever the excellent Simpson was right in his assertion that far more operated patients die in hospitals than in private practice, modern surgery may rather declare the contrary. If there is any danger of a mistake in the treatment of a wound it is more apt to happen in a private house, where it is more difficult to satisfy the accurate demands of modern surgery than in hospitals. — *Volkmann, Int. Med. Congress.*

REGULATING THE PRACTICE OF MEDICINE:
THE NEW YORK LAW.

SUCH as are interested in laws for regulating the practice of medicine in different States will receive with becoming discouragement the announcement that "the law of 1880" of this State is practically a failure. The Board of Censors of the Medical Society of the County of New York have made their first annual report concerning the working of the law and the results of prosecution for its infringement, and base their unwelcome verdict regarding its utility upon the stubborn facts of a sufficiently extensive experience before the grand jury and in the police courts.

It appears to be conceded by the gentlemen of the committee, as well as by the distinguished counsel for the Society, Mr. E. C. Ripley, of this city, that the law

is deficient in many important particulars. For instance, it has been proven that any person can register without a diploma and yet escape conviction on the charge of perjury. The District Attorney has expressed the opinion that such false swearing is not perjury in the strict sense of the term, and cannot be punished as such according to the provisions of the law of 1880. Such an opinion, if sustained, breaks the backbone of the law, and makes the latter virtually a dead letter. In view of this being possible, it would appear to be unwise, in any future amendment of the law, to allow any latitude whatever to an individual registering, and to hold him to the strictest accountability for the slightest misconception of his privileges. How this can best be done must be a subject of careful study. — *New York Medical Record.*

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 22, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diphtheria and Croup.	Diarrhoeal Diseases.	Lung Diseases.	Typhoid Fever.
New York.....	1,206,590	679	309	31.66	11.19	11.05	6.48	1.62
Philadelphia.....	846,984	341	113	22.58	5.28	4.40	2.93	5.87
Brooklyn.....	566,689	254	115	33.46	11.81	12.60	12.60	1.58
Chicago.....	503,304	263	131	45.73	11.79	3.80	6.46	9.89
Boston.....	362,535	178	69	25.84	9.55	11.80	8.99	1.12
St. Louis.....	350,522	158	67	27.85	3.16	10.76	1.27	4.43
Baltimore.....	332,190	184	79	33.70	19.02	5.43	4.89	3.26
Cincinnati.....	255,708	113	51	21.24	2.66	8.85	3.54	4.43
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	102	36	39.22	4.90	8.82	2.94	5.88
Pittsburgh.....	156,381	77	31	53.25	10.39	5.19	1.30	10.39
Buffalo.....	155,137	94	46	42.55	17.02	17.02	3.19	2.13
Milwaukee.....	115,578	39	27	28.20	10.26	12.82	17.95	5.13
Providence.....	104,857	36	13	16.67	8.33	2.78	8.33	—
New Haven.....	62,882	23	17	8.70	4.35	—	4.35	4.35
Charleston.....	49,999	29	10	17.24	—	3.45	10.34	6.90
Nashville.....	43,461	28	9	39.29	—	28.93	—	3.62
Lowell.....	59,485	19	4	15.79	10.53	5.26	5.26	—
Worcester.....	58,295	10	5	10.00	10.00	—	20.00	—
Cambridge.....	52,740	21	11	42.86	9.52	28.57	—	—
Fall River.....	49,006	22	9	45.45	13.64	9.09	—	18.18
Lawrence.....	39,178	12	5	16.67	8.33	—	—	—
Lynn.....	38,284	10	3	30.00	20.00	—	10.00	10.00
Springfield.....	33,340	11	1	9.09	9.09	—	—	—
Salem.....	27,598	14	6	7.14	—	7.14	7.14	—
New Bedford.....	26,875	10	—	50.00	—	50.00	—	—
Somerville.....	24,985	6	2	33.33	16.67	—	—	—
Holyoke.....	21,851	9	3	33.33	—	—	11.11	11.11
Chelsea.....	21,785	5	1	20.00	—	20.00	—	—
Taunton.....	21,213	8	—	37.50	37.50	—	—	—
Gloucester.....	19,329	8	3	12.50	—	12.50	—	—
Haverhill.....	18,475	6	2	50.00	—	33.33	—	16.67
Newton.....	16,995	10	4	30.00	—	30.00	20.00	—
Newburyport.....	13,537	9	2	11.11	—	—	11.11	—
Fitchburg.....	12,405	4	0	—	—	—	—	—
Twenty-three Massachusetts towns.....	181,609	77	18	29.87	11.70	6.49	6.49	9.09

Deaths reported 2869 (no report from New Orleans): 1202 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 899, consumption 382, diphtheria and croup 277, diarrhoeal diseases 259, lung diseases 169, typhoid fever 117, malarial fevers 69, small-pox 64, scarlet fever 60, cerebro-spinal meningitis 19, whooping-cough 15, puerperal fever nine, measles six, erysipelas two, typhus fever two. From *malarial fevers*, District of Columbia 17, New York 12, St. Louis 11, Brooklyn 10, Philadelphia seven, Baltimore four, Buffalo and Charleston two, Boston, Cincinnati, Providence, and Nashville one. From *small-pox*, Chicago 41, Pittsburgh 11, Philadelphia nine, Cincinnati two, New York one. From *scarlet fever*, New York 28, Pittsburgh nine, Brooklyn six, Philadelphia five,

Baltimore three, Chicago and St. Louis two, District of Columbia, Buffalo, New Bedford, Webster, and Westborough one. From *cerebro-spinal meningitis*, New York six, Philadelphia, Chicago, Boston, St. Louis, Baltimore, District of Columbia, Buffalo, Nashville, Cambridge, Fall River, Lawrence, New Bedford, and Holyoke one. From *whooping-cough*, New York and Baltimore three, Philadelphia, Brooklyn, and Boston two, Providence, Somerville, and Newburyport one. From *puerperal fever*, New York, Chicago, Boston, St. Louis, Cincinnati, District of Columbia, Pittsburgh, Buffalo, and Holyoke one. From *measles*, Cincinnati two, New York, Chicago, Boston, and Buffalo one. From *erysipelas*, New York and Brooklyn one. From *typhus fever*, Chicago two.

Three cases of small-pox were reported in Brooklyn, five in

Boston, one in St. Louis, eight in Cincinnati, and 57 in Pittsburgh; diphtheria 44, typhoid fever 44, scarlet fever four in Boston; diphtheria nine, scarlet fever three in Milwaukee.

In 42 cities and towns of Massachusetts, with a population of 1,099,520 (population of the State 1,783,086), the total death-rate for the week was 21.29 against 23.50 and 21.01 for the previous two weeks.

For the week ending October 1st in 149 German cities and towns, with estimated populations of 7,824,824, the death-rate was 21.8. Deaths reported 3281; under five 1605; pulmonary consumption 432, acute diseases of the respiratory organs 213, diphtheria and croup 181, diarrhoeal diseases 162, scarlet fever 126, typhoid fever 63, whooping cough 38, measles and röteln 18, puerperal fever 14, small-pox (Dresden, Aachen, Essen) three, typhus fever (Thorn) one. The death-rates ranged from 14.1 in Dortmund to 40.6 in Kiel; Königsberg 33.6; Breslau 26.2; Munich 27.1; Dresden 25.5; Berlin 23.4; Leipzig 16.8; Hamburg 18.2; Hanover 22; Bremen 16; Cologne 21.9; Frankfurt 19.4; Strasburg 22.7.

For the week ending October 8th in the 20 English cities with estimated populations of 7,608,775, the death-rate was 18.8. Deaths reported 2739: acute diseases of the respiratory organs (London) 227, scarlet fever 136, diarrhoea 108, fever 68, whooping-cough 49, measles 47, diphtheria 28, small-pox (London 13) 15. The death-rates ranged from 12.4 in Bristol to 24.7 in Newcastle-on-Tyne; Birmingham 17.3; Sheffield 18.3; London 18.6; Leeds 18.8; Manchester 21.9; Liverpool 22.7; Edinburgh 17.1; Glasgow 22.4; Dublin 18.7.

For the week ending October 8th in the 21 chief towns of Switzerland, population 479,934, there were 19 deaths from diarrhoeal diseases; acute diseases of respiratory organs 12, diphtheria and croup six, typhoid fever four, scarlet fever three, whooping-cough one. The death-rates were, Geneva 23.3; Zurich 21; Basle 18.4; Berne 16.4.

The meteorological record for the week ending October 22d, in Boston, was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 16	30.233	65	80	56	78	27	57	54	W	NW	NE	16	14	4	F	F	F	—	—
Mon., 17	30.269	52	58	50	72	83	95	83	E	E	E	14	11	3	F	T	G	—	—
Tues., 18	29.856	49	55	45	100	93	93	95	E	NE	NW	6	9	7	G	O	X	—	—
Wed., 19	30.191	46	54	40	82	41	60	61	NW	NW	N	12	10	5	F	F	C	—	—
Thurs., 20	30.204	46	55	40	74	64	85	74	Calm	E	E	0	9	4	G	F	H	—	—
Fri., 21	30.293	47	57	36	91	67	77	78	NW	E	SW	5	8	8	G	C	C	—	—
Sat., 22	30.231	56	72	41	79	33	69	60	W	W	SW	10	8	8	C	C	H	—	—
Week.	30.182	52	80	36														11.10	.19

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 22, 1881, TO OCTOBER 28, 1881.

BYRNE, C. C., major and surgeon. Paragraph 2, F. O. 26, C. S., from these headquarters, relieving him from duty in this department and directing him to proceed to his proper station, Benicia Barracks, Cal., is confirmed. S. O. 119, Department of Arizona, October 17, 1881.

HARRIS, A., major and surgeon. Granted leave of absence for one month, with permission to apply for an extension of nine months, and authority to visit Europe. S. O. 214, Department of the Missouri, October 20, 1881.

GARDNER, W. H., captain and assistant surgeon. The leave of absence on surgeon's certificate of disability granted him in S. O. 138, June 18, 1881, from A. G. O., extended three months on surgeon's certificate of disability. S. O. 239, A. G. O., October 31, 1881.

TRIMANE, W. S., captain and assistant surgeon. The extension of his leave of absence on surgeon's certificate of disability granted him in S. O. 112, May 16, 1881, from A. G. O., still further extended three months on surgeon's certificate of disability. S. O. 238, A. G. O., October 20, 1881.

BROWN, P. R., captain and assistant surgeon. Relieved from duty in Department of the East, and to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 240, C. S., A. G. O.

COMPTON, W. H., captain and assistant surgeon. Relieved from duty in the Department of the Platte, to proceed to New York city, and, on arrival, report by letter to the Surgeon-General. S. O. 240, C. S., A. G. O.

PAULSON, H. O., captain and assistant surgeon. Relieved from duty in the Department of the East, and to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 240, A. G. O., October 21, 1881.

GARDNER, I. F., captain and assistant surgeon. Granted leave of absence for four months, with permission to apply for an extension of two months. S. O. 238, C. S., A. G. O.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JULY 1, 1881, TO SEPTEMBER 30, 1881.

BAILLY, P. H., surgeon. Detailed as member of board to examine keepers and crews of life-saving stations. September 8, 1881.

To inspect the service at stations in Maine, New Hampshire, and Massachusetts. September 9, 1881.

WYMAN, WALTER, surgeon. When relieved of special duty as medical officer, revenue bark Chase, to rejoin his station, via Washington, D. C., August 18, 1881.

LONG, W. H., surgeon. Detailed as chairman board of examiners. September 12, 1881.

Granted leave of absence for twenty-four days. September 24, 1881.

PURVANCE, GEORGE, surgeon. Detailed as member board of examiners. September 12, 1881.

SAWYER, H. W., surgeon. Detailed as recorder board of examiners. September 12, 1881.

GODFREY, JOHN, passed assistant surgeon. To proceed to Pascagoula, Miss., as inspector. July 27, 1881.

GOLDSBOROUGH, C. R., passed assistant surgeon. To proceed to Havre de Grace, Md., as inspector. July 27, 1881.

Granted leave of absence for thirty days. September 1, 1881.

COOKE, H. P., assistant surgeon. Granted leave of absence for thirty days. August 12, 1881.

CARTER, H. R., assistant surgeon. Granted leave of absence for eight days. September 24, 1881.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the Society will be held on Monday evening, November 7th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. H. Joy Jeffries. Subject, The Imitation of Syphilis. Semi-annual election of members.

M. H. RICHARDSON, M. D., Secretary.

Lectures.

CLINICAL LECTURE.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, OCTOBER 5, 1881.

BY PROF. A. JACOBI.

TANIA; EARLY OSSIFICATION OF THE CRANIUM.—
DIPHTHERITIC PARALYSIS AND ACUTE NEPHRITIS.

THE first case which I present to you to-day is that of Michael S., three years old. His mother says that when about a year and a half old he commenced to walk by taking hold of chairs and thus supporting himself, but that since then he has made no improvement, and that although three years old he is yet unable to walk alone. He also is unable to talk, although he utters a few words occasionally. The mother says, in reply to questioning, that the child is a hearty eater, but not voracious. She attributes his appetite to the fact that he has a tape worm. A few words in regard to that before I go on to speak of his retarded development, which is the reason why he is brought to us. Tape worms are introduced into the intestinal canal through the agency of raw meat. Rare meat will never convey them, and when raw meat is used as a remedy in diarrhoeas, as it frequently is, there is always this danger to be apprehended that you may have a *tania mediocanellata* developed as a result. Now, *tania* are of graver consequence in children than in the adult, because the *tania* which is found in children is not the *tania solium* which is usually communicated through the medium of raw ham, but the *tania mediocanellata* which is conveyed in the raw beef which the children are fed upon, and this variety of *tania* is far more difficult of expulsion than the *tania solium*. But, as I have said, there is something far more serious than this for which the child is brought here. He does not develop intellectually. He walks no better now than when he was only fifteen months old. Now, when a child of this age does not walk it is either because the extremities are paralyzed, or because the conductors of nervous force have lost the power of conveying the nervous stimulus, or because the brain is at fault. The mother says that the first teeth appeared at the age of five months. That is abnormally early. The first teeth usually appear at the age of seven months, being the lower central incisors. Then it is stated that the fontanelle was closed when the child was one year old. The normal period at which the anterior fontanelle should close is during the fourteenth, fifteenth, or sixteenth month. There is, as a rule, a direct connection between the appearance of the teeth and the closure of the fontanelle. When the teeth appear late the fontanelle closes late, and, on the contrary, when the teeth appear early the fontanelle closes early. There was in this child, then, a premature development of the teeth; at least they appeared two months before the usual time, and, contrary to what is usual, the first teeth to make their appearance were the upper central incisors instead of the lower. We find also that the fontanelle, in accordance with what I have stated, closed during the twelfth month, or at least two months earlier than in other children. In the large majority of cases in which a premature ossification of the fontanelle and cranial valves took place, the first premature incisors which made their appearance were those in the upper jaw. This appears

to occur so regularly that I am in the habit of looking at that anomaly as almost pathognomonic of cranial premature ossification. When there is premature ossification of the cranium, as the cranium and brain develop equally, the brain is prevented by its rigid case from developing properly, and when the ossification takes place equally the brain is dwarfed in its totality, and so the child remains behind both physically and mentally. Sometimes, however, it is the coronal suture which becomes ossified too early, and then development being hindered anteriorly the cranium and brain contents bulge out posteriorly, or if it is the parietal sutures which are at fault then the development takes place antero-posteriorly, and you have a bulging of the frontal and occipital regions and a flattened cranium. In such a case as this the prognosis must be very unfavorable because a condition of things exists, the cause of the tardy development, which we cannot alter, and there is hardly any indication for remedies. The mother says that all the temporary teeth made their appearance at eighteen months, and here again is an evidence of abnormally early ossification. The temporary teeth are not usually completed before the twenty-sixth month. Contrary to what you would suppose, convulsions rarely appear in this condition of things, and in this case there is no history of convulsions. The changes in the cranium and the consequent compression of the brain take place so slowly that the nervous tissue escapes irritation sufficient to produce such disturbances. Epilepsy, however, does occur; where the brain is compressed very early, as before or shortly after birth, idiocy is the result, but when the change takes place later epilepsy follows. Such cases of epilepsy go hand in hand with asymmetry of the cranium, the ossification taking place in one or other of the sutures, as I have before explained, while the cranium developed in such a direction as the unossified sutures permitted. It is not uncommon for epilepsy to arise during the eighth or tenth year of life, but when it can be traced back to early childhood it is probably due to early ossification of the cranium. Of course we must tell the mother that as far as the intellectual trouble is concerned the case is hopeless. A condition exists which we are unable to alter. For the intestinal trouble, the *tania*, I should use either kousso or kameela. The child might take one drachm of the powder of kameela in the course of two hours. He ought to be fed on oat meal and milk previously, and purged three or four times a day; then after the administration of the kameela he should be given a little milk, and if the *tania* does not appear in the course of an hour he should be given a dose of castor oil.

Our next case is that of J. K., aged four years. He was perfectly well until six months ago, when he had scarlet fever followed by acute nephritis; after that he had whooping-cough, and about four weeks ago he had an attack of diphtheria from which he was two weeks in recovering. About a week ago his parents noticed that he staggered when he walked, and that his voice had a nasal intonation. His urine now contains about forty per cent. in volume of albumen, so that the nephritic trouble still exists, and will certainly prove a formidable complication to deal with. It does not appear, on inquiry, that fluids which he drinks return by the nasal passages, and his father says that he noticed the peculiarity of gait before the nasal intonation of voice. It is not probable, however, that the locomotor disturbance preceded the paralysis of the palate to

which the nasal twang is due; it, from its nature, merely, was the first symptom to attract attention. This is a typical case of that form of paralysis which follows diphtheria; it is not, however, an invariable sequel of that disease, for it may happen that you will not see it in one per cent. of your cases, then you may have two or three such cases in succession; when it does occur it usually shows itself first in the soft palate, but never during the course of the disease. The soft palate may be incapable of performing its functions during the disease, and regurgitation of fluids take place, but then the paralysis is not nervous in origin, but merely mechanical. It is due to the thickened and oedematous condition of the mucous membrane and muscular tissue of the palate, just as in peritonitis you have constipation as the result of a similar condition in the muscular coat of the intestine. As the local inflammation and swelling subside, this paralysis disappears, to give place, however, after an interval, to the true paralysis of the palate, of which the case before you is an example. Here it is not, however, complete, because then there would be regurgitation of fluids through the nose, which there is not. There is only sufficient loss of power over the muscle to give a nasal twang to the voice. It has been stated by some observer that diphtheritic paralysis originates under all circumstances in the arches of the soft palate. This is incorrect. A number of cases have been reported in which other parts of the body were the first to become affected. I have seen cases where the arches of the palate escaped entirely, and there are instances on record where the patient has suffered from a paralysis of the accommodation muscles of the eye without a similar affection of the soft palate. Next in order of frequency the muscles of the eye become affected, resulting in strabismus when the paralysis attacks the recti, in paralysis of accommodation when the ciliary nerves become affected. When the ciliary nerves are paralyzed the paralysis is apt to be symmetrical; paralyzes of the rectus externus and internus are more frequently alternate. Next in frequency come the paralyzes of the lower and upper limbs; as a rule they involve a series of muscles at a time, and do not affect all the groups at once, improving in the same order as they became affected. After the paralysis has lasted some time the circulation begins to suffer, the extremities becoming bluish and cold; sometimes the muscles of the neck are affected so that the head cannot be held erect. In bad cases the abdominal and respiratory muscles share in the paralysis. When the paralysis attacks the muscles of respiration it is very dangerous, as it almost always sets in suddenly, and may result in apnoea and death. Paralysis of the pharyngeal muscles may be dangerous also in so far as it may permit the food to enter the larynx, thus giving rise to immediate suffocation or to a secondary pneumonia. With very rare exceptions the sphincters escape the paralysis. Sensory paralyzes occur subsequent to diphtheria, as well as motor, and when the two forms are associated they give the appearance of locomotor ataxia. I myself have observed a case of pure anaesthesia of the upper portion of the trunk. Where autopsies have been made of cases which have died during the course of diphtheritic paralysis thickening of the spinal nerves at the junction of the anterior and posterior roots has been found, also haemorrhages, also diphtheritic exudation in the superficial connective tissue in these places. Haemorrhages in the

spinal meninges with nuclear proliferation in the gray substance of the cord has been observed. Degeneration of the palatine nerves with fatty disintegration of the palatine muscles have also been discovered. It is certain that diphtheritic paralysis does not depend in every case on one and the same cause, but in most cases it appears to consist of a trophic affection of the motor system, almost always peripheral in origin, seldom central, if ever. One of the most characteristic features of this form of paralysis, which I ought not to omit mentioning, is that it follows no certain course, but passes by certain parts of the body to attack others. It is capricious in its order of development.

The usual duration of the paralysis of diphtheria is from eight to ten weeks, and the large majority of the cases get well. The treatment should be tonic and stimulant; let the patients be fed on beef, milk, and eggs, alcohol also in small quantities. Among the tonics iron is the principal one which you will use, choosing that form which is best suited to the case, as, if there is diarrhoea, you would naturally choose the sulphate of iron in preference to other forms. Among the nervines strychnia is the most efficient and powerful in its effects. A child of this age (four years) should take as much as one thirtieth of a grain in the course of the day; let him begin on one eightieth (three times a day) for a dose. When the respiratory organs are affected you cannot afford to wait for the strychnia to be absorbed by the stomach, but must give it hypodermically. You may give one or two injections daily of one eightieth of a grain each, which will have a good effect. Electricity is necessary and useful also, both the Faradic and galvanic currents. As far as this phase of the case goes, then, the prognosis is favorable, but there is a very unpleasant complication in the shape of the nephritis which has been alluded to before. The father says the child passes water as usual, but no dependence is to be placed on such statements; the only way in which you can obtain satisfactory and trustworthy information on the subject is by having the urine measured ounce by ounce. At the beginning of a case of nephritis the urine is diminished in quantity, but as the shrinkage of the kidney takes place there is passed a great quantity of urine of low specific gravity, ranging between 1004 and 1008. This child should go to bed, and ought to perspire freely once or twice a day; for that purpose either a hot-air bath may be used or the hot pack, or you may produce diaphoresis by the subcutaneous injection of pilocarpine, which will make the child perspire freely. This should be done two or three times in the twenty-four hours, but while he is perspiring you ought to give alcohol because the pilocarpine acts as a depressant on the heart's action. I have given as many as eight injections to a child of this age in the twenty-four hours, always seeing that the children were well stimulated, but I do not recommend this in every case. Each case, remember, is a case by itself, and requires its own special treatment, and he who has not the power of individualizing ought never to be a physician. Where the heart's action is good you may use pilocarpine. I have had a number of cases of Bright's disease after scarlatina get well on this treatment. Gallic and tannic acids, in doses of five to fifteen grains daily, act favorably also by restraining the loss of albumen, and may be given in connection with the pilocarpine. Iron is useful when there is much albumen in the urine towards the latter stages and many blood cells have

been destroyed. Strychnia internally, then, for this case, up to one twenty-fifth of a grain per diem, a hot bath twice a day, and the bowels to be kept gently open, not too much so. Purgation should be employed with caution in children, for the purgatives which are selected are the salines, and they act by diluting the blood, and they therefore require a certain amount of strength in order to be well borne.

Original Articles.

HEADACHE.

BY WILLIAM INGALLS, M. D.

If any one care to investigate the subject of headache let him consult, as one authority, Wood's Practice of Medicine, volume ii., page 671. He will not find much encouragement of a practical nature from what he reads, I apprehend, if he have, as he should, an earnest desire for the restoration of his patient to health. I commend the searcher to the first line of the last paragraph on page 673, which reads: "The first and most important point is to discover and remove the cause."

The subject under consideration is Sick Headache or Idiopathic Headache, of which there are a great many examples, and as I have a theory as to the cause, and a speculation concerning the means of cure, I invite your attention to what I have to offer.

And first, I have written an outline record of several cases, all of which are pertinent to the subject, though not all of them strictly cases of sick headache: *e. g.*, the first.

Three years, between 1862 and 1866, were passed by the writer in the field, in the late war, a part of the time in the Carolinas and the remainder in Virginia, during which time many hundred men were under his care and observation, and it is not within his recollection that he was called upon to treat, or that there was reported to him for treatment, one case of idiopathic headache. The following is recorded and will be alluded to later.

CASE I. North Carolina, in 1863; a man of large frame, well nourished, strong, not obese, was brought to the hospital tent by his comrades with the report that he had suffered for about one hour an agonizing pain through his head, that upon arising to come to hospital for relief he fell heavily upon the ground, unconscious. His breathing was slow and labored, pulse large, strong, and not easily compressible, forehead damp, eyes injected, pupils noted, but not set down, and their state forgotten. He was immediately let blood to thirty ounces, and it was delightful to witness his returning consciousness. He fully recovered, and returned to duty in three days. He assured me that he did not remember ever to have had a headache before. It was set down as a simple meningitis or coup de soleil from hard work under a hot sun for three hours. He had been slaughtering cattle for the division.

CASE II. A banker, is now seventy years of age. Up to the age of thirty-six he enjoyed the best of health and strength, from that age to about that of fifty-three, he tells me, he suffered almost daily with severe headaches, oftentimes accompanied with distressing nausea. Treatment by various physicians was of no avail for permanent relief. Tea and coffee he had given up for several years, yet the headaches continued. He has

always attended to business. About seventeen years ago he went to Havana. As is the custom there, quite early in the morning a servant brought to him, while in bed, a cup of coffee; this was his first morning: the day before he had suffered the most cruel headache of all, and he would not drink it. The second morning, however, he drank the cup, and from that time to this he has never had a headache. He drinks coffee every morning.

CASE III. A married woman, aged forty, tall, well formed, of light complexion, has always been a worker; has been married sixteen years; her oldest child is thirteen and her two other children are ten years old; she had a miscarriage at two months, five years ago, is a house-keeper with love of order and neatness, in excess, which, as she keeps no servant, causes her great labor. Her children are almost entirely clothed by her own hands. Her husband is a skilled workman and must have his breakfast and be out of the house by seven o'clock; his dinner must be ready at ten minutes past noon. This is a mere outline of her life. To bed at ten, she rises at five. Note this: rarely does she go out of the house except as a matter of duty.

About seven years ago she awoke one morning with her first headache, which filled her with astonishment, so great was the pain, but as the day wore on the trouble diminished, and this is often the case with her. Headaches, sometimes with, and sometimes unaccompanied by, nausea, have pursued this patient all this time. The bodily functions for the most part are in good order. Occasionally there is a restless night, but generally sleep is sound and sometimes profound; quite frequently at the five o'clock awakening she is heavy with sleep, but the morning duties are, to her, inexorable, and there is no "folding of the hands." Since the miscarriage the headaches have been no more severe than they were before.

Five years ago this patient took a vacation of five weeks at her old home far down East. During the first two weeks there her headaches and her general misery were indescribable; but from that time an amendment took place, and she began to make visits and to ride and walk, and was free from suffering, and became well and strong. The amendment continued for a week or two after her resumption of her home duties, since which she has been as she was before. She is exempt from her malady about three fourteenths of the time.

CASE IV. A physician of this city died, at the age of sixty-two, in the year 1866. From the time of his graduation he was frequently assailed by severe headaches, rather infrequently accompanied by nausea. The attacks rarely began with the day, but often an hour or two after breakfast, and for several years they unfitted him for his duties for a large part of the day, and he felt obliged to go to bed, being utterly unable to preserve the erect position. He had light complexion and was, moreover, pale, at times white. His bodily functions were generally in order. Every course of living was adopted and continued for weeks or months, from a strictly bread-and-milk diet up to the most generous and liberal living. Drugs, also, at various times were used systematically and persistently. Tobacco he could not use in any form. In the last decade of his life this gentleman grew stout; in his earlier life he was thin and spare. He had for many years a fixed belief that he had some disease of the heart, but experts who ex-

amined him failed to discover any. In this last decade he did not suffer with headaches so often as before, but when they came on they were as intense.

He died of rupture of the left ventricle; he had fatty degeneration of the heart.

CASE V. A thin, spare man, forty years of age, has been tormented with headaches, sometimes accompanied by nausea, since he was fifteen years old. His complexion is dark and sometimes sallow. It is rare for a week to pass in which he is not disabled for twenty-four or more hours by a headache. Two years ago, he came under my professional care. The pain was throughout the head, and he had suffered from it for three hours previous to my first visit; the tongue was flabby and with a moist white coating, the pulse slow and compressible, stools not clay-colored, yet lighter in color than they should be. Small doses of calomel and rhubarb night and morning, and a vegetable tonic at noon-time were prescribed and followed up for three weeks, and there was amendment as to frequency and severity for three or four months. But the treatment is obliged to be repeated as often as two or three times a year. This gentleman was on active duty in the army for four years, and almost all the time in Virginia, during which he had not more than four or five attacks of his malady.

CASE VI. is that of a skilled machinist, by which I mean one who, in addition to his adroitness and willingness to work with his own hands, has the responsibility of seeing that the other workmen in his department do not go wrong, and who is the man to set them right when they do, and thus his head is pretty well at work as well as his hands. Headaches tormented this man while he was a youth; he is now forty-five; and he has toiled many a day when he thought it would be a good thing for the powerful engine to crush his head off. By degrees, the frequency of the attacks came to once a week, and, singularly enough, began on Saturday night and ended in the course of the following Monday. He was under my care for one year, four years ago; he received no permanent benefit. Electricity seemed at one time to lessen the severity, but did not prolong the intervals. I need not go into particulars as to his case. He is of dark complexion, sallow; slow in his movements. This, however, it is important to say, that when he can be driven from his work and sent into the country for three or four weeks he has no malady for two or three weeks after his return.

Case II., that of the banker, may be set down as one of the curiosities of medicine, for why he should have lost his tenacious companion of seventeen years so suddenly and never regained it is past finding out.

My theory in regard to the cause of sick headache in a vast proportion of instances meets with some support from Cases I., III., V., VI., and this it is, that those who lead an out-of-door life are *unapt* to be afflicted with that terrible malady.

The first case carries with it the fact that headache was never complained of by those living an out-of-door life, while backache, pain in joints and limbs were of constant occurrence. Case III. is one of a great many, it might almost be called typical, the woman doing the work of two, rarely taking out-of-door exercise, thus missing a wholesome sun and air bath, yet when away from care and work, and when, after a little, she becomes accustomed to her new life, she rallies into

sprightliness and strength, becoming vigorous enough to ride and walk, and to forget her old enemy, having no battle with him until she returns to her former habits. And so also of the machinist.

If the grand cause of sick headache is as has been stated, the remedy is patent. I have never known drugs or regimen to do any permanent good; and to urge the adoption of the almost certain curative we shall find, unhappily, few indeed who will be able, for obvious reasons, to make any sufficient change in their habits or in their ways of life.

SARCOMATOUS TUMOR OF ABDOMEN INVOLVING LEFT KIDNEY AND ALSO RIGHT KIDNEY IN A GIRL FOUR YEARS OLD; DEATH; AUTOPSY.

BY C. ELLERY STEDMAN, M. D., DORCHESTER.

A. C., four years old, began to be ill early in March, and I saw her on the 9th. She was listless, irritable, with capricious appetite, slept poorly, tired soon, and liked to lie on the floor face downwards; the belly was tumid, and the bowels regular; some nausea; no complaint of headache or other pain; the temperature about 99° F. in the morning and 102° F. in the evening. She remained about the same with slowly increasing emaciation and weakness. On the 19th, though there were no symptoms pointing to the kidneys, the urine was obtained and found to be normal in amount, containing one eighth per cent. of albumen and granular and hyaline casts; there was no hæmaturia during the course of the disease. It was now said that the patient had not been really well since January, and many circumstances were recalled confirming this belief. On the 29th swelling and dullness was noticed in the left hypochondrium. At nine p. m. of this day she was seized, without special cause, with a violent tonic convulsion, lasting two hours. The spasm was mostly confined to the right side; the temperature, 104° F., was reduced (by a bath cooled to 75°) to 100° F., and the fit yielded after two enemata of ten grains each of chloral. After the operation of a cathartic the belly became flaccid, and there were to be felt in the renal regions two tumors, the left nearly the size of a foetal head, the right apparently as large as a turkey's egg. The next day she had quite rallied from the convulsion, and appeared much as usual; emaciation progressed and strength failed. There was at no time discoloration of the skin. The tumor of the left side grew rapidly upwards towards and past the umbilicus, and downwards to the pelvic brim; œdema of the legs and body appeared. The abdominal veins were prominent. Percussion was dull over the tumor, which presented nodules and cysts to palpation. She suffered little or no pain, and went out in her carriage daily, spending many hours out-of-doors. On the 5th of June the appetite failed. On the 8th very little urine was passed, and none on the 10th, when, at half past nine, she died very quietly.

Drs. Edes, Thorndike, and Fifield saw her in consultation.

The autopsy was made on the 12th.

The body was very greatly emaciated. A tumor in the left side extending from the fourth rib to the pelvic brim, bulging out the back and flank, spread out

the ribs, pushed forwards the sternum, and crowded upon the left kidney. A pint of bloody serum was removed from the abdominal cavity. On the tumor, which occupied nearly all the abdomen, was flattened out the spleen in the upper left part, the pancreas spread thinly across the middle, while the colon traversed the growth three quarters of the way down, all adherent, the small intestines being pushed to the right, the lungs, not compressed and crepitant, were crowded into spaces the size of one's fist. The tumor was composed of a large cyst filled with grumous material, apparently composed of blood coagula, bloody serum, and more or less broken-down and ragged masses of fibrous tissue, apparently new growth. Attached to this cyst were smaller cysts, seemingly in the connective tissue, filled with bloody serum. There were several masses of white semi-fluid or denser matter, of which the principal was posterior and closely fixed to the vertebral column and adherent to the stomach and intestines. The cyst-walls were so much thinner than the adhesions that the tumor could not be removed entire, but was broken in many places. The left kidney was spread out on the surface of the mass; the pelvis, though distorted and compressed, appeared normal in structure, and could not be made out to communicate with any of the cysts. The cortical substance was thinned, a little paler than normal, adherent in small spots to a dense thickened capsule. In the renal substance itself there was *none* of the malignant growth. The tumor weighed, by estimate, seven pounds.

The right kidney was thrice its normal size, being $13 \times 7 \times 3.5$ cm., and perhaps one half its tissue preserved, there were in it several cancerous masses, compressing the renal substance, which in both kidneys was a little granular. The largest tumor in its substance was $7 \times 4.5 \times 3$ cm. near one end, the next was as large as a horse-chestnut; there were several others, large and small, all within the kidney parenchyma, and did not communicate with the pelvis; the larger ones possessed quite firm and distinct capsules; the contents were of moderate firmness, slightly yellow, with streaks of connective tissue here and there of a deeper yellow. The smaller masses had less distinct capsules, the contents being whitish and mucilaginous. The kidney substance was perhaps a little pale, at places compressed by the tumors, elsewhere the cortical substance was of nearly normal appearance. One mesenteric gland showed the only other appearance of cancerous disease.

Dr. Edes, who furnishes part of the above description, considers the microscopic appearances to be those of a small, round-celled sarcoma.

In the symptoms preceding the death of this patient, the absence of hæmaturia, which is present in the ratio of thirty-one out of fifty-nine cases of this disease was noticeable. No cancer cells were seen in the urine. Again, ascites was not observed till a week or ten days before death, at which time œdema of the legs and trunk set in. It has been said that dropsy in the abdomen without œdema of the legs is characteristic of malignant growths in the abdomen. The kind of cancer found in this case is the usual form; schirrous, colloid, and epithelioma are extremely rare. The large size of the growth is the rule. Robin mentions one tumor of kidney in a child weighing thirty-one pounds. In Roberts' sixty-eight cases "the disease was confined to one kidney sixty times, in seven both kidneys were involved, but in three only of these did the disease appear to be

primary on both sides, in the other four one kidney was the seat of primary cancer which formed a tumor, while its fellow only contained small secondary nodules. In the sixty unilateral cases of cancer each kidney was affected an equal number of times. "Twenty-two of these cases out of sixty-seven occurred in children under five years of age, three others between seven and ten, the remainder were distributed pretty equally between the ages of nineteen and twenty. . . . The male sex is more liable to renal cancer than the female, sixty-six cases being divided between forty-seven males and nineteen females, but the preponderance of the male sex is not so great in childhood." In this case there was scarcely any pain. The duration of the disease is supposed to have been four months.

REPORT ON PROGRESS OF OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

THE EYES OF THE NEW-BORN.

THE investigations of Jaeger¹ as to the refraction of the eyes of infants remained for a long time the only ones. In 1880 Ely² and Horstmann³ gave the results of their examinations in the same direction. Königstein⁴ also has examined the eyes of nearly three hundred infants. As the statements of the three former observers differed decidedly in regard to the character of the refraction found, so Königstein's statement differs much from either of theirs. It is of interest to compare these statements, as Königstein has done, and see how far it may be possible to account for the disagreements.

Jaeger, of 100 eyes of infants between 9 and 16 days old, found 17 hypermetropic, 5 emmetropic, 78 myopic; in 48 the myopia ranging from one twelfth to one sixth. Ely, in 154 eyes, up to 8 weeks of age, but nearly three fourths less than 2 weeks, found 69 per cent. hypermetropia, 14 per cent. emmetropia, 18 per cent. myopia. Horstmann, in 40 eyes less than 20 days old, 70 per cent. hypermetropia, 20 per cent. emmetropia, 10 per cent. myopia; the myopia only one half to one dioptré. Königstein, in nearly 600 eyes under 9 days, found only a few which might be called emmetropic, that is, with hypermetropia less than one fortieth; in all others there was hypermetropia, in many greater than one twelfth. Also in premature births the hypermetropia was greater than in children born at term.

Jaeger examined the infants lying on their backs, without dilatation of the pupil by atropine, the lids sometimes held open by a speculum, the eye sometimes held by forceps. He used the weak-light mirror. Under such unfavorable circumstances it must have been difficult not to make mistakes. Analysis of Jaeger's observations of older children serves still more to throw doubt on his results. He found among country girls of 5 to 11 years 56 per cent. myopia; among boys of 6 to 11 in an orphan asylum 55 per cent. myopia; children of 9 to 16 in a private school 80 per cent. myopia; thus differing greatly from all subsequent observers, almost no myopia being found in village schools in Germany, and even in universities

¹ Ueber die Einstellungen des dioptrischen Apparates, etc., Wien, 1861.

² Archives of Ophthalmology, vol. ix.

³ Bericht der Versammlung deutschen Naturforscher und Aerzte in Danzig, 1880. Centralblatt für pract. Augenheilkunde, 1880.

⁴ Medizinische Jahrbücher, 1881, Hft. 1.

no such percentage of myopia having been discovered as that given by Jaeger for children of 9 to 16 years.

Ely examined 105 eyes with pupils dilated by strong solution of atropine, his own eyes also atropinized. The infants were narcotized by paregoric, held erect by a nurse, and a sweetened rag or finger placed in their mouths. Of these only 11 per cent. were myopic. But another series of 19 eyes, with weak solution of atropine, without paregoric, and without atropine in the observer's eye, gave 33 per cent. of myopia. The two series together gave 18 per cent. of myopia. There is another peculiarity in Ely's cases. In 100 eyes of the first series, in children of one week and less, there was not quite 8 per cent. of myopia, from the first to the second week 25 per cent. myopia, and from the second to the eighth week no myopia. In the second series, in the first week 23 per cent., second week 35 per cent., second to eighth week 31 per cent. myopia.

Horstmann used atropine, but no detailed account of his method is at the disposal of the reporter.

Königstein used a weak solution of atropine, had the infant held against the shoulder of a nurse, a teat in its mouth, and raised the lid with his finger when necessary, as was usually the case. He believes that the infant's eye is almost invariably hypermetropic, but admits that his investigations were all among the lower classes, in whose eyes myopia is less common. In a note he adds he has learned that Horner has examined infants of the better class, and found only hypermetropia.

The color of the iris in the new-born is, according to the text-books, always blue. Ely always found it bluish, even in one negro, and Dr. Culpepper in fifty infants at the Charity Hospital saw only one, a negro, with brown iris. Ely also quotes one of the nurses at the Maternity Hospital as having seen in more than 1000 confinements only one infant with dark irides. Königstein considers the color rather gray, with a tinge of blue or green, and has seen several cases of dark-brown irides.

Remains of the pupillary membrane Königstein found in 21 infants among 281 in whom it was looked for, and thinks in some cases fine threads may have escaped him, and in others been broken by the use of atropine before examination. He agrees with Jaeger that in infants the optic nerve appears bluish gray, and states also that the difference between arteries and veins is not so pronounced as in adults, either as to color or size.

An important fact noted by Königstein was the frequency of hemorrhages in the retina. He saw them in 10 per cent. of the infants observed, both striated and rounded; often they were large and spread over a large extent of the fundus. They were absorbed rapidly, and in several cases he was able to watch the change and diminution day by day. The possibility is suggested that some of the larger hemorrhages, though disappearing without visible trace, may destroy retinal elements, and so be the cause of amblyopia without ophthalmoscopic changes found later in life. These retinal hemorrhages appear analogous to the ecchymoses in the skin and conjunctiva, and it might be natural to explain their occurrence by the great pressure exerted on the child during labor, but they were not more frequent in difficult forceps deliveries, in forehead presentations, or in large children, than in those of small size, or in premature births when the labor was proportionally easy and short. Königstein regards the

changes in the circulation and arterialization of the blood at birth as the cause of the hemorrhage.

PROPHYLAXIS OF OPHTHALMIA NEONATORUM.

Bacteria have been found in the secretion of blenor-rhea neonatorum, as in other serious inflammations of the conjunctiva, by many observers, and naturally in these days of antiseptic treatment various agents have been employed as means of disinfection in this disease. At the height of the inflammation, however, disinfection has not seemed to be always sufficient, but the prophylactic use of antiseptics has given excellent results. Haussmann, more than ten years ago, demonstrated the habitual presence of bacteria in the vaginal mucus. He now¹ calls attention to the fact that the character of the presentation and of the labor may influence the probability of infection of the conjunctiva of the infant and also the time at which it occurs. That while, as a rule, in head presentations the vaginal secretions will during labor merely smear the lashes and lids, and only when the latter are opened after birth be able to reach the conjunctiva, on the other hand, in face presentations, in attempts at extraction, etc., direct infection of the conjunctiva may be effected within the mother by the manipulations of the obstetrician. He believes this last method of infection, together with prolonged labor, may explain the occasionally reported cases in which swelling or inflammation of the conjunctiva has been observed immediately after birth, and holds that an ophthalmia is more likely to occur after face than head presentations. He advises washing the lids immediately after the child is born with a one per cent. solution of carbolic acid, and, in cases where direct infection may have been produced during labor, or the eyes have been opened before the lids have been washed, washing out of the eyes also with the same solution. His own experience with this treatment has been encouraging but not extensive.

At the Lying-In Hospital in Leipzig Credé² sought at first to avoid inflammation of the eyes of infants by making vaginal injections in all women affected with gonorrhoea or chronic vaginal catarrh, the injections being given during labor as often as every half hour. But as this method, though it lessened the number of children affected, proved by no means satisfactory, it was abandoned. The plan was then adopted of washing the eyes shortly after birth with water, placing a drop of a two per cent. solution of argentic nit. between the lids, and covering them for twenty-four hours with cooling compresses kept moistened with a two per cent. solution of salicylic acid. At first employed only with the infants of diseased mothers, this treatment was later extended to all cases, and with the result that of two hundred children so treated during six months not a single case of blenor-rhea appeared. One baby only had a light attack of conjunctivitis in one eye, and in this case the application of the solution of arg. nit. had been accidentally neglected. Credé admits that six months is too short a time wholly to exclude the influence of chance. His experience shows, however, that the important factor is not disinfection of the vagina, but of the eyes themselves.

Olshausen,³ at Halle, has tried prophylaxis for two years. The first fifteen months the eyes of the infants were washed out with a one per cent. solution of car-

¹ Centralblatt für Gynäkologie, 4 and 9, 1881.

² Archiv für Gynäkologie, xvii. 1.

³ Centralblatt für Gynäkologie, No. 2, 1881.

bolie acid after the cord was divided and the child washed. The percentage of cases of blenorrrhea was reduced from 12.5, the previous average amount, to 8.8. During the last nine months the lids were washed off with the carbolic-acid solution so soon as the head was born and before the eyes were opened, and then the eyes washed out with the solution also, and the per cent. of blenorrrhea fell to 3.6. The cases of blenorrrhea which did appear were also much milder, and in no instance was there injury of the cornea. He proposes to use a two per cent. solution of carbolic acid in future, one washing with which he states is harmless to the eyes. Though these results were not so striking as Credé's the treatment was a much simpler one, and Olshausen doubts whether the arg. nit. or the salicylic applications made by Credé were the more efficacious; moreover, the latter call for a close and continued care on the part of the attendants which cannot always be given. Further experience must determine the most reliable means of disinfection. He regards a blenorrrhea beginning later than the fifth day (it usually begins on the third or fourth) as probably to be referred to infection from the lochial discharge or from another child.

INFLUENCE OF DISTURBANCES OF THE CAROTID CIRCULATION ON THE EYE.

Michel¹ contributes an interesting paper on this subject. The conditions he found on ophthalmoscopic examination when digital compression of the carotid was made in man, or the carotid ligated in dogs, differed in many respects from those described by others. In man he saw in the eye of the same side paling of the papilla and narrowing of arteries and veins, which soon gave place to redness of the disc and venous hyperæmia. In the dog, on ligation of the carotid, in a very short time there was pallor of the disc and disappearance of blood from all retinal vessels, followed as quickly by sudden refilling. If the ligation was permanent the disc remained somewhat paler, the arteries somewhat narrower, while relatively the veins appeared wide, and this condition could be distinguished for weeks, though diminished in amount. While the primary pallor of the papilla and narrowness or emptiness of the vessels is due to the interruption of the blood current, and the subsequent filling to restoration of the current through collateral channels, the persistence of venous hyperæmia is ascribed to decreased arterial and consequent decreased intra-ocular pressure. As to the differences observed in man and the dog, the incomplete emptying of the vessels at first in man may be explained by incomplete closure of the carotid and probable freer collateral circulation; the subsequent reddening of the disc may point to a greater natural hindrance to venous outflow, which would be increased by the not wholly avoidable obstruction of some of the veins of the neck when digital compression is made.

From these and similar observations, clinical and experimental, and the considerations awakened by them, Michel deduces a new theory of the production of choked disc with intra-cranial new formations. He regards the first stage of choked disc (a high degree of venous engorgement, with apoplexies, and edema of the disc) as the consequence of venous hyperæmia, and the venous hyperæmia as produced by increased intra-cranial pressure. But while according to the theory advanced by

Von Graefe the excessive intra-cranial pressure acted to check the outflow of blood in the veins and thus caused venous stasis, Michel believes the effect of the pressure to be to hinder the inflow of blood through the arteries. The venous congestion in the eye is thus the result of the lessened arterial pressure, just as is the case when the carotid is compressed. Collections of fluid in the spaces between the nerve sheaths, or in that over the chiasma, etc., complicate the picture of venous stasis by exciting inflammatory processes in the nerve substance. "The choked disc is then the consequence of the altered circulation, it is complicated by the possibility of other added pathological changes."

Two cases are related in which disease of the carotid interfering with its circulation exercised a marked effect on the circulation and nutrition of the eye. One was a case of aneurismal dilatation of both carotids. The eyes were soft, the retinal arteries narrow, the veins wide and tortuous, there was serous exudation in a portion of the retina, impaired vision. The other case was one of thrombosis of the right carotid. Here the right eye was soft, its arteries narrow, veins wide, cedema of the retina, loss of sight.

Convinced that with great disturbance of the circulation through the carotid changes might be expected in the corresponding eye, Michel went further. He considered it possible that a disturbance of the circulation, characterized rather by long continuance and gradual increase than by sudden occurrence, might also give rise to impairment of nutrition in the eye. Prompted by this idea, he took careful note of the condition of the carotids in all cases of cataract, senile and other, of unknown origin. In the course of ten months fifty-three cases were observed, and in all a connection between the formation of opacity in the lens and sclerosis (atheroma) of the carotid is believed to have been undeniable. These cases are divided into four groups. (1.) Unioocular cataract, with sclerosis of the carotid developed only, or in much higher degree, on the same side. (2.) Double cataract, developed earlier or more advanced on the side on which sclerosis of the carotid was more pronounced. (3.) Double cataract, commencing at the same time or equally advanced in the two eyes, with equally marked sclerosis of the two carotids. (4.) Cataract with sclerosis of the carotid and also enlargement of the thyroid gland.

The age of the individuals affected ranged from eight to eighty-one years. In the first group were four from eight to seventeen years of age. The most striking cases, and those which have the most weight as evidence, are those in which, with youth and middle age, there was cataract in one eye only, and relative or absolute onesideness of the sclerosis of the carotid.

That the lens should be chiefly affected by diminution of the blood supply to the eye follows naturally enough from the fact that under normal conditions its nutrition is affected only indirectly. Michel does not assume, however, that with every senile or unioocular cataract sclerosis of the carotid must be present. Senile marasmus, as every marasmus after an exhausting disease, congenital narrowness of the arterial system, strumous swellings which compress the carotid, any of these may cause cataract, and examples in point are given of each. The lesson to be drawn is that in every case of opacity of the lens (aside, of course, from traumatic cataract, etc.) the state of the circulatory system should be examined.

Finally, Michel cites two cases in which anæmism of

¹ Beiträge zur Ophthalmologie als Festgabe Friedrich Horner. Wiesbaden, 1881.

the internal carotid produced pressure on and disease of the opticus. And he thinks that with continued attention to the subject the category of ocular affections caused by disease of the carotid will be further extended.

Hospital Practice and Clinical Memoranda.

CHILDREN'S HOSPITAL.

CASES IN THE SERVICE OF DR. E. H. BRADFORD.

REPORTED BY MR. JOHN TRUMBULL.

THREE CASES OF OSTEOCLASIS.

CASE I. H—, three and a half years, was referred to the hospital by Dr. Kinnear. The patient presented marked outward bowing of the tibiae, the distance between the internal condyles of femur on bringing the feet together being eight centimetres.

Under ether both tibiae and fibulae were fractured by means of the osteoclast three inches above the ankle, and the fragments being held in position the legs were encased in plaster. There was no rise of temperature above the normal, no pain or swelling of the toes. Within a fortnight a silicate bandage was substituted and continued for a couple of months, when they were removed, and the patient discharged with tibiae straightened.

CASE II. C—, three years, had considerable outward curving of both lower legs on entering. These were both broken with the osteoclast, and the limbs placed in a corrected position in plaster bandages. No trouble resulted from its immediate application, and the dressing was not disturbed for three weeks. Union of the bone was found, with the limbs in a straight position. A silicate bandage was applied to each limb, and the patient discharged, to report as an out-patient.

CASE III. K—, four years of age, was admitted with a rachitic curvature of both tibiae, forwards and outwards.

Both bones were fractured with the aid of the osteoclast a couple of inches above the ankle-joint, the deformity immediately corrected, and the limbs put up in a plaster bandage.

No pain or swelling followed the operation, and at the end of three weeks the plaster was removed and silicate bandages with steel bars applied. Discharged, and a month later reported with legs straight, and walking without difficulty. A slight tendency to turn the whole limb inward, the eversion occurring at the hip, was relieved by a suitable appliance, and the patient is now walking as actively as other children. During the recovery the patient was attacked by whooping-cough, which, however, did not interfere with the union of bone.

OSTEOTOMY FOR GENU VALGUM AND VARUM.

G—, colored, four and a half years old, entered with an extreme deformity of both knees (genu varum and valgum respectively). The patient was hardly able to stand. She was etherized July 29th, and under carbolic spray an incision was made, little more than an inch in length, along the inner side of the left femur above the condyle, and the chisels then driven completely through the femur. The wound was dressed antiseptically, and the leg held straight while a plaster

splint was applied from the toes to the upper portion of thigh. A window was cut out over the incision, its edges packed with putty, and Lister dressing applied.

No pain or swelling resulted, and the dressing was not disturbed till August 12th, when the wound was found to be healing nicely. Osteotomy of the right femur was performed as above, the incision, however, being made on the outer side.

August 24th both dressings were removed, as healing was complete in the left and nearly so in the right leg. Plaster also was removed from the former.

September 12th an attack of acute pneumonia set in, and it was four weeks before the child was well enough to be discharged, to report as an out-patient, with silicate dressings on, the result in the right leg being entirely satisfactory, while in the left there exists slight shortening, — half an inch, — with some prominence of the internal condyle.¹

FORCIBLE STRAIGHTENING OF DISTORTED KNEE AFTER CHRONIC DISEASE.

CASE I. T—, nine years old, entered with the results of chronic disease of both hip and knee. In the left hip there was slight motion, with slight adduction of the limb; while the knee on the same side was somewhat enlarged, tender, and flexed at about a right angle.

An attempt was made to bring down the knee by gradual straightening of a ham splint. This proving insufficient, ether was administered, and the leg straightened by forced flexion and extension. A silicate bandage, with a ham splint, was applied, adhesive plaster extension being also employed for a few days. With high shoe and crutches he was in ten days able to be about the wards, and was so discharged. No inflammation of the joint followed the surgical interference.

CASE II. D—, seven years, on admission, as the result of chronic knee-joint disease, had his left leg flexed at a right angle. He was etherized, both hamstring tendons divided, and the limb flexed and extended, fibrous adhesions giving way. The patella, however, remained adherent, and it was impossible to bring the leg straighter than within sixteen degrees of a fully extended position. A ham splint, with silicate bandages, was applied. Two weeks later he was able to walk about the wards on crutches, and was discharged wearing the ham splint.

TORTICOLLIS.

CASE I. T—, a girl nine years old, during an attack of rheumatic fever had severe spasms of pain in the head and neck, and next morning her head was found drawn over to the right side. Some improvement has since occurred, but nine months later she entered the hospital with her head twisted downwards on to the right shoulder, so that the axis of the face made an angle of twenty-five degrees with the axis of the body. Motion at the neck was impossible. The patient was in excellent health and free from pain. There was an evident lateral curvature, with marked rotation of the spine in the cervical region.

July 19th she was etherized, and after subcutaneously cutting the insertion of the left sterno-mastoid, which was prominent, extension and torsion were made

¹ This latter was due to the faulty position in which the limb was held when the plaster was applied. The deviation from the normal line was, however, slight.

upon the head, the shoulders being held. Adhesions were felt to give way. With a wire frame, taking support from a plaster jacket and holding the head by means of plaster and silicate bandages, the axis of the face was fixed in a corrected position. No ill effects followed the operation.

August 8th the frame was removed, and motion in either direction was found equally stiff. Four days later, under ether, the head was again twisted, the frame applied, and she was allowed to go home. A week later this was removed. Motion of the head was then allowed. The patient continued to gain, and became able to move the head in all directions with equal freedom. The head is held in nearly a normal position, although the axis of the nose varies from the vertical axis of the trunk a few degrees.¹

CASE II. J—, nine years old, entered the hospital for simple torticollis, with a firm contraction of the right sterno-mastoid. Tenotomy of both insertions of the sterno-mastoid was performed, a plaster jacket applied to the trunk and shoulder, and in this buckles inserted. Adhesive plasters and bandages were placed around the head, so as to secure it firmly, and by means of straps passing from the bandages around the head to the buckles in the gypsum bandage the distortion was over corrected. The patient remained in the hospital for ten days. Three weeks later the apparatus was removed, and the motions and position of the head were found nearly normal.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. M. RICHARDSON, M. D., SECRETARY.

JUNE 20, 1881. The Society came to order at 8 05 with DR. BROWN in the chair. The report of the secretary was read and accepted. Present thirty-six.

DR. INGALLS read a paper on

HEADACHE.²

DR. EDES said he had taken great interest in the subject of headaches because he had been subject to them himself ever since he could remember. He knew of no cause for them except fatigue. They last two days and go away on the third. They are less severe and less frequent than formerly. There are some remedies that will do good. Potassium bromide does good in his own cases. The best remedy in the severe headaches of interstitial nephritis is caffeine. In the use of coffee as a remedy in headaches it is the caffeine probably which affords relief. Many cases are relieved by three grains of caffeine once repeated.

DR. DRAPER confirmed what Dr. Edes had said. The fourth case reported by the reader is a good history of his own case. He had been a victim to sick headache all his life. A service of three years in the army did not modify them in frequency or in severity. They generally came on after overwork or exhaustion.

Among remedies, potassium bromide was most effectual, of late large doses of quinine seem best.

These sick headaches are very bad, sending a man to

bed for the day. One curious feature is that they often disappear with the setting of the sun. After suffering intensely during the day the patient may be able to do his work in the evening. Dr. Draper had had no experience with caffeine.

DR. BUNDY said that he had been one of the unfortunates, and had found relief in guarana; one drachm of the fluid extract is effectual, except when the headache is congestive, in which case he has used the bromide. He has found both remedies very valuable.

DR. EDES remarked that the active principle of guarana is caffeine.

DR. INGALLS said it was the cure of the disease he was after and not its relief. The relief is delightful but it is temporary.

DR. STEDMAN (C. E.) reported a case of headache in a married woman of thirty; poek-marked, who said that she had had a headache ever since she was four years old, with the exception of twelve to fourteen days when she was sick with small-pox. She wore a plaster on her breast, by which she thought the headache was somewhat relieved. In long-continuing cases of headache it is well to examine the urine.

DR. DENNY said, with regard to headaches in a medico-legal bearing, that in the case of Freeman headache was a prominent symptom for years before his crime. John Kember had severe headaches for years before he killed his three children. They were very marked while he was in prison. Subsequently, during his stay in jail, epileptic convulsions came on. In conjunction with epilepsy, headache exists oftentimes. In such cases he had found marked tenderness or hyperæsthesia in the region of the sutures of the skull, especially about the posterior fontanelle, and over the squamoparietal, coronal, and sagittal. Benjamin Eastman had these symptoms very marked, with headache. When suffering from them his intellect was clouded though at other times it was perfectly clear.

Williams, the Somerville murderer, presented similar symptoms for years, and his mother before him.

Lena Daniels, the infanticide, was subject for years to severe headaches. (Her father before her had sunstroke, which perhaps had some bearing on the headaches.) When under its influence she was very different in the manner of her responses to questions than when she was not. This was especially marked in the first days of her examination.

With reference to the effect of malaria on the production of headache, Dr. Denny said, that during the war sick headache was very seldom complained of. At least in North Carolina where malaria is very prevalent the symptom was almost unknown.

DR. C. E. STEDMAN reported a case of Sarcomatous Tumor of the Abdomen.³

PROCEEDINGS OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

GYNÆCIC SURGERY AT THE INTERNATIONAL MEDICAL CONGRESS.

STATED meeting first Thursday of October. PRESIDENT WHEELER in the chair.

DR. MARCY being called upon for his report of his visit to the International Medical Congress, commenced

¹ The case is one where the posterior muscles of the neck, not accessible to tenotomy, were more affected than the sterno-mastoid, which was not strongly contracted. Delore's method of forcible extension and torsion was the one chiefly instrumental in correcting the deformity.

² See page 439 of this number of the JOURNAL.

³ See page 440 of this number of the JOURNAL.

by saying, that to do any justice to the report upon Gynecic Surgery, that had been requested of him by the Society, it would be necessary to consider briefly the views advanced upon general wound treatment. No other question in the whole Congress equaled this in interest, and it is highly probable the importance of this subject is at present greater than any other in the entire domain of the medical art. This was first discussed in reference to abdominal surgery. The antiseptic method had many warm supporters: Dr. Keith stated that at first he was very enthusiastic as to its benefits, that after the adoption of the spray he had had eighty consecutive recoveries from ovariectomy, and had he stopped here he would have been a strong advocate of its value; but that in the next twenty-five cases he had had five deaths, two from carbolic poisoning, one from septicæmia, and two from acute nephritis. On account of this mortality, and of the frequent very high temperatures upon the evening following the operation, he had abandoned the spray; since, he had had one death in twenty-seven ovariectomies.

The discussion took a wide range upon the question of failure to obtain primary union in operation wounds and the methods best calculated to secure it. Mr. Savory, in a carefully prepared paper, drew the conclusion that primary union was most likely to occur when fresh surfaces are brought together in their natural state, and so maintained without disturbance. He believed the essential principles were rest, cleanliness, and asepsis; and these factors admit of a great variation in detail.

Mr. Gangee showed antiseptic absorbent cotton pads, which he had used with success. He illustrated their value by exhibiting a piece of perfectly preserved meat, which for twelve days had been enclosed between two of these pads, and had been exposed for a few seconds each day to the air. He emphasized perfect dryness of the wound, thus removing one of the conditions of putrefaction; rest; favorable position of parts; infrequent dressings with the use of antiseptics as an important adjunct.

Professor Esmarch detailed his own most remarkable experience. In 598 major operations there were only six deaths, and 85 per cent. of the cases cured healed by first intention with one dressing. These included 146 excisions of large tumors; 40 excisions of mammae and axillary glands; 51 major amputations; eight hernias; 19 compound fractures; etc. The cases were all dressed with pads soaked in iodoform and absolute alcohol (10 per cent.), fastened on by an iodoform bandage, over that a large pillow of jute and gauze, a moist dressing, and over all an elastic bandage.

Professor Volkmann believed that all suppuration is septic and, as is well known, holds antiseptic methods as a revolution in surgery.

Mr. Lister thought that, upon the whole, antiseptic ovariectomy had been successful, although he had attempted to dissuade Mr. Keith from using the spray, since his successes without it had been so very remarkable. He pointed out the care with which it should be used in abdominal operations, since here is abundant room for effusion and means of absorption, while carbolic acid both increases the one and lessens the other. He gave the results of a series of recent investigations, from which was demonstrated that blood clots in the body are less favorable to the development of organisms than the serum. "It is the solid bits of dirt that

are the deleterious agents," and he thinks it is very probable that too much attention has been given to the finer particles floating in the air. His own results were so good that he shrank from giving up any of the details by which he obtained them. He held to nothing by prejudice and was willing to give up the spray if better means could be devised; however, at present he could not accept irrigation as a substitute. The general condition of the patient and his surroundings must not be disregarded.

In military surgery, obstetrics, even in medicine, the subject of septic poisoning and antiseptic measures was held to be of the first importance and very widely discussed. Men of different belief would each obtain their crumb of comfort; however, the general verdict seemed to be entirely contrary to the spirit or inference derived from the interesting letter of our late lamented Professor Greene, published in the Boston Medical and Surgical Journal; and, briefly stated, the general impression produced was, that the general value of antiseptics is clearly recognized; while it was made evident that Professor Lister's aim may be obtained by other means, and that the successful operator must be the scientific surgeon of wide research, enlarged views, familiar with all the requirements of wound treatment.

Mr. Wells's paper upon the recent advances in the surgical treatment of intra-peritoneal tumors was of especial interest in emphasizing the value of a careful adaptation of the peritoneal surfaces, and this he illustrated by a series of specimens from various animals showing the variety of repair processes which ensue when the peritoneum is differently treated. He spoke of the difficulties in controlling hæmorrhage in the ablation of the uterus and removal of uterine tumors, and, as an aid of great value, exhibited a number of his large "pressure forceps" of various shapes. These differ from those ordinarily in use chiefly in size, greatly increasing the power of compression and the amount of material held by them. He uses antiseptic measures in all his operations, and has for a considerable period; he declared his belief that in abdominal operations the drainage tube should be used only exceptionally, in fact he had not used one for the last three years. "Since adopting antiseptic precautions either fluids do not form, or if they do they do not putrefy, they are absorbed without doing any harm, without leading even to any febrile rise of temperature." This quotation from his paper is of the greater importance since it is so directly opposite to the opinion of Mr. Keith.

Professor Tarnier, of Paris, read a paper upon the value of his obstetrical forceps, which was followed by an interesting discussion by Professor Lazarewitch, Dr. Fordyce Barker, Professor Simpson, Mathews Duncan, Dr. Barnes, Dr. Playfair, and others. The general conclusion was that they were of value, and in many instances to be much preferred.

Dr. R. Battey, of Rome, Ga., read a carefully-prepared paper upon his operation, which he calls Oöphorectomy. He distributed tables of his operations, and of the cases tabulated as complete operations there were cured sixty-eight cases or seventy-five per cent., greatly benefited, fifteen cases or seventeen per cent., not benefited, seven cases or eight per cent.; of the incomplete operations, greatly benefited, seven cases or forty-one per cent., not benefited, seven cases or forty-one per cent.

Dr. Savage, of Birmingham, read a paper giving a history of thirty consecutive successful oöphorectomies performed during the last two years for various conditions, ten being for long-standing and painful prolapse of the ovary, and four for myoma. For the benefit of these conditions he believed there was a wide field open for this operation in properly selected cases. With one exception — the inability to conceive — patients, after the operation, possess every attribute of womanhood.

Mr. Lawson Tait had operated twenty-six times for the lessening of fibroid tumors, with five deaths. He thought to control the menorrhagia, it was necessary to remove the Fallopian tubes also.

These papers were further discussed by Drs. Priestley, Thornton, Bantock, Hayward Smith, Mathews Duncan, Spencer Wells, Dr. Martin, of Berlin, Dr. Goodell, of Philadelphia, Dr. Pallen, of New York, and others. It was generally conceded that with proper selection of cases the operation was one to be recognized as justifiable, and an advance in surgery. Many things of the most complimentary character were said of Dr. Battey, who certainly shared generously the honors of the section.

Many papers must be passed without even reference in the brief period at disposal. Dr. Hewitt, discussing the exciting causes of hysteria, demonstrated his views, familiar to most of you, upon uterine flexions.

Dr. Mundé, of New York, read an interesting paper upon uterine displacements and their curability. After narrating the various means at the disposal of the surgeon, he gave as his opinion that pessaries well adjusted are by far the most valuable means, but that all methods, however wisely selected, must, in chronic cases, be persevered in for long periods before cure could be expected. Dr. Cole, of San Francisco, followed in a paper upon the same subject, and exhibited his pessaries as possessing exceptional value.

Professor Freund, of Strassburg, furnished an interesting paper upon the total extirpation of the uterus in malignant disease. The leaving open and drainage of the peritoneal cavity, the simple ligature of the vessels of the severed broad ligaments, step by step, made the operation shorter, less laborious, and hastened recovery. By separation of the cervix uteri from the vault of the vagina it is easy to draw up the uterus through the abdominal wound above the symphysis. This severing of the cervix he had performed before chloroforming his patient. The upward tension of the uterus held by the tenaculum forceps greatly lessened the hemorrhage; a fatal result in the hands of several operators was exceptional. In the early stages of malignant disease it may be undertaken as a not very dangerous operation with a promise of radical cure. If the uterus was very large and the vagina narrow, the abdominal operation was to be preferred.

Dr. Martin, of Berlin, said the operation was only available in a few cases because any cancerous affection of the broad ligaments or lymphatics rendered the operation useless. In six such cases operated on by himself all had died.

Dr. Nelson, of Chicago, urged the importance of the early recognition of cancer of the cervix, entered into a mild discussion of its causes, and advised the abdominal method of removal.

Dr. Barnes read a paper upon post-partum hemorrhage and its treatment, advocating the use of iron injections in extreme cases. This paper occupied an

exceptional period of time in discussion without eliciting very much that was new or valuable. Dr. Maddler, of Dublin, gave the views of his school, chiefly in favor of iron, and advocated the plan of Von Hecker, the hypodermic injection of large doses of sulphuric ether. Professor Winkel, of Dresden, also spoke of its value as restoring the heart's action and improving the tone of the blood-vessels.

Professor Spiegelberg, of Breslau, read a paper upon antiseptics in midwifery. The application and practice of Lister's system to the puerperium meant the strictest cleanliness and antiseptics during birth, both on the part of the persons attending the mother and the mother herself. Air must, as far as possible, be prevented from entering the genital tract, and since this was not wholly unavoidable, disinfection by frequent injections with antiseptics during birth should be used. After birth care must be taken to secure perfect rest of the genital tract, and if manipulation is necessary to do it with the strictest of antiseptic precautions. Professor Winkel stated that all the midwives under his direction had printed antiseptic rules. Carbolic solutions are used for all instruments, examinations, and workings.

Dr. Fancourt Barnes stated that in the London Lying-In Hospital all his patients were delivered under spray. In all examinations carbolic solutions were used. A one to eighty solution was used much of the time in the wards in atomizers. Since he had instituted the above precautions it was the exception to find any rise in temperature, while before the reverse obtained.

Professor Maggiotti (Rome) spoke highly of the value of iodoform as an antiseptic.

Dr. Eddis (London), Professor Lazewitch, and Dr. Tarnier all strongly advocated the value of antiseptic precautions in midwifery. Dr. Marcy urged the importance of early recognition of septic symptoms, and thereafter the immediate and thorough cleansing of the uterine cavity; the better to effect this purpose he had devised double rubber tubes of various sizes to No. 10 French scale. These were of easy and safe introduction, and gave a free and continuous outflow.

Dr. Pallen, of New York, read an interesting and highly original paper upon the reparative surgery of the genital tract, worthy of careful study, but time forbids an analysis of it.

The last paper of especial interest was by J. Henry Bennet, upon laceration of the cervix uteri, its causes and treatment. He carefully reviewed the whole subject, and called attention to the fact that in his work upon Uterine Inflammations, in 1849, he had pointed out the frequency of this lesion. He had attended during a long gynecological career hundreds of such cases of laceration without operating. An interesting discussion followed, in which the wisdom and benefit of Dr. Emmet's operation was clearly established.

We found Dr. Bennet a most interesting gentleman, and a day spent at his charming country seat at Weybridge, after the Congress, was one of the most pleasing episodes of our visit. The general interest in the sessions was kept undiminished until the close. The leading men of the different nationalities were constant in their attendance. Dr. McClintock presided over the section with a rare ease, grace, and dignity, while the spirit of the discussions was one of thoughtful earnestness, seeking to substantiate fact and advance the border lines of knowledge.

Only pleasant memories can be recalled by those

who were fortunate participants in this most remarkable medical meeting the world has ever witnessed.

Dr. MARTIN having previously given place to Dr. Marey, as his remarks would be less pertinent to matters of gynecological interest, now proceeded to address the Society.

Dr. Marey, he said, had been well repaid for his assiduous and faithful attendance upon the gynecological section, and had gained much that was new and important. He himself had not been so fortunate. When he had looked into that and certain other sections they were being addressed by French or German savans, and he was quite willing to acknowledge that the effort necessary to follow and imperfectly understand what they said was far from being rewarded by any very strikingly original or important information. It was very gratifying, however, to note the rapt attention and apparent interest of many of his compatriots to these, to himself, dimly dim and imperfectly instructive addresses. It was particularly illustrative of the immense educational advantages of international medical congresses, which some skeptics have seemed inclined to doubt, that most of these gentlemen had, previously to attendance at this particular Congress, been almost entirely ignorant of any modern tongue but their own.

There had been a vast amount presented to the Congress, the result of able, honest, hard scientific work, but there had been also, as there always is on such occasions, a great deal of rubbish, and he had been so unfortunate as to hear a good deal of this. As a general thing, the worthless matter came from men so eminent that they were eagerly and intensely listened to and applauded, no matter how flimsy or thousand times repeated their work might be, while much of the ablest and best work came from younger or less known men, to whom, no matter how admirable their efforts, but little attention or applause was vouchsafed. This is always the way, and always will be while the bulk of the profession pay far less regard and attention to the work done than to the person who does it. For himself, Dr. Martin could only express delight and gratitude for the innumerable courtesies and even distinctions extended to him from the very day of his landing in England to that of his departure six weeks later. Although, as before stated, he had nothing special to offer in gynecology, he had, while in England, been so fortunate as, long before the assemblage of the Congress, to make the acquaintance of Professor Lister. Then his attention was strongly directed to the considerations of the germ theory so far as it related to surgical practice and to the so-called antiseptic method. The very great courtesy extended to himself by Professor Lister certainly inclined him to a favorable opinion of anything which might claim him as an author or advocate.

He could not say, however, that his opinion, frequently expressed to this Society, of the germ theory of morbid inflammatory processes, and of the complicated method of treating wounds and performing surgical operations involving incisions, etc., had been changed or modified, except in being confirmed. Whilst he considered and fully appreciated the prominence which had been given to careful seclusion of wounds from the air, their being allowed to remain undisturbed for long periods of time, the means adopted to prevent putrefaction of secretions, mainly by careful provision for thorough and continual drainage, which we surely

largely owe in their present perfection to Lister's announcement of the germ theory, in connection with certain morbid surgical processes, Dr. Martin did not believe in the germ theory in the way, or to anything nearly approaching the degree, taught by Professor Lister and his more faithful and devoted disciples. If the practice is full of good, as he cheerfully and thankfully admitted, may it not be considered hypercritical to cavil at the theory to which, indirectly, we owe so much? Dr. Martin did not think so. When the theory that certain low forms of organic life are the sole cause of inflammation, and that varieties of inflammatory processes are each due to a different species of such organism, comes to be totally exploded, we shall be very apt to lose sight or full appreciation of the great advantages of a modified and reasonable practice of what is called the antiseptic method.

It has happened over and over again in the history of medicine that admirable points of treatment, associated with utterly exploded theories, have been swept into utter oblivion with the once widely popular theory which had led to, and been associated with, them. Those who have studied the history of our art, of the well-nigh innumerable, rapidly succeeding, and rapidly forgotten theories which have marked that history ever since the great iconoclast, Bombastes Paracelsus, smashed the highly respectable and venerable idols in the temple of Galen, will easily and readily appreciate the truth of this. To those who have not perused this extremely instructive study this is not the time to prove the fact. Nothing, however, could be easier; we need look no further back than the beginning of this century.

When Jenner stated the simple, fully-ascertained fact that casual inoculation of an *adult* human being with the virus from a certain vesicular eruption on the teats of the milch cow rendered the adult thus inoculated exempt from all danger of small-pox contagion, however conveyed, for the remainder of life, he announced a fully ascertained and infinitely important fact. When he also announced that inoculation of a second adult human being with virus obtained, at a certain stage, from the artificially induced disease, produced an apparently *precisely* similar effect, no one could doubt the interest and scientific importance of the discovery. When he asserted that virus obtained from vesicles in a human adult, being inoculated on a like subject, induced a disease precisely as protective of the patient from subsequent small-pox, he stated a *theory*, one very *probably* correct but not absolutely ascertained; by no means *proved*, either then or since. When he asserted that not only adults but infants inoculated with lymph taken after innumerable human removes from its original bovine source are thereby protected from small-pox in all degrees and forms for the remainder of life, exactly as the adult milker was proved to be completely protected, he started an essentially wild and really baseless theory, — a theory, however, regarded by the profession generally as absolutely ascertained. To doubt its truth involved for a long series of years such persecution as medical etiquette and professional magnanimity permitted, and to doubt and deny it, even twenty-five years ago, required great courage and indifference to consequences.

Now, however, whatever certain old fogies may think, no physician with any well-founded claim to consideration as a student of the subject, believes that there is no modification whatever in vaccine virus, re-

sulting from often repeated human transmission, or that the protection of one vaccination in infancy is as complete as that of an adult revaccinated with vaccinal effect, or as that of one first vaccinated successfully in adult life. What confusion and humiliation, what swallowing of one's thousand times uttered words or opinions, or even worse still, what angry and obstinate persistence in error, has grown out of the firm, unbending, unyielding faith of the profession (with rare and quite disregarded and despised exceptions) in *all* the doctrines of Jenner, not in so much of them as was based, really and logically, in the single ascertained fact of the permanent protection from small-pox of adult (over ten years of age) milkers by casual inoculation from the teats of the cow with the cow-pox, but on quite unproved, but very extremely *probable* surmises, the result, not of deduction from perfect premises, but of that reasoning from analogy, so fascinating to many minds, to that going from the particular to the general, which long ago one of the very wisest of the children of men declared to be a crying sin of physicians, and one which, more than any other, stood in the way of sound and true progress in medicine.

If, said Dr. Martin, the history of vaccination, of the thousand and one wild theories and suggestions to which Jenner's announcement gave rise, were investigated and considered, enough would be learned to make us hesitate before we accept all, or even a considerable part, of the theories already founded on the really very important, ascertained facts as to the rapid multiplication of certain low organisms and their agency in the production of certain diseased conditions.

The speaker had been led on far beyond the intended limits of remark on the subject. He had no doubt that antiseptic treatment, in a form much modified from what is now practiced by the Listerian, will have a continued and assured place in the surgery of the future. He could not doubt that Professor Lister deserved, as indeed he had received, the warm grateful applause of the profession and humanity for what he has done to establish and maintain antiseptic surgery, but he must continue to believe that much of the germ theory will crumble away into oblivion and discredit, and that the process will not be unassociated with a good deal of chagrin and humiliation to those who have so confidently and uncompromisingly assumed that it was "one complete and perfect chrysolite" of truth and of the result of sound logical reasoning.

The subject is a great one — too great to be lightly discussed. He hoped, as it concerned gynecological with all other branches of surgery, the Society would make it the subject of discussion for one or more sessions. Such ample time was absolutely necessary to anything like a fair and useful presentment of what might be said for and against the relations of the development and multiplication of certain low forms of organic life to surgery and the methods of treatment which that assumed relation has inspired.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.

REPORTED BY DR. E. P. HURD, CORRESPONDING SECRETARY.

THE semi-annual meeting of the Essex North District Medical Society was held at the Eagle House in Haverhill, Wednesday, October 12, 1881. The president, DR. JOHN CROWELL, of Haverhill, in the chair.

DR. CHENEY reported an interesting case of Ova-

rian Dropsy where cure was accomplished by natural processes (absorption and elimination) without recourse to surgery. He also called attention to the beneficial effects of sodium salicylate in the treatment of typhoid fever.

DR. LOVEJOY read extracts from an article on the Use of Hypodermic Injections of Morphia in Puerperal Convulsions; followed by a discussion. The question was raised whether morphia suspends uterine action. The sentiment of the meeting was in the negative. Is the treatment of puerperal convulsions by subcutaneous injections of morphia *good* treatment? The answer was considered doubtful; anaesthetics and chloral seemed to give better results.

DR. TOWLE reported a case of Congenital Imperforate Rectum.

DR. ROOT reported a case of Hepatization of the Lungs in a child ten years old.

DR. TOWLE gave an interesting account of his recent illness in London. — passive pulmonary congestion relieved by hemorrhages, free and frequent.

DR. C. D. HENKING, of Haverhill, read a paper on Pneumonia; its Character and Treatment. He adopted the theory first proposed by Dr. William H. Draper, of New York,¹ advocated by Jurgensen, notably in this country by Dr. Austin Flint,² that Pneumonitis is an essential fever, and not purely a local inflammation. In other words, "the pulmonary lesion is a sequence in point of time of the pyrexia," representing "a conservative process by which a materies morbi is eliminated from the circulation," and is the result of a specific poison, allied to the poison of scarlet fever, small-pox, or typhoid fever, in the blood of persons suffering from the disease. In proof of this view (1) it cannot be induced by local causes, such as penetrating wounds, contusions, etc.; (2) cannot be induced experimentally; (3) has definite cycles and runs its course like the so-called essential fevers. If this view of the pathology of pneumonia is correct, it is evident that the treatment should be supporting and eliminating; the heart especially should be sustained by stimulants and digitalis; antimony and venesection should be discarded. The reduction of excessive temperature by cold baths and quinine was advocated by the writer. The essay was discussed by Drs. William Cogswell, R. C. Huse, and others.

Appropriate resolutions on the death of Dr. Martin Root,³ of Byfield, formerly secretary and one of the principal founders of the Essex North District Medical Society, were adopted; and the death of two of the senior members of the society was announced, namely, Dr. G. M. Garland, of Lawrence (died May 5, 1881), and Dr. W. H. Kimball, of Andover (died September 30, 1881).

¹ Bulletin of the New York Academy of Medicine, vol. ii. 1866.
² Practice of Medicine, Fourth Edition New York Medical Record, vol. xii., p. 443.

³ We publish below the resolutions, with the following synopsis of the preamble, which, in its entirety, is too lengthy for our columns.

Dr. Martin Root died of old age at his residence in Byfield, October 27, 1880, aged 78 years.

He studied medicine in Castleton, Vt., graduating in 1827. Settled in Byfield in 1828, joining the Massachusetts Medical Society about this time. In 1842 he helped found the Essex North District Medical Society, becoming permanent secretary in 1845, afterwards secretary and treasurer, till 1874. He never missed but one meeting of the District Society for over thirty years! In 1874 he resigned his office on account of failing eyesight and other infirmities; resolutions of esteem and confidence were passed, and he was voted a gift of fifty dollars from the Society treasury. Dr. Root left six children, one of whom is a physician, Dr. R. B. Root, of Georgetown, Mass.

As a physician he was popular and successful; he was conscientious.

Recent Literature.

A Treatise on Comparative Embryology. By FRANCIS M. BALFOUR. Vol. II. London: McMillan & Co. 1881. Price \$5.25.

WE are very glad to welcome Mr. Balfour's second volume, which completes his invaluable manual of comparative embryology. It is a bulky volume of nearly 700 pages. The first half is devoted to the completion of the first part of the work, (systematic embryology), and is accordingly occupied with chapters on *Amphioxus*, the *Tunicata*, and the several classes of vertebrates. The second half of the present volume contains Part II., *Organogeny*. It deals almost exclusively with the comparative morphology of the vertebrata, the author holding that "our knowledge of the development of the organs in most of the invertebrate groups is so meagre that it would not be profitable to attempt to treat systematically the organogeny of the whole animal kingdom." We know of no other work in which the problems of vertebrate morphology are so ably and philosophically presented and discussed. The manner in which he has brought out the essential features of vertebrate structure is very striking, and his work cannot fail to exercise a profound influence on the progress of anatomical and embryological research. To the English-speaking scientists the convenience will, of course, be particularly great. It is certainly gratifying to have a manual in our own language equal to the very best of German text-books. Indeed, Balfour's book is an abler production than Kolliker's *Entwicklungsgeschichte*, with which one naturally compares it, especially if we consider that the clearness and conciseness of the English work renders the tedium of the diffuse style of the Wurzburg Professor more offensive by comparison.

The chapters in the first half of the volume take up the classes of the *Chordata* in systematic order, an improvement on the pell-mell arrangement of the first volume. They one and all betoken Mr. Balfour's fitness for the difficult labor he has undertaken. The selection of what to present, the correct estimation of the relative value of conflicting observations and theories, and the relegation of the less trustworthy conclusions to a subordinate place, required an unusual insight and discrimination. The author, while following out all the latest advances in embryology and the newest and most startling deductions, exhibits a fortunate independence of judgment, for he is neither hampered by traditional opinions nor yet carried away by over eagerness for innovation. His pages are, moreover, enriched by original observations and mor-

phological conceptions at once new and philosophical.

If we should enter upon a detailed criticism of the work, we should produce a rather monotonous eulogium, although there are several respects in which we think changes or additions would result in improvement. Thus the primitive histological characteristic of the germinal layers is nowhere clearly brought forward. There is a neglect to take advantage of Hatches's very important work on the homologies of larval forms. More figures of whole embryos, and more reliance upon the results to be obtained by dissection of embryos, are to be recommended. The lungs and liver should have a much fuller treatment.

As a whole, the second volume is better than the first, not only because the subjects have been more fully investigated, but also because the author's handling has improved with experience, and he has profited by some of the criticisms passed upon the first volume.

The labor of preparing this work has been enormous and extremely difficult, but the result is so excellent and valuable that the author has placed all biologists and anatomists in his debt. Balfour's Embryology is a standard work, with which every student of zoölogy, and every investigator of anatomy, ought to be familiar.

C. S. M.

Photographic Illustrations of Cutaneous Syphilis. By GEORGE HENRY FOX, A. M., M. D. New York: E. B. Treat, No. 757 Broadway.

These three numbers complete the series of forty-eight plates, "photographed from life and colored by hand," and portray excellently the various syphilodermata. We have called attention at various times to the previous nine parts as they appeared, and while we did not feel authorized to indulge in the fulsome adulation expressed by some reviewers of emotional temperaments rather than minds judicial, our criticisms have yet been on the whole quite favorable. That to which we took occasion especially to object was the inferiority of succeeding to the first, and, as it were, specimen, numbers. Also the marked difference existing between different plates of the same case, the artist's work varying in its degrees of merit. These three concluding numbers are, however, as we said above, excellent. Dr. Fox is to be congratulated upon the successful accomplishment of a work which must have involved the expenditure of much time and effort by himself personally, while his promptness and regularity in issuing all the parts of the series is worthy of sincere commendation.

Part X. consists of five plates representing the ulcerative forms of the syphilodermata, and of these there is but one plate which is not exceptionally good. Part XI. comprises seven plates, large and small, portraying loss of nose; extensive ulceration due to chancrels; two primary lesions of syphilis, that is, initial indurations; periadenitis; and the syphilitic and non-syphilitic forms of condylomata. Part XII. concludes the series, and contains four fine plates of hereditary syphilis, and four smaller ones of syphilitic dactylitis, which, being dependent for their accuracy upon the camera rather than upon the artist are, of course, well given.

The series is not made up of exactly the illustra-

ties, and faithful in the discharge of every duty; in private life and in public, in every good work and word."

It was, that in the death of Dr. Martin Root, of Byfield, we were enabled to select an esteemed and valuable member of our Society, whose life was devoted to its interests, and was ever careful of the honor of the profession to which he belonged; one who in his long and useful connection with the Essex North District Society as its president, and in the discharge of his duties, had shown a high degree of fidelity, energy, and integrity, and to secure the continuance of his services, and the benefit of his example, we were enabled to select a successor, one who was a great help to the Society, and who, since his death, has been a great help to the Society, and who, since his death, has been a great help to the Society.

And it was, that in the death of Dr. Martin Root, of Byfield, we were enabled to select an esteemed and valuable member of our Society, whose life was devoted to its interests, and was ever careful of the honor of the profession to which he belonged; one who in his long and useful connection with the Essex North District Society as its president, and in the discharge of his duties, had shown a high degree of fidelity, energy, and integrity, and to secure the continuance of his services, and the benefit of his example, we were enabled to select a successor, one who was a great help to the Society, and who, since his death, has been a great help to the Society.

tions announced in the publisher's list; but the ones furnished are, as to subjects, equally well selected, and have been no doubt preferred as being finer in execution than the ones originally promised. The whole book is a treatise upon syphilis with illustrations, rather than plates of cases with accounts of the same, and is all the more valuable for that reason. A true list of illustrations is appended, together with a table of contents; also condensed notes upon the cases by number; finally, a well-selected formulary, arranged upon the metric system, as every scientific work of to-day ought to be, has been compiled and inserted, and will be appreciated by every busy practitioner of medicine.

E. W.

A Manual of Practical Normal Histology. By T. MITCHELL PRUDDEN, M. D., Director of the Physiological and Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York, etc. New York: G. P. Putnam's Sons. 1881.

Histological manuals have multiplied of late with such rapidity that when we took up this little volume we were by no means disposed to welcome it, but on a closer acquaintance our preconceived aversion disappeared, and we are happy to find that a really valuable addition has been made to literature. The work is not merely a treatise on methods; it gives also brief accounts of the structure of the tissue and organs. The author is evidently a master of his craft, and fully understands the practical details. We are surprised at the amount of information put into such small compass.

T. D.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 10, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number: \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,

No. 4 PARK STREET, BOSTON, MASS.

BOSTON MEDICAL LIBRARY ASSOCIATION.

WE call the attention of our readers to the final appeal of the Medical Library Association on another page, and trust that it will meet with the ready response which it deserves.

It is now about six years since the library was first started in two small rooms in Hamilton Place, with scarcely any books, without a dollar, in the face of lukewarmness and great skepticism on the part of many influential members of the profession as to the possibility of carrying out the plan, and backed only by the faith of a minority that the physicians of a city like Boston could and would support a special library of their own in no less degree than its lawyers and its clergymen. That this faith was well grounded subsequent events have shown.

The Association now—within six years of its birth—has a membership of over 200, occupies and owns a building of its own, which is assessed for upwards of \$20,000, is admirably situated and adapted to its purposes, and contains a fine hall in which the meetings of all the local medical societies are held. It is regularly in receipt of 273 medical periodicals, has a reference library of more than 10,000 volumes and nearly 6000 pamphlets, and a circulating library of over 2200 volumes, with a cross reference card-catalogue of all, which is approaching completion. The Association carries on and gives a home to a Directory for Nurses, now about to enter on the third year of its existence, and this has already proved an immense boon to the medical profession and the public alike. Through its instrumentality a competent nurse for any case of illness can be secured promptly at all hours of the day and night for a very small fee, with full information as to her character, qualifications, price, etc.; and it was the existence of the medical library in a building of its own which alone rendered the establishment of such a Directory possible. The need had long been felt, and frequent attempts had been made to supply it, but the nurses could not be induced to cooperate in a scheme which savored to their minds too much of the intelligence office, while they were not slow to appreciate the advantages of the plan when taken up and carried out by the medical profession. There is scarcely a desirable nurse in the city of Boston or its immediate neighborhood who is not registered in the books of the Directory, and during the last year about 900 applications for nurses have been filed.

The Association, again, has received by donation a valuable nucleus of a collection of surgical instruments, which are loaned to members as required. In short, the aim of the management has been to make the library a medical centre, and useful in as many ways as possible to the members of the profession, and to the general public, not only in Boston but also in all parts of the State. The Directory for Nurses, indeed, is proving of service to all parts of New England.

If free from debt the Association would have an income of about three thousand dollars per annum, a sum sufficient to enable it to meet all reasonable expectations of the profession and of the public; but the interest charges and the reduction of the principal of the debt have necessitated the strictest economy in the past in order to make both ends meet. We trust that each member of the profession will see his interest as well as his duty in contributing according to his ability toward the fifteen thousand dollars which are asked for. A generous response from the profession itself will encourage generous friends outside of the profession, and the work of the Medical Library will immediately and once for all be put on a perfectly secure basis.

In the course of time the library will doubtless be endowed, members of the profession remembering it in their wills, but the receipt of the sum now asked for will obviate the necessity of any further direct appeal.

THE RADICAL CURE OF CANCER.

THE offer of prizes for essays on the Radical Cure of Cancer, to be found in the advertising columns of this Journal, will probably excite various phases of thought among our readers. Undoubtedly there is a certain proportion of medical men to whose minds the idea of instituting a search for a cure for cancer will not appeal very strongly. The belief that disease is a part of the plan of creation, and that, therefore, there will always exist pathological conditions beyond the avail of remedial agents, has a goodly proportion of adherents. Considered incurable (at least by medicine) before the time of Ovid, — "*utque malum late solum inmedicabile cancer serpere*," — the tone of discouragement being echoed by Monroe, Le Dran, Sharpe, and other physicians of note, cancer, it must be confessed, remains one of the chief *opprobria* of medicine. Nevertheless, there are those eminent in the practice of the medical and surgical art, as well as for their scientific attainments, who, in the matter of the possibility of curing cancer, have ranged themselves in the ranks of the less skeptical. It is only necessary to refer to the quotation from Sir James Paget's remarks in the discussion on cancer in the Pathological Society of London to show the truth of our statement. "If," says this distinguished man, "I look, and I do look, for a [remedial] hope of recovery from cancer," etc. As a matter of fact, Sir James Paget, in announcing this hope, echoes the implied, if not the expressed, belief of a large body of medical men for several hundred years. From the time, in the tenth or eleventh century, when Theodoric, the monk, extolled the internal use of arsenious acid as a cure for cancer, to the present day, the claim of the radical efficacy of certain drugs in this disease has always awakened the liveliest interest in the profession. The failure of the monk's remedy did not prevent Storck and Récamier from believing firmly in the curative powers of conium; nor did the non-fulfillment of the hopes raised by these two experimenters serve to diminish the eagerness with which, a few months ago, physicians beset the druggists' shops for long-forgotten jars of Chian turpentine.

There is thus, in the medical profession, evidence of an abiding hope, amounting to faith, of the possibility of the discovery of a radical cure for cancer; and we trust that the generosity of the donor of these prizes will be the means of bringing forward suggestions worthy of serious consideration.

The answer to the possible inquiry, what forms of morbid growths it is intended to include under the denomination cancer, is given, substantially, in the announcement. The term "malignant disease" has been employed, and this is intended to embrace, in a comprehensive way, all those forms of growth which possess infectious qualities, whether of an epithelial, connective tissue, or other anatomical character. It is rather the clinical aspect of the disease which is to be considered, and therefore even the growths of a lesser type of malignancy must be kept in view; for while these can, in the vast majority of instances, be controlled by sur-

gical art, they may, under certain unfavorable conditions, assume a highly infectious character.

We invite, then, earnest attention to the offer of these prizes, and we commend to consideration a quotation from Christopher Turner Johnson: "To view a disease as incurable is, in effect, to render it such, for, where this idea has unfortunately taken possession of the mind, the necessary result is a state either of dull stupidity, or of supine indolence. It is the generous hope of future discovery that will best serve to animate and lead us forward, in every scientific pursuit."¹

THE INDEX MEDICUS.

THE *Index Medicus* is a periodical which has reflected great credit upon American medicine; it is, as its name indicates, an index to medical literature, published monthly, giving the titles, properly classified, to original articles in the medical periodicals of the preceding month. Its use is, of course, mostly limited to physicians who desire to keep themselves specially informed on certain topics, and who have the means of consulting those journals referred to as containing articles of special interest to themselves. But if its use is limited to a comparatively small number of men, its influence is felt through the whole field of medicine. It is easy by its means for any man to keep himself well informed on what is being written; it is a great saver of time. It is a great addition to the armamentarium of medical libraries, and has received many encomiums from very various quarters; but this moral support by no means compensates for the paucity of *bonâ fide* subscriptions. It has been supported through the present year by private contributions, and the publisher is obliged to ask the support of the profession for the coming year. In a circular just issued he says: —

"The publisher cannot, in justice to himself, stand the risk of additional loss, nor does he feel justified in expecting the same small minority, who came so generously to the rescue this year, to bear the burden of the deficit a second time.

"While he cannot object to any individual contribution that may be directly pledged, he is unwilling to make any special appeal, believing that the enterprise is of such importance to medical science as to entitle it, on the part of the profession, to a more general support. If the general practitioner has no direct use for the *Index*, he is, nevertheless, indirectly benefited by its work. The publisher is at a loss to devise any means by which to impress this fact on those too busy to realize it, but he believes that in some measure a more general estimate of the work, and a more adequate cooperation on behalf of its support, could be insured through the medical organizations. Four associations, indeed, have already taken action in this direction, namely, the American Medical Association, the Philadelphia County Medical Society, the Philadelphia Pathological Society, and the Philadelphia

¹ A Practical Essay on Cancer. Annual Prize Essay of the Royal College of Surgeons of London for 1898.

Obstetrical Society, each of which subscribed fifty dollars toward the guarantee fund of 1881. If this example could be followed proportionately by other medical societies, the deficit could be covered with a minimum tax on individual members. Subscriptions by societies certainly divide the expense most evenly among the profession and seem the most desirable method of sustaining this enterprise, which is too good to die—we sincerely hope it will not prove too good to live.

EXPERIMENTAL PHYSIOLOGY.

THOSE who may be disposed to follow the example of England and seek to impose prohibitory restrictions upon experimental physiology, even in the hands of educated men, would do well to read the address of Mr. John Simon, delivered at the recent Medical Congress in London.

On another page our readers will find some copious extracts from this address, which we should have been glad to give entire did our space permit. Mr. Simon puts his side of this subject—which is our own—very clearly and very strongly.

MEDICAL NOTES.

—The Massachusetts Medical Benevolent Society had an agreeable social reunion at the house of its President, Dr. H. W. Williams, Thursday evening, November 3d. At the business meeting preceding the social entertainment the old officers were reelected with the exception of a change in three of the trustees.

—Professor H. J. Bigelow, and his son, Dr. W. S. Bigelow, arrived at home from England a few days ago. Professor Bigelow is one of the last of the attendants upon the International Medical Congress to return. We congratulate him upon the appreciative attention and interest excited among the surgical delegates by his modifications in the operation for lithotomy. These were subsequently the subject of two elaborate papers in the *Lancet* copiously illustrated by cuts.

—The notice of the first meeting, after vacation, of the Clinical Society of London, in the *British Medical Journal*, reminds us of the nominations by the Council of the International Congress of a few representative even as honorary members of that Society:

“The first meeting of the Clinical Society after the autumn vacation took place on Friday, October 14th. There was a good attendance of members, and the chair was taken by the President of the Society, Mr. Lister. After the reading of the minutes of the preceding meeting, the President announced that the Council had decided to recommend the Society to commemorate the recent meeting in London of the International Medical Congress by the election of several honorary members of the Society. The names of the distinguished persons recommended for such election were the following: Sir James Paget, the President of the Congress, and the second president of the Clinical Society, the only British subject proposed for the honorary membership; Dr. H. J. Bigelow, Pro-

fessor of Surgery in Harvard University, and Dr. J. S. Billings, of the United States Army, representatives of America; Professor Esmarch, of Kiel, and Professor Volkmann, of Halle, representing Germany; Dr. Vernetil, Professor Ollier, and M. Pasteur, representing France; and Dr. Pantaleoni and Professor Mazzoni, representatives of Italy. In mentioning the name of M. Pasteur, the President remarked that he was not, strictly speaking, a medical man, but that his distinguished services to medicine would be held as more than ample to qualify him for the proposed honor. The mention of the above names received the cordial approval of the members present, but the election of the honorary members cannot take place until after the required interval.”

—A new building has been fully determined upon for the Boston Dispensary. The additional sum of fifty thousand dollars is requisite to complete its fund. Eleven subscriptions of one thousand dollars each have already been obtained.

—A few changes and additions are to be noticed in the list of instructors in the Harvard University Medical School, as published in the schedule, as follows: E. N. Whittier, M. D., instructor in theory and practice; G. M. Garland, M. D., instructor in clinical medicine; F. A. Harris, M. D., demonstrator of medico-legal examinations; E. H. Bradford, M. D., assistant in clinical surgery. Special instruction is to be given by the following gentlemen: J. R. Chadwick, M. D., in diseases of women; T. B. Curtis, M. D., in diseases of the urinary organs; O. F. Wadsworth, M. D., in ophthalmoscopy; and J. Homans, M. D., in the diagnosis and treatment of ovarian tumors.

—On Saturday last there were nine cases of small-pox in hospital.

—A physician of Erie, Pennsylvania, is training carrier pigeons for use in his practice. He leaves pigeons at places from which he wishes reports to be sent him.

—A great increase in the cost of treating hospital patients has taken place in the last dozen years. In 1867, in St. George's Hospital, each patient cost £4 17s. 9d., increased last year (1880) to £6 17s. 3d., as we learn from the *Medical Times and Gazette*.

—The arrangements for the festival in honor of the twenty-fifth anniversary of Virchow's appointment as Professor to the University of Berlin—an anniversary which coincides with his sixtieth birthday—are now being made. The 19th of November has been fixed for this festival. The most interesting part of the proceedings will be the handing over to Professor Virchow the title-deeds of a new institution to be devoted to the prosecution of scientific researches especially relating to anthropology, of which he will have the full control. As a politician, an anthropologist, and an antiquarian, no less than as a pathologist, Professor Virchow has claims, not on Germany alone, but on the whole of civilized humanity; and we heartily join in the desire to do him honor.

—Frequenters of the Medical Library have learned to appreciate Dr. Neale's Medical Digest. It is a classified index to a large portion of the medical peri-

medical literature for the past thirty years. A second edition is in course of publication, which is to be even more complete and valuable than the first edition. It is to be published by subscription. The first edition was published by the Sydenham Society.

— A gentleman of Milan, Signor Lorin, has offered 20,000 francs to the municipal authorities of that city to maintain a mortuary and post-mortem room in connection with the crematory, wherein the bodies of all persons dying of unexplained causes shall be rigidly examined before they are cremated. This is indispensable if special facilities for poisoners and other murderers by secret processes are not to be created by the recourse to cremation.

— Professor Ira Remsen of the Johns Hopkins University is in Boston and is engaged upon an examination of the water. We fear the results must be of a negative character.

— Mayor Latrobe, of Baltimore, has signed an ordinance absolutely prohibiting the sale of toy pistols in that city. The large number of deaths by lockjaw last summer prompted the passing of the act.

— The London Sanitary Protection Association, which was organized about a year since, lately announced its first general meeting, when Professor Fleeming was to give an account of work already done. Professor Huxley is chairman of the Association, and Drs. Acland, Britowe, Andrew Clark, Burdon-Sanderson, Sir William Gull are, among others, members of its council. The convenience, economy, and utility of these associations are destined, we think, to make themselves felt in all cities and thickly settled towns.

NEW YORK.

— The Rev. Dr. John Hall has been elected Chancellor of the University of the City of New York in place of Dr. Howard Crosby, resigned.

— The fifth annual commencement of the Nurses' Training School at the Charity Hospital on Blackwell's Island took place on the 27th of October. Diplomas were conferred on seventeen graduates, three of whom read essays, a number of prizes were awarded, and an address to the class was made by Dr. Fessenden N. Oels. One of the essays was on Emergencies, another on The Care of the Sick, and the third was of a valedictory character.

Miscellany.

PERINEAL SUTURES.

ROBERT B. DEXON, M. D.

When a perineum is torn at the time of child-birth the proper thing to do is to sew it up at once, unless there is some grave contra-indication, as extreme exhaustion or very severe hemorrhage. If the tear should be extremely deep, through the sphincter and involving the rectum, it may then be well to let it go for six weeks or more, till the woman is in good condition for a secondary operation, when a better result will probably be obtained than would have been if the operation had been done primarily.

Many experienced practitioners never sew up a torn

perineum, or even examine to see if the perineum is all right. But when they learn that there is a tear, all that is considered necessary is to tie the legs together, turn the woman on her side and let her go. The result is the perineum fills up more or less with granulations, followed by the usual amount of cicatricial tissue. If, however, a suitable suture had been used at the time, and union obtained by first intention, as may usually be done, then the many secondary results of a lost perineum will be saved the woman in the future. By sewing up the parts at once, the danger of septicaemia from absorption of the lochial discharges running over the abraded surfaces is prevented. But in many cases, when the operation is done at the right time, nothing is gained because of the sutures being inadequate for the work for which they are intended. As the selection of a proper suture has a great deal to do with getting a good result from the operation, and as it has been repeatedly shown by abundant experience that the principal difficulty with sutures has been, that they either dissolve too readily before union is perfected, or else give rise to troublesome ulceration; then, what is wanted is a suture which combines in itself both strength and non-irritability.

The sutures which have been most commonly used are the carbolyzed cat-gut, silk, silver wire, silver plated and nickel plated iron wire, annealed iron wire (which is used considerably in France), and, for a great many years by Dr. H. H. Hill, of Augusta, Maine, the lead wire. I do not know of this latter having been used by others than Dr. Hill, who has kindly told me of its advantages. Besides those above mentioned, horse-hair and split tendon have been used to a slight extent.

Carbolyzed cat gut has been probably used for the past few years in the primary operation more frequently than any other material. The disadvantage in the use of this is easily seen, from its too readily dissolving and allowing, in most cases, the parts to separate on the third or fourth day, when the cat-gut gives out, before the torn surfaces are even partially united.

Silk has been, and is, used a great deal, but it irritates and produces ulceration, necessitating removal before thorough and complete union is obtained.

Silver wire works very well, but is quite expensive. I saw it used a great deal in Vienna the past winter by Dr. Powlik, in Professor Braun's wards. Besides expense the principal fault found with it was, that it caused some ulceration before the parts were firmly united.

Silver-plated and nickel-plated iron wire answer admirably as regards strength, but the trouble is the plating wears off too soon, often coming away in flakes, leaving the exposed iron, which soon makes trouble.

Annealed iron wire has been used, but it does not answer all purposes. If the iron wire is polished it works better, but the expense is considerably increased.

Tendon has been so little used that not much is known about it. One complaint about its preparation has been the difficulty of splitting the tendon into threads.

Gut and horse hair have been considered the least irritating materials for sutures we possess.

Bryant says iron and silver sutures are about as irritating as silk, but not more so.

Regarding lead wire, which has been but little used, I shall say more than of the others, as it seems well worth being tried where there is the necessity for a

metallic suture, not only in operations on the perinaeum, but also in other surgical operations, especially when mucous surfaces are involved. I refer to it in this article, however, only in its connection with the perinaeum.

I have had but one opportunity to use the lead wire myself, but in that case it worked splendidly in every way.

Dr. Hill informed me that he has used the lead wire for more than twenty-five years in his practice, with excellent results: never seeing the slightest ulceration from its use, and in no case was it necessary to remove the wire till a cure was obtained.

The lead wire can be prepared by any one, by cutting off strips about one eighth of an inch wide, from a piece of sheet lead, and then drawing it through a wire-plate, to any size needed. The usual size required to possess the requisite amount of strength is about as large as the ordinary pocket-case probe, about half an inch from its bulbous end. Soft soap is a very good vehicle to rub on the wire, as it is being drawn down.

The only sutures we have then, which can be used to advantage, are the silver and lead. The trouble with the former is its expense and a certain amount of ulceration which it will produce. The lead wire answers every purpose. It is sufficiently strong for use anywhere, where metallic sutures are wanted. It does not produce ulceration, is pliable and inexpensive, and can be easily made by any one. It can be left in as long as desirable, till the parts are fully united, without causing any trouble whatever.

If the lead wire should be used more frequently in the primary operation I think there would be far fewer cases presenting themselves for a secondary operation.

Dr. W. L. Richardson, in a recent article, says: "Perineal sutures should be put near together, and not drawn too tightly." The nearness of the sutures prevents interspaces to be filled up by granulations, and by not drawing the sutures too tightly strangulation of the vessels is prevented.

During my term of service as interne, at the Boston Lying-In Hospital, under Dr. Richardson, it was shown on a number of patients, that if the woman's legs were drawn apart much farther than they would naturally be by her own unintentional movements, the perinaeum was not drawn upon at all. If the legs, or especially one leg, should be flexed at a right angle with the body or drawn up still nearer the abdomen, then the perinaeum was drawn upon, varying in extent with the amount of flexion.

Boston, October 10, 1881.

MALARIAL DISORDERS IN NEW ENGLAND.

THE secretary of the Connecticut State Board of Health, in his September report, says, in regard to malarial disorders, that "New Haven shows the greatest mortality from malarial diseases this month, — twelve in all. The protracted drought doubtless has been an efficient factor in causing the increased prevalence of malarial diseases reported, pretty generally where these diseases have become more or less established. The greatest increase yet mentioned is at Thompsonville, where nearly a hundred cases occurred almost simultaneously. The mortality in Hartford does not show increase, but more cases are reported. There is no exemption from age. Even infants are attacked in

many places. The attendance at school is more or less interfered with by the recurring chills. Fairfield, where considerable attention to drainage has been paid, reports a few cases through the drought, but much less than in former years, while for the present, New Milford, where similar work in systematic drainage has been done, is reported as entirely free from malarial diseases for the present at least.

"Quite an outbreak is reported in the northern part of Providence, R. I., and in Cranston and Elmwood, adjacent villages. A hundred cases or more are estimated in Providence city limits. As we have it endemic in New York and the valley of the Hudson and thus far in the Housatonic, Naugatuck, Quinnipiac, Farmington, and Connecticut River valleys, and to the northward as far as Holyoke at least, the prospects for a complete invasion of the State are very good. Thus far the greater portion of New London, Tolland, and Windham counties have escaped, and some portions of Litchfield County have been but lightly invaded. In Massachusetts reports occasionally come to hand of the encroachments east and west from the Connecticut River valley."

PREVENTIVE MEDICINE AND EXPERIMENTAL PHYSIOLOGY.¹

THE experiments which give us our teaching with regard to the causes of disease are of two sorts: on the one hand we have the carefully prearranged and comparatively few experiments which are done by us in our pathological laboratories, and for the most part on other animals than man; on the other hand we have the experiments which accident does for us, and, above all, the incalculably large amount of crude experiment which is popularly done by man on man under our present ordinary conditions of social life, and which gives us its results for our interpretation. . . .

Let me illustrate my argument by showing you the two processes at work in identical provinces of subject-matter. What are the classical experiments to which we habitually refer when we think of guarding against the dangers of Asiatic cholera? On the one side there are the well-known *scientific* infection experiments of Professor Thiersch, and others following him, performed on a certain number of mice. On the other hand there are the equally well-known *popular* experiments which, during our two cholera epidemics of 1848-49 and 1853-54, were performed on half a million of human beings, dwelling in the southern districts of London, by certain commercial companies which supplied those districts with water. Both the professor and the companies gave us valuable experimental teaching as to the manner in which cholera is spread. I need not state at length the facts of those experiments, probably known to all here, but may rather justify my parallel by referring to an aetiological question which will presently be discussed in our section. . . .

The two sorts of experiment — the scientific and the popular — differ, as I have noted, in this particular: that the popular experiment is almost always done on man, the scientific almost always on some other animal. It is true that many memorable cases are on record

¹ Extracts from an Address on State Medicine, delivered at the opening of the Section of Public Medicine in the International Medical Congress, by John Simon, C. B., F. R. S., D. C. L., LL. D.

where members of our profession have deliberately given up their own persons to be experimented on by themselves or others for the better settlement of some question as to a process of disease; have deliberately tried, for instance, whether, in this way or in that, they could infect themselves with the poison of plague or of cholera; and as regards one such case which is in my mind, I think it not unlikely that the illustrious life of John Hunter was shortened by the experiments which he did on himself with the ignoble poison of syphilis. There have been cases, too, where criminals have been allowed to purchase exemption from capital or other punishment at the cost of allowing some painful or dangerous experiment to be performed on themselves. And cases are not absolutely unknown where unconsenting human beings have been subjected to that sort of experiment. But waiving such exceptions, the rule is, as I have said, that scientific experiments relating to causes of disease are performed on some animal which common opinion estimates as of lower importance than man. Now, as between man and brute, I would not wish to draw any distinction which persons outside this room might find invidious, but, assuming for the moment that man and brute are of exactly equal value, I would submit that, when the life of either man or brute is to be made merely instrumental to the establishment of a scientific truth, the use of the life should be economical. Let me, in that point of view, invite you to compare, or rather to contrast with one another, those two sorts of experiment from which we have to get our knowledge of the causes of disease. The commercial experiments which illustrated the dangerousness of sewage-polluted water supplies cost many thousands of human lives; the scientific experiments which with infinitely more exactitude justified a presumption of dangerousness, cost the lives of a few dozen mice. So, again, with experiments as to the causation of tubercle; judging from the information which I quoted to you, I should suppose that the human beings whose milk supply on any given day includes milk from tubercular cows might be counted, in this country, in tens of thousands; but the scientific experiments which justify us in declaring such milk supply to be highly dangerous to those who receive it were conclusive when they amounted to half a dozen. So far, then, as regards the mere getting of experimental knowledge, we must not, with a view to economy of life, be referred to popular, rather than scientific, experiment. And in the same point of view it perhaps also deserves consideration that the popular experiments, though done on so large a scale, very often have in them sources of ambiguity which lessen their usefulness for teaching.

Let me now briefly refer to the fact that, during the last quarter of a century, all practical medicine (curative as well as preventive) has been undergoing a process of transfiguration under the influence of laboratory experiments on living things. The progress which has been made from conditions of vagueness to conditions of exactitude has, in many respects, been greater in these twenty-five years than in the twenty-five centuries which preceded them; and with this increase of insight, due almost entirely to scientific experiment, the practical resources of our art, for present and future good to the world, have had, or will have, commensurate increase. Especially in those parts of pathology which make the foundation of preventive medicine, scientific experiment in these years has been

opening larger and larger vistas of hope; and more and more clearly, as year succeeds year, we see that the time in which we are is fuller of practical promise than any of the ages which have preceded it. Of course I cannot illustrate this at length, but some little attempt at illustration I would fain make. First, let us glance at our map. When we generalize very broadly the various causes of death (so far as hitherto intelligible to us) we see them as under two great heads, respectively autopathic and exopathic. On the one hand there is the original and inherited condition under which to every man born there is normally assigned eventual old age and death, so that, sooner or later, he "runs down" like the wound-up watch with its ended chain; and, as morbidities under this type, there are those various original peculiarities of constitution which make certain individual tenures of life shorter than the average, and kill by way of premature old age of the entire body, or (more generally) by quasi-senile failure of particular organs. On the other hand, as a second great mass of death-causing influence, we see the various interferences which come from outside; acts of mechanical violence, for instance, and all the many varieties of external morbid influence which can prevent the individual life from completing its normal course. As regards cases of the first class — cases where the original conditions of life and development are such as to involve premature death (which in any such case will commonly show itself as a fault in particular lines of hereditary succession) — the problem for preventive medicine to solve is, by what cross-breeding or other treatment we may convert a short-lived and morbid into a long-lived and healthy stock; and this, at least as regards the human race, has, I regret to say, hardly yet become a practical question. But as regards cases of the second class, evidently the various extrinsic interferences which shorten life have to be avoided or resisted, each according to its kind; and here it is that the scientific experimenters of late years have been giving us almost daily increments of knowledge. . . .

I have reason to believe that if that Act (the Contagious Diseases Act) continues on the statute-book one of two results will follow. Experiments, indispensably necessary for the growth of medical science in relation to the cure and prevention of disease, will cease, or almost cease, to be done in this country; or, as the alternative to this, persons who desire to advance the science of their profession, will be tempted to clandestinely ignore the law and to run their chance, if the worst comes to the worst, of having to try conclusions with the common informer.

Let me illustrate this by two personal references; I have already mentioned Professor Lister as an experimenter, whose name is now classical wherever science has reached, and whose work has been of signal advantage to mankind. Last autumn Mr. Lister wished to do some experiments in extension of the particular branch of knowledge with which his name is identified, and at a point which he considered of extreme importance in surgical pathology. He found he must either abandon his investigation or must conduct it in a foreign country, and in his zeal for science he chose the latter course. His experiments (which had to be on large animals) were done at the Veterinary College of Toulouse; and in stating this fact in a letter, from which I quote, Mr. Lister added that "even with reference to small animals, the working of the Act is

so vexatious as to be practically prohibitory of experiments by a private practitioner like myself, unless he chooses to incur the risk of transgressing the law." A second name which I have mentioned is that of Professor Greenfield, who has so highly distinguished himself in developing, by means of experiments, the preventive medicine of splenic fever. Dr. Greenfield, in order to perform his inoculation experiments, had of course to become a license-holder under the Act; and his experience of the hindrances which attach to that position is expressed to me in the following terms: "It is my deliberate conviction, as a result of my experience, that these hindrances and obstacles are so numerous and so great as to constitute a most serious bar to the investigation of disease, and even of such remedial measures as would by common consent be for the direct benefit of the animals experimented upon. When to this is added all the annoyance and opprobrium which are the lot of investigators, it is to be wondered at that any one should submit to be licensed." Dr. Greenfield's experimental operations consisted only in inoculating the virus of animal diseases, and he says: "I have not been engaged in other investigations for the simple reason that, with the present restrictions and the difficulty of obtaining a license, I regard it as almost hopeless to attempt any useful work of the kind in this country."

As I feel sure that the Act must at no distant time be reconsidered by the Legislature, and as I also very strongly feel that, quite apart from any question of legal enactments, there is the question of moral right or wrong to be considered in the matter, I would beg you to allow me to make my own public confession of faith (from which I dare say yours will not much differ) in that extremely important matter of controversy.

[In connection with the preceding, we take the following parenthetical remarks from a clinical lecture of Dr. William Hunt's, appearing in the *Medical News and Abstract*. — Ed.]

"This was the case that thus early in my surgical life strongly impressed me with the phenomena that occur in serious injuries to the spinal column and cord, or to either of them. In those phenomena I have ever since taken a deep, though melancholy, scientific interest; melancholy, because of the utter hopelessness of recovery for most of the victims; scientific, because these and brain cases are those which give us more knowledge of the physiology of the nervous system than anything else.

"They are cruel, accident vivisections, vivisections performed on the highest of God's creatures. I dislike vivisection, although I have done something at it in my day; but I have frequently thought when standing helpless at the bedside of one of these terrible cases of spinal injury, that if a dog could be wounded and give me any light for the relief of the man, it ought to be done. I think of Him who said, 'Ye are of more value than many sparrows,' and I say ye are of more value than a few dogs."

THE STANDARD OF COWS' MILK.

An interesting paper has been published by Professor C. A. Cameron, in a recent number of the *Scientific Proceedings of the Royal Dublin Society*, on the composition of the milk of cows. During the winter quarter of 1880, analyses were made of the milk of

forty-two cows which were kept at the government agricultural institution, known as the Albert Farm, at Glasnevin, in the county of Dublin. The morning's and the evening's milk of each cow were each analysed once, and an examination of the mixed milk of the forty-two cows was also made on the 11th of December, 1880. The cows were, as might be expected, good animals, having from one to three crosses of the Shorthorn breed. They were in the house during the period of the experiments; their food consisted of a daily allowance of about nine stone of pulped mangolds and turnips with exhausted brewery grains, together with about one stone of hay. Their ages ranged from four to nine years inclusive. Dividing them into two groups — those aged four and five years, and those aged eight and nine years — a marked difference in favor of the milk of the latter, both in quantity and quality, was noticed. This, however, might easily be accounted for by the process of artificial selection, for while it is only good milch cows that would be kept in the dairy for several years, the younger ones, proved not to be good milkers, would be put into the fattening stalls. The belief that milk becomes deteriorated in quality towards the end of lactation was not supported by these experiments. The quantity naturally became scanty, but the quality improved. The average yield of milk was for each cow $11\frac{1}{4}$ quarts. In every instance, the quantity of milk yielded in the morning exceeded the proportion furnished in the evening, eight hours intervening between the milkings. Thirty out of the forty-two cows gave richer milk in the evening than in the morning; eleven gave richer milk in the morning than in the evening, while the remaining cows' milk was equally good at both milkings. The increase in the amount of solid matters in the evening's milk was chiefly due to the larger amount of fats contained in the latter. — *Sanitary Record*.

BOSTON MEDICAL LIBRARY ASSOCIATION.

AN APPEAL TO THE PROFESSION AND TO THE PUBLIC.

THREE years ago the Boston Medical Library Association appealed to the profession and public for pecuniary aid to enable it to purchase and fit up a house to contain its extensive library, and also a hall for the meeting of all the medical associations in the city. More than ten thousand dollars were then subscribed, the building bought and altered, leaving the Association with a mortgage of eight thousand dollars and a floating debt of four thousand dollars; the latter has since been reduced to one thousand dollars, by further subscriptions by the profession and by the practice of the most rigid economy.

The usefulness of the Institution has been so fully appreciated and endorsed by the profession, and the Directory for Nurses, established and carried on by the Association, has proved such a boon to physicians, nurses, and especially the public, that the executive committee feel authorized to appeal for a new subscription of fifteen thousand dollars for the purpose of cancelling the entire debt, making some pressing and long-neglected alterations and repairs, and having a small fund for binding and for buying new books, as soon as issued.

With this sum we feel that the Library Association will be established on so lasting a basis as to preclude

the necessity of appeals for pecuniary assistance in the future.

It is not necessary to dwell upon the value of libraries in general, but we would remind our patrons that the mass of medical literature is now so great as to be beyond the purchasing power of even the richest physicians, and yet the life and health of every individual in the community, is, in a large measure, dependent upon a familiarity, on the part of the medical profession, with every advance in the science and practice of medicine.

To meet this pressing need more fully than has heretofore been possible with our limited resources, we hereby appeal to the profession and the public.

Subscriptions may be sent to any of the undersigned.

O. W. HOLMES,	W. L. RICHARDSON,
F. I. KNIGHT,	EDW. WIGGLESWORTH,
O. F. WADSWORTH,	P. C. SHATTUCK,
CHARLES P. PUTNAM.	

Executive Committee.

JAMES R. CHADWICK, *Librarian.*

19 BOYLSTON PLACE, BOSTON, October, 1881.

CONGRESS CORRESPONDENTS.

The *British Medical Journal* says editorially:—

"A Journal-Reader" writes to us: Most of the correspondents who have reported their notes on the recent Congress have done so in language of warm compliment and congratulation. Some of the French correspondents are a little dissatisfied that their own language was not more generally spoken, and that they could not understand any other. One or two of them complain that there were too many Germans; and one, that the Germans ate too much, and carried their wives' portraits about with them in lockets. The Germans are generally well pleased. The *Berliner Klinischer Wochenschrift* observes that the public and opening addresses were, with the exception of Pasteur's, somewhat unsubstantial. The American journals, especially the *New York Medical Record* and the *Boston Medical Journal*, give excellent reports of the proceedings; so does the *Progrès Médical* in France. Some of the reporters are easily censorious; very few carefully criticised. Dr. Rumbold has made quite a little collection of things which ought not to be, and of tales out of school, with which he regales his countrymen. At the Liverpool Infirmary, he was scandalized with the "young ward doctors;" "the most of them," he observes parenthetically, "part their hair in the middle." He spoke to the young gentleman who thus incurred his wrath, of the nasal cavities and Eustachian tube, and reports this answer: "Oh, that is a nasty part of the head; we can learn enough of this in the books." "His contempt, his conceit, and his ignorance," says the amiable visitor, "were equal." Dr. Rumbold was then taken through the whole hospital. His comment is: "As I have said, I saw nothing that was striking, except the universal clumsiness of their splints for fractures of all kinds." Except for grammar and orthography, this leaves nothing to be desired. Coming on to London, he has much to say of the bungling mistakes of brilliant operators. Thus he describes an operation in which the mastoid process was needlessly trephined and the lateral sinuses opened. He adds: "I am very certain that it will pay American physi-

cians to come over here and see mistakes made; but to see them too often makes one too reckless, which is closely allied to barbarism." He adds: "As an instance of heroic surgery at one of the old hospitals, I may direct the reader's attention to an operation of ovariectomy performed there. The abdomen was ripped from pubis to sternum, and what appeared to me to be ovarian or ovario-uterine or uterine fibroid, by a persistent and persevering series of separating, tearing, ligating, and dividing, was taken out of the then apparently (at a casual look) eviscerated subject, and the extensive wound stitched up, just before the patient breathed her last." Further: "A gynaecologist of considerable experience a few days ago proposed to do ovariectomy; but, after opening the abdomen, he found the tumor to be uterine, when he declined to proceed further, and closed up the opening at once. Another prominent gentleman found a tumor in the upper portion of the vagina displacing the uterus somewhat; but it was found by a more careful diagnostician that the woman had pelvic cellulitis." Partly, however, our censorious friend relents. "Notwithstanding, in some instances, John Bull, with self-complacent dignity and a sullen icicle selfishness apparent, passes his American cousin, and even his European *confères*; yet many London doctors show the true gentlemen that they are and seem willing and anxious to interest and entertain strangers from every land; and I shall return to America glad that I came, and with many pleasant recollections connected closely with medical men of the great city of London." This will save some of us from being too much elated at the success of our efforts to entertain our visitors and show them what was best worth seeing. It may also interest our instrument-makers and more inventive surgeons, to know that M. Fochier of Lyons is of opinion that there was nothing new in the display of instruments, and that French models were largely copied and exhibited as English novelties.

DRAINAGE OF THE PERICARDIUM.

A CASE, probably unique in the annals of paracentesis, has been recorded by Rosenstein, of Leyden. A child, aged ten years, suffering from pericardial effusion, presented such a degree of interference with circulation and respiration, that an aspirator needle was passed into the fourth intercostal space, near the sternum, and 620 cubic centimetres of liquid were withdrawn. Left-sided pleural effusion soon followed, and 1100 cubic centimetres of liquid were evacuated. The cardiac symptoms increased, and necessitated a second puncture of the pericardium; 120 cubic centimetres of purulent liquid were withdrawn. A relapse occurring, a larger opening was made (an inch and a half long) in the fourth intercostal space. The soft parts were divided layer by layer under strict antiseptic precautions. When the pericardial cavity was reached a large quantity of pus escaped. Two drainage tubes were inserted. The operation was followed by an immediate return of the circulation and respiration to normal conditions. An incision into the pleura, however, also became necessary. At the end of four months of treatment the patient left the hospital in good condition. There was no pyrexia or oedema of the skin in the precordial region to indicate the purulent nature of the effusion. — *The Lancet*.

REPORTED MORTALITY FOR THE WEEK ENDING OCTOBER 29, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	The Principal "Zymotic" Diseases.	Percentage of Deaths from			
					Diphtheria and Croup.	Lung Diseases.	Diarrhoeal Diseases.	Typhoid Fever.
New York.....	1,206,590	648	266	31.79	12.04	13.12	6.94	2.19
Philadelphia.....	846,984	341	105	21.70	6.16	3.52	3.23	6.74
Brooklyn.....	566,689	289	130	33.22	13.84	12.11	7.27	1.04
Chicago.....	503,304	240	115	50.42	13.75	5.42	2.50	8.33
Boston.....	362,535	156	49	17.31	5.13	11.54	5.13	3.85
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	175	86	34.86	20.57	4.57	6.86	2.29
Cincinnati.....	255,708	96	31	11.46	2.08	5.21	1.04	3.13
New Orleans.....	216,140	111	29	24.32	1.80	4.50	13.51	3.60
District of Columbia.....	177,638	96	34	31.25	7.29	5.21	6.25	5.21
Pittsburgh.....	156,381	96	49	62.50	8.33	6.25	12.50	13.54
Buffalo.....	155,137	91	34	41.76	12.09	5.49	12.09	10.99
Milwaukee.....	115,578	31	14	29.03	9.68	6.45	3.23	—
Providence.....	104,857	34	12	26.47	8.82	14.70	14.70	—
New Haven.....	62,882	28	—	25.00	7.14	7.14	3.57	14.29
Charleston.....	49,999	33	12	12.12	6.06	9.09	—	3.03
Nashville.....	43,461	23	7	34.78	13.04	—	4.35	4.35
Lowell.....	59,485	22	8	27.27	22.73	13.64	4.55	—
Worcester.....	58,295	19	6	36.84	5.26	15.79	10.53	15.79
Cambridge.....	52,740	22	11	22.73	13.64	—	—	4.55
Fall River.....	49,006	27	14	26.93	7.41	3.70	7.41	3.70
Lawrence.....	59,178	—	—	—	—	—	—	—
Lynn.....	38,284	22	5	40.91	13.64	—	—	13.64
Springfield.....	33,340	8	1	25.00	—	—	—	12.50
Salem.....	27,598	11	4	45.45	—	—	18.18	18.18
New Bedford.....	26,875	9	3	33.33	11.11	11.11	11.11	—
Somerville.....	24,985	16	7	31.25	12.50	12.50	12.50	6.25
Holyoke.....	21,851	11	2	27.27	—	9.09	—	9.09
Chelsea.....	21,785	4	—	50.00	—	—	—	25.00
Taunton.....	21,213	7	3	42.86	14.29	—	14.29	14.29
Gloucester.....	19,329	4	1	—	—	—	—	—
Haverhill.....	18,475	5	2	20.00	—	40.00	—	20.00
Newton.....	16,995	3	1	—	—	—	—	—
Newburyport.....	13,537	4	1	—	—	25.00	—	—
Fitchburg.....	12,405	4	2	25.00	—	—	—	—
Twenty-three Massachusetts towns.....	188,566	48	9	27.08	18.75	10.42	4.17	4.17

Deaths reported 2734 (no report from St. Louis): 1053 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 860, consumption 412, diphtheria and croup 286, lung diseases 228, diarrhoeal diseases 169, typhoid fever 124, small-pox 89, scarlet fever 74, malarial fevers 60, whooping-cough 20, cerebro-spinal meningitis 19, puerperal fever 11, erysipelas four, measles three, typhus fever one. From *small-pox*, Chicago 49, Pittsburgh 21, New York seven, Philadelphia six, Boston and Cincinnati three. From *scarlet fever*, New York 31, Brooklyn 14, Philadelphia 10, Pittsburgh five, Baltimore and Buffalo three, Chicago and Milwaukee two, District of Columbia, Worcester, Fall River, and Fitchburg one. From *malarial fevers*, Brooklyn 17, New York 12, District of Columbia nine, New Orleans five, New Haven four, Baltimore and Nashville three, Chicago two, Philadelphia, Pittsburgh, Charleston, Lynn, and Holyoke one. From *whooping-cough*, New York 10, Chicago three, Baltimore two, Philadelphia, Brooklyn, District of Columbia, Cambridge, and Salem one. From *cerebro-spinal meningitis*, New York six, Chicago and Buffalo two, Philadelphia, Cincinnati, District of Columbia, Milwaukee, Fall River, Lynn, Springfield, New Bedford, and Chelsea one. From *puerperal fever*, Chicago and Milwaukee two, New York, Boston, Baltimore, New Orleans, Buffalo, Lynn, and Holyoke one. From *erysipelas*, New York two, Chicago and Boston one. From *measles*, Chicago, Cincinnati, and Providence one. From *typhus fever*, New York one.

Eighteen cases of small-pox were reported in Brooklyn, nine in Boston, 11 in Cincinnati, 89 in Pittsburgh, one in Buffalo; diphtheria 39, scarlet fever nine, typhoid fever 40, in Boston; diphtheria eight, scarlet fever eight in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of

1,067,299 (population of the State 1,783,086), the total death-rate for the week was 19.64 against 21.29 and 23.50 for the previous two weeks.

For the week ending October 8th in 149 German cities and towns, with an estimated population of 7,936,736, the death-rate was 23.3. Deaths reported 3560; under five 1688: pulmonary consumption 434, acute diseases of the respiratory organs 237, diarrhoeal diseases 193, diphtheria and croup 163, scarlet fever 121, typhoid fever 72, whooping-cough 64, puerperal fever 22, measles and *rötheln* nine, small-pox (Aachen) three, typhus fever (Rostock, Thorn two) three. The death-rates ranged from 14.3 in Lubek to 36.2 in Görlitz; Königsberg 25.1; Breslau 26.9; Munich 30.5; Dresden 25.7; Berlin 25; Leipzig 16.5; Hamburg 21.4; Hanover 16.1; Bremen 16.9; Cologne 19; Frankfurt 15.6; Strassburg 20.

For the week ending October 15th in the 20 English cities with estimated populations of 7,608,775, the death-rate was 20.5. Deaths reported 2985; acute diseases of the respiratory organs (London) 279, scarlet fever 170, diarrhoea 85, measles 70, fever 63, whooping-cough 61, diphtheria 29, small-pox (London 22) 23. The death-rates ranged from 14.8 in Leicester to 27.9 in Liverpool; Bristol 15.1; Leeds 17.1; Sheffield 17.2; London 19.9; Manchester 21.9; Birmingham 22.6. In Edinburgh 21.4; Glasgow 23.3; Dublin 18.2.

For the week ending October 15th in the 21 chief towns of Switzerland, population 479,934, there were 25 deaths from diarrhoeal diseases; acute diseases of respiratory organs 16, scarlet fever four, diphtheria and croup two, typhoid fever two, puerperal fever one. The death-rates were, Geneva 22; Zurich 22.3; Basle 19.3; Berne 21.1.

The meteorological record for the week ending October 29th, in Boston, was as follows:—

Date.	Barom-eter.	Thermom-eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Oct., 23	30.037	60	75	50	86	57	84	76	W	W	W	8	4	10	F	F	C	—	—
Mon., 24	29.819	47	60	42	89	96	98	94	NE	NE	NE	10	16	8	O	R	R	—	—
Tues., 25	29.482	51	64	39	100	75	91	89	N	W	W	7	7	9	G	F	C	—	—
Wed., 26	29.883	37	52	32	65	38	72	55	NW	NW	W	14	18	5	C	C	C	—	—
Thurs., 27	30.101	42	56	28	72	42	65	60	W	W	W	6	10	6	C	C	C	—	—
Fri., 28	30.269	44	59	34	80	63	76	73	W	E	S	8	7	2	H	F	C	—	—
Sat., 29	30.269	48	54	42	83	96	94	91	Calm	E	SE	0	10	16	G	R	R	—	—
Week.	29.980	47	75	28														26.30	.39

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM OCTOBER 29, 1881, TO NOVEMBER 4, 1881.

DAVIS, W. B., first lieutenant and assistant surgeon. Relieved from duty in Department of Dakota, to proceed to Richmond, Va., and, on arrival, report by letter to the Surgeon-General. S. O. 240, C. S., A. G. O.

KOLMER, E. A., captain and assistant surgeon. Relieved from further duty at Yorktown, Va., and to proceed to Plattsburg Barracks, N. Y. S. O. 191, Department of the East, November 3, 1881.

CARVALLO, C., captain and assistant surgeon. Granted leave of absence for one month on surgeon's certificate of disability, with permission to go beyond the limits of the department and to apply for five months' extension. S. O. 108, Department of the Platte, October 24, 1881.

SKINNER, J. O., captain and assistant surgeon. Relieved from duty as acting medical purveyor in the field, and to proceed to his proper station, Whipple Barracks, A. T. S. O. 123, Department of Arizona, October 26, 1881.

ARTHUR, WILLIAM H., first lieutenant and assistant surgeon. Relieved from duty at Fort Sanders and assigned to duty at Fort Washakie, Wyo. Ter. S. O. 110, Department of the Platte, October 29, 1881.

APPOINTMENTS. — To be assistant surgeons, with the rank of first lieutenant: —

EDWARD C. CARRER, of New York, October 22, 1881, *vice* Phillips, deceased.

HENRY I. RAYMOND, of New York, October 22, 1881, *vice* O'is, promoted.

THOMAS J. C. MADDOX, of New York, October 22, 1881, *vice* Smith, resigned.

RICHARD W. JOHNSON, of Minnesota, October 22, 1881, *vice* Jaquett, promoted.

G. O. 77, A. G. O., October 31, 1881.

ERRATUM. — In the report of the American Academy of Dental Science, November 3d, page 134, Dr. T. L. Williams should read Dr. J. L. Williams.

BOOKS AND PAMPHLETS RECEIVED. — A Manual for Hospital Nurses and others engaged in attending on the Sick. By Edward J. Danville, L. R. C. P. Lond. Fourth Edition. Philadelphia: Presley Blakiston. 1881.

Second Annual Report of the State Board of Health, Lunacy, and Charity of Massachusetts. 1880. Supplement containing the Report and Papers on Public Health.

Third Annual Report to the Legislature of Massachusetts regarding the Registry and Return of Births, Marriages, and Deaths in the Commonwealth for the Year ending December 31, 1880.

A Practical Treatise on Hernia. By Joseph H. Warren, M. D. Second and Revised Edition. Fully Illustrated. Boston:

James R. Osgood and Company. London: Sampson, Low, Marston, and Rivington. 1882. All rights of translation reserved by the author.

Artificial Anesthesia and Anesthetics. By Henry M. Lyman, M. D. New York: William Wood & Co. 1881. Library of Standard Medical Authors.

A Treatise on Orthopaedic Surgery. By J. Warrington Howard, F. R. C. S. London: Longmans, Green & Co. 1881.

New System of Ventilation, which has been thoroughly tested under the Patronage of many Distinguished Persons, being adapted to Parlors, Dining and Sleeping Rooms, Kitchens, Basements, Cellars, Vaults, Water-Closets, etc., etc. A Book for the Household. Fourth Edition, enlarged, with New Illustrations. By Henry A. Gouge. New York: D. Van Nostrand. 1881.

Favorite Prescriptions of Distinguished Practitioners, with Notes on Treatment. By B. W. Palmer, A. M., M. D. New York: Birmingham & Co. 1881.

Essentials of the Principles and Practice of Medicine. A Handbook for Students and Practitioners. By Henry Hartsborne, A. M., M. D. Fifth Edition. Thoroughly revised and improved, with one hundred and forty-four illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881.

Chronic Pelvic Abscess. A Contribution to the Differential Diagnosis of Abdominal Tumors. By A. F. Erich, M. D., Professor of Diseases of Women, College of Physicians and Surgeons, Baltimore. (Pamphlet.)

Ophthalmology, Ancient and Modern. Annual Address before the Maine Medical Association, June 22, 1881. By James A. Spaulding, M. D. Portland: Stephen Berry, Printer. 1881.

Historical Sketch of the Obstetrical Society of Boston. By Benjamin E. Cotting, M. D. (Harv.) Boston: David Clapp & Son. 1881.

Three Cases of Compound Committent Fracture of the Leg. Recovery without Suppuration. By Thomas R. Wright, M. D. (Reprint.)

The Science and Art of Midwifery. By William Thompson Lusk, A. M., M. D. With numerous illustrations. New York: D. Appleton and Company. 1882.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D. Fifth Edition, thoroughly revised, with illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881.

A Text-Book of Physiology. By M. Foster, M. A., M. D., F. R. S. Second American from the Third and Revised English Edition. With Extensive Notes and Additions. By Edward T. Reichert, M. D. With two hundred and fifty-nine illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881. (A. Williams & Co.)

The Therapeutics of Gynecology and Obstetrics, comprising the Medical, Dietetic, and Hygienic Treatment of Diseases of Women. Second Edition, thoroughly revised and greatly enlarged. Edited by William B. Atkinson, A. M., M. D. Philadelphia: D. G. Brinton. 1881.

Historical Sketch of the Medical Societies of Baltimore, Md., from 1730 to 1880. By G. Lane Tameyhill, A. B., M. D.

State Medicine. An Address delivered before the New Hampshire Medical Society. By G. P. Conn, M. D. (Reprint.)

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, M. D. Parts X, XI, XII.

Lectures.

CLINICAL LECTURE ON DISEASES OF WOMEN.¹

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROF. T. GAILLARD THOMAS, M. D.

CASE I. FIBROID OF THE OVARY.

GENTLEMEN, — Before introducing any new patients to-day, I wish to say a word in regard to the one whom you saw here three weeks ago, and whom some of you saw me operate on a fortnight since at the Woman's Hospital. Since my last report of the case to you the sutures have been taken out, and the woman has continued to do perfectly well in every respect. As to the character of the tumor removed I have a correction to make. When I exhibited it to you last week I told you that it was a sarcoma of the ovary, which is a kind of malignant growth liable to return, and which would render the ultimate prognosis very unfavorable. At that time it had been examined only by an inexperienced microscopist; but since then it has been placed in the hands of Prof. Francis Delafield, and he has written me concerning it as follows: "The outer portions of the solid ovarian tumor removed by you are composed of dense, compact tissue; the central portions of a looser and more spongy tissue. The anatomy of both these portions, however, is essentially the same. Their structure resembles that of the ordinary fibroid tumors of the uterus. That is, they are composed of connective tissue and smooth muscular fibres. The tumor is, therefore, a *myo-fibroma*. There has been, as you know, some question whether ovarian tumors ever contain smooth muscle; but the best authorities now admit that it does sometimes exist in such tumors. I suppose that you are certain that this tumor was not attached to the uterus, nor contained in one of the broad ligaments."

[Before the removal of the tumor it was supposed by Dr. Thomas to be an ordinary case of uterine fibroid with long pedicle. His reasons for undertaking the operation were that the growth had given rise to abdominal dropsy and was rapidly undermining the health of the patient. P. B. P.]

The question which Dr. Delafield suggests is a very natural one in view of the extreme rarity of ovarian fibroids; but I could not possibly have been mistaken in regard to the attachment of the tumor for the reason that when I was performing the operation I took the precaution of lifting both the uterus and ovaries outside of the body in order to be sure about the matter. It was without doubt a fibroid of the ovary with a long pedicle, and was the first one of the kind that I have met with in all my experience. I was mistaken, therefore, in my diagnosis previous to the operation only as regards the attachment of the tumor, and such a mistake is certainly excusable when the fact is considered that there is no means whatever known to science for determining absolutely in such a case whether the growth is attached to one of the ovaries or to the uterus. I reasoned in this way: It must belong either to the uterus or to one of the ovaries, and as fibroids of the uterus are exceedingly common, while those of

the ovaries are so exceedingly rare as almost never to be met with, it was in all probability connected with the former.

CASE II. RUPTURE OF THE PERINEUM FOLLOWED BY PROLAPSE UTERI.

Ann R., aged forty years and a native of Ireland. She has had one child (six years ago) but no miscarriages, and is now a widow.

How long have you been complaining? "For about a year." How do you suffer? "From a great pain in my back." What else? "Pains in my knees, legs, and shoulders." Do you suffer much at your monthly periods? "No." Can you walk about pretty well? "Yes." Can you go up and down stairs well? "No." Can you do as much work as before you began to feel badly? "Oh, no." Have you any trouble about your bladder? "I have to pass my water too often." How many times during the night? "Only once or twice at night, but I have to pass it very often indeed through the day." You feel relieved in this respect, then, at night? "Yes." Do you have the whites? "Yes."

You observe that the patient has a very strong frame, such as we commonly associate with persons in robust health; but it needs only a glance to see that she looks harassed and depressed. As you have heard, she was well up to one year ago, when she began to suffer from great weakness and pain in the back and thighs. Then followed leucorrhœa and irritability. Such symptoms scarcely seem like those that could seriously affect a patient apparently so strong, and she herself does not make very much of them; but yet the fact remains that she cannot do her ordinary work any more.

Now let me show you what took place in this woman's case six years ago, and has really caused all her trouble, although she has been complaining only for the past year. Before the birth of her child her uterus was kept up in place by the ordinary means provided by nature for the support of this organ; but at the time of the delivery the perineal body was split directly in two, the rupture of the parts extending completely back to the anus. What was the result of this accident? Presently the bladder began to fall, because the laceration of the perineum took away its entire support; and as it descended lower and lower, the uterus (which was in a state of subinvolution and greatly enlarged) came down with it. The patient's system bore up nobly under such a strain; but at last, at the end of five long years, it began to give out. The uterus has not as yet come down outside of the body in this case, but it has fallen down to the vulva; so that the fundus thus presses upon the bladder, while the rectum, on the other hand, is dragged upon.

Next we inquire, Can the symptoms, of which the patient complains, be satisfactorily explained by such a prolapsus uteri as we find here? and the answer is, "Undoubtedly they may." This is in some respects a prolapsus of the second degree: but it is to be classed as one of the first degree, because, for some reason, the uterus still retains its normal axis, instead of having become retroverted, as is generally the case. I presume that if nothing were done to prevent it the organ would, before a great while, come down entirely outside of the body; the ligaments having finally given up all resistance.

I wish to pause here for a moment to say, that any

¹ Reported by P. Brynberg Porter, M. D.

medical man who is in the habit of practicing obstetrics and ignores such an accident as rupture of the perineum had better, by all means, give up this branch of the profession. All sorts of uterine troubles are constantly arising from it; and the most lamentable part of the matter is that they might all have been avoided if the accoucheur in attendance in each case had only performed his duty properly. Of course, rupture of the perineum is sometimes inevitable, in spite of all our efforts to save it; but not infrequently the accident can be prevented by a little care. For instance, when forceps are employed it is better to take them off before the head is delivered. If by taking every precaution, then, we can prevent the perineum from giving way, we are doing a vast deal for the patient's present safety, as well as for her future welfare. There are some who boast that they do not even tear the fourchette in delivering their patient; but as a fact it is found that this almost invariably gives way. Such a rupture, however, is physiological, rather than pathological, and it is not of this that I am speaking. More extensive lacerations of the perineum are, unfortunately, very frequent, and, indeed, they take place in the great majority of instrumental labors. Of course, I do not mean that in the generality of forceps cases the perineum is torn all the way through to the anus; but enough injury is done to give rise to very serious trouble. When we consider what an acrid and irritating fluid the lochial discharge is, it certainly appears marvelous that more parturient women do not die of septicæmia, because when there is a rupture of the perineum the raw surfaces are constantly bathed by this irritating material pouring from the uterus. Yet this is only one of the many evils that result from this accident.

Now suppose that, in some case, in spite of all efforts to prevent it, you find that there has been a rupture of the perineum. The question at once presents itself, Shall I close it or shall I let it alone? While it is impossible to lay down any law that shall be universally applicable in such cases, the rule is, put in sutures immediately and repair, as far as it is possible, the damage that has been done. To this, however, there are some exceptions. When, for instance, the patient has lost a large quantity of blood, or has otherwise become much exhausted during labor, or when there are weak-minded relatives present who will cry out with horror at the mere thought of such a procedure, and nearly frighten the patient to death, it is better to delay the operation until a more appropriate time. If the patient has been bleeding very profusely, she may actually die while the sutures are being put in, and, of course, any obstetrician who attempts to operate under such circumstances must be regarded as culpable.

If done carefully and thoroughly the immediate operation is generally successful. Usually, however, the practitioner does not have the necessary appliances for operating with him, but it should be the rule of every one who practices obstetrics at all to always have the things required at hand in every case which he attends. When this is the fact he can put in the sutures without any delay, and if anesthetics have been previously used during the labor, the patient very often is entirely unaware that any operation is being performed upon her. When a laceration has thus been promptly repaired you have closed up two avenues of future trouble to your patient. In the first place, you have prevented the exposure of the

raw surfaces of the torn perineum to the septic action of the lochial discharge, to which allusion has already been made. I often wonder why it is that all women do not die of puerperal fever after labor. As the patient lies on her back the septic fluid bathes not only the cervix (which is very likely to have been lacerated) and the vagina, but also pours directly over the fourchette, whose lymphatics and blood-vessels have been exposed by its almost inevitable rupture. All this is going on for days and days together, and although vaginal injections may be of service, they cannot prevent it. How much greater must be the danger, then, when not only the fourchette, but perhaps nearly the whole perineum, is torn through, and the extensive surfaces of its two parts left exposed. In the second place, by an early operation the necessary support is furnished to the uterus, and the danger of prolapsus in the future is averted. During the present course I have not had so good an opportunity as the present for speaking of this subject, which I regard as a very important one.

But now, as to the patient before us. Can she be cured? I think she can, but it will take a long time. Under the circumstances here present I would by no means advise that the treatment should be begun with a surgical operation. It is possible to restore this uterus to position and maintain it there by other means, and this will relieve both the engorgement which now characterizes it and the severe dragging upon the ligament which has been going on so long. For this purpose I would suggest Cutler's pessary or some modification of it (which might be removed at night), and in addition copious vaginal injections of hot water should be frequently used, while care should be taken that all pressure from tight clothing be removed. After three months of such treatment as this I do not doubt that we should have a uterus much less hyperæmic and heavy than at present, and it would then be proper to restore the lacerated perineum by an operation. The restoration of the perineal body would thus support the bladder, and all traction having been removed the uterus would probably remain in its normal position without the aid of a pessary or other mechanical contrivance.

CASE III. PROLAPSE OF THE BLADDER FROM RUPTURE OF THE PERINEUM; MARKED RETROFLEXION.

Lena P., twenty-six years old, and a native of Germany. She has been married eight years, and has had three children, but no miscarriages. The last child was born six months ago.

How long have you been sick, Mrs. P.? "Six months." Have you never been well since the birth of your last child? "Yes, I feel well sometimes, but I cannot do my work any longer." Why cannot you do your work? "Ever since my baby was born my womb keeps coming down outside of my body, and prevents me from working as I used to."

Here, you see, we have a diagnosis given us at once, but, as is very apt to be the case under such circumstances, it is not correct. The uterus, I find, has never been down at all.

What else troubles you? "Pain in the back and great distress in the lower part of my stomach." Do you suffer from anything else? "I feel just like fainting sometimes, because I am so very weak." Have you any trouble with your bladder? "No, but I notice that when I pass my water the womb always goes

up, though it comes down again afterward." Do you have to get up at night to pass your water? "No."

From the appearance presented when I first looked at the vulva of this patient, I supposed that the uterus was in reality out of the body, as she stated; but as soon as I touched the supposed uterus with my finger, I found that the mass yielded, and that instead of having prolapsus uteri to deal with, there was prolapsus of the anterior wall of the vagina with prolapsus of the bladder as well. In addition, the examination revealed that the patient had also lost her perineum; and hence it is that the bladder, having been deprived of its normal support, has fallen down in this way, until it is practically entirely out of the body.

But what gives all this pain in the back and the great distress of which the patient speaks? In pursuing my investigation of the case I found, furthermore, that the uterus was completely retroflexed; the cervix being felt very high up, and the fundus down behind it. I thought at first that the latter might be a fibroid (but soon found that it was not sufficiently hard for that), and then that it was a small ovarian cyst which had slipped down into Douglas's cul-de-sac. When I resorted to conjoined manipulation, however, I at once found that the body of the uterus was not in its normal position, and the passage of the sound showed that there was complete retroflexion of the organ. If the diagnosis of prolapsus uteri had been taken for granted here, and a pessary appropriate for that condition ordered, it would have done harm instead of benefiting the patient. A pessary for prolapsus can do no good where there is retroflexion of the uterus, and this is altogether the most marked case of retroflexion that has been at the clinic for at least a year.

The question now comes up, Has all this trouble come on since the birth of her last child, six months ago? I think not; for it is much more probable that the prolapsus of the bladder was the result of her first labor, six years ago. The retroflexion, however, I believe must have followed the last one, six months ago; because it is so extremely marked that I can scarcely see how it is possible that so many conceptions should have occurred with the organ in this position.

This patient, I believe, can be cured; but it will be a very troublesome case to treat. What shall we do first here?—restore the perineal body? If we do, we shall most certainly fail in curing the patient; because this bladder, instead of being of the normal size, is now three times as large as it ought to be, and it cannot be satisfactorily supported in its present condition. The only proper way to proceed here is to begin by reducing the size of this organ, and this can be done most simply by taking an ellipse from its walls, and bringing the denuded mucous membrane together by means of silver wire sutures. After the operation Sims' glass plug should be worn for a time in the vagina, and at the end of nine days the sutures should be removed. Thus having succeeded in markedly diminishing the size of the hypertrophied bladder, the next step will be to restore the perineal body by the usual operation; and the uterus, having then been replaced, should be kept in position by a pessary. When all this has been done for her the patient will imagine that she is cured; but in every such case you should beware of telling the woman that she can get along without wearing a pessary. I should think it

would be fully two or three years before the pessary could be safely abandoned in the present instance, because the uterus has completely lost its tone.

Original Articles.

CASE OF PRESIDENT GARFIELD.

STATEMENT OF DR. J. COLLINS WARREN.¹

MR. PRESIDENT AND GENTLEMEN OF THE SOCIETY,—Before making any remarks on our President's case, perhaps it will be proper for me to say that I am in possession of no facts or data that other members of the Society have not had the opportunity of reading and finding out for themselves. The diagrams and one or two other matters of interest which I shall show were collected together for illustration to the class at the Medical School, and I thought it might be of interest to the members of the Society to present them, such as they are, imperfect as the statement of the case would be to them. I therefore offer no further apology for the incompleteness of my remarks. I suppose that it would hardly interest the members, either, to hear all the details which I went into at the school, but I will select certain points which may be of interest to them as physicians.

In the first place I would present for inspection a specimen of the ball with which the President was wounded, No. 44 calibre.—quite a formidable pistol-ball. I will pass it round, together with the pistol, which is of the British bull-dog pattern, which I have here with me. The noticeable features about it are its short barrel, its large mouth, and the fact that it has a repeater, which shows that the assailant was able to fire two shots in rapid succession. In reading one of the sporting papers in the course of the summer I noticed some remarks by the editor on the character of this weapon. Attention was called to its small penetrating power. The shortness of the barrel did not give an adequate opportunity for the rifling to exert its influence. Secondly, the charge of powder which is contained in the cartridge is apt to be diminished in quantity by the grease which is used in connection with the preparation of the cartridge and ball. At all events the amount of powder placed in this shell is apt to be of a variable quantity and of a smaller quantity than a full charge. The result is a low rate of velocity. These facts being taken into consideration the small penetrating power was dwelt upon, the writer concluding with the statement that the bark of such a weapon was worse than its bite. It is a kind of weapon apt to be selected by one unfamiliar with the use of firearms, owing to its formidable appearance and also to the amount of noise which the weapon makes in its discharge.

In regard to the direction of the bullet, I have prepared a skeleton, with a wire, on the end of which is inserted a large size bullet showing the track of the ball, with a wire behind here running somewhat in the direction the bullet came before it struck the body. The point at which it entered the body was in the intercostal space between the tenth and eleventh ribs, about three and a half inches to the right of the spinous process of the adjacent vertebra. On entering it descended pretty vertically, so much so that it grazed

¹ Made at a meeting of the Suffolk District Medical Society, October 29, 1881; see page 470.

the inside of the twelfth rib, inflicting a fracture on that rib also, having previously produced a fracture on the eleventh rib. It then entered the intervertebral substance between the last dorsal and first lumbar vertebrae and continued downward obliquely and forward in its course, and emerged on the median line in front of the spine, that is, near the middle of that dorsal vertebra. It then went about two and a half inches further, and lodged behind the pancreas.

Here [referring to diagram] I may add is the track of the ball as shown in a diagram taken from photographs which were kindly sent to me by Dr. Woodward from the Medical Museum. Here you see the twelfth vertebra, and there you see a probe passing through the hole. I have here the photographs which were sent me, the first one showing the injury to the bone by the ball, the second showing the bone laid open to demonstrate the great injury to the body of that vertebra and the intervertebral substance, and even to some of the bony structures of some of the adjacent bodies.

This diagram shows a section of the body at the plane at which the ball lodged, the general plane which the ball traversed. That is about the level of the last dorsal vertebra. This is a diagram taken from one of that beautiful series of anatomical plates of Braune, which are so satisfactory for the purposes of study. Here we have the body of the vertebra, and here the kidneys, right and left; here is the liver; there is the tip of the spleen, and there is the ascending and there the descending colon. In the centre of all lies the pancreas, which you see looks like quite a large organ, and assumes a much more prominent place in such a section than one might imagine. A noticeable feature of that diagram is that the peritoneum lies entirely in front of the pancreas. There is a whitish line shaded dark at the edges, which winds about the colon, intestines, and liver, but leaves behind it the pancreas and the kidney, so that it is a curious fact that the ball entering the body at that part might go more than half way through the body, and yet not make what is technically termed a penetrating gun-shot wound of the abdomen, that is, a wound which had penetrated the peritoneal cavity.

Another interesting feature about the anatomical relations of the bullet at the point of entrance is that, although it had so much to do with the abdominal region, it really entered above the diaphragm, yet at the same time it did not touch the pleura; the pleura did not come quite so far down at this point, and the ball passed along, as it were, the tendons of the insertion of the diaphragm, then penetrated the point of origin of the psoas muscle, according to the statement of Dr. Weisse, passed downwards, as we have described, passed through the muscular attachments below the diaphragm, and rested, as I said before, near the pancreas. As it passed through the tendons of the insertion of the psoas muscle, and entered a bony partition, it left behind it, naturally, a very small point to trace its future progress, to mark the distant portion of the wound.

Here we have another diagram showing the pancreas and its arterial supply, intended to show the splenic artery. Here is the artery about which much has been said, showing its tortuous course towards the spleen, and lying along the upper edge of the pancreas, the ball passing, as you remember, obliquely behind the pancreas and very near the splenic artery in its course.

There are a number of points connected with the

pathology of the case, which, of course, are worthy of discussion amongst physicians. In the first place, the first clinical symptom of note was the shock. There was a large amount of shock at the time of the injury that did not, I think, receive satisfactory notice in the papers at the beginning of the record of the case. At the time of the injury the pulse was weak and very rapid, and the temperature was below normal. There were also other symptoms — pallor and coolness — of a very marked shock.

There was on the whole a considerable amount of examination of the wound, although it was of a cautious character so far as probing, in the old sense of the term, is concerned. We cannot say, I think, that the wound was unduly probed, that is, the deeper parts of the wound were not meddled with, but from an antiseptic view, we might criticise the introduction of the finger of several surgeons into the wound. For instance, there was a statement made by a physician, I think a homœopathic physician, who was some relation or friend of President Garfield's, in which he states that, hearing of the injury, he went to the White House and found the patient lying so and so, with his clothes on him, and he turned him over on his side, put his finger into the wound, and then exclaimed, "My God, General! You ought to have surgical advice," to which President Garfield replied, "There are about forty of them in the adjoining room, go and consult with them." That shows the impression left upon the President's mind by the examination he had been subjected to. Of course, from an antiseptic point of view, these examinations were not in accord with the prevailing present theories.

In regard to the wound to the liver. At the point at which the ball entered the body there is a reflection of the peritoneum, on the liver from below downwards and from above upwards, so that if the ball had entered the body directly and had penetrated the liver, as was supposed, it would not have injured the peritoneum, because there was no peritoneum at that particular point. In fact, with this route of the ball, it would seem as if there was less chance of injuring the peritoneum than in almost any other route that possibly could have been selected. Then the symptoms of injury to the liver were not present.

Dr. Otis, in his great work, the Surgical History of the War, points out some symptoms. Among them the great hæmorrhage, and the characteristic color of the discharges. A gun-shot injury to the liver is not unlike a gun-shot fracture upon glass. The brittle character of the organ renders it liable to become very much comminuted by the shot. I have here the volume for the purpose of showing that point. Such an injury would be a very severe one, and the fact is that gun-shot injuries of the liver are of a very fatal character. Precisely what the statistics are I do not remember, but a great many die from hæmorrhage, which is a striking feature.

We come now to two prominent features in the course of the case, one near the end of July and the other about a week later, in the early part of August. Those are easily accounted for. The burrowing of pus in the neighborhood of the fracture of the ribs rendered counter openings necessary. First, I think, the wound was lengthened a little, subsequently a deeper opening was made lower down, below the ribs, and at fording much more complete drainage of the wound than before. Then, as the case progressed, the fact

that the outlines of the wound began to show themselves in the neighborhood of the groin, the pus burrowing, as is characteristic of pus, from carious vertebrae along the psoas muscle, and ending at a point in the groin. Speaking of the counter openings for the purpose of drainage, I would mention that Dr. Marcy has just handed me a flexible tube, which he tells me has been devised by himself for getting up a double current. The wound was washed out, I am told, with a tube of this character.

In regard to the drainage of the wound, so far as I can gather from the accounts which I have thus far read, there was no tube left in permanently. At one time it was mentioned in the papers that chicken-bone drainage-tubes had been used. If that was the case, of course they were used under a misapprehension of the peculiar qualifications of those tubes, the object of which is to enable them to disappear and become useless after a certain period of time. They are intended for amputations, as for instance, of an extremity where it is desired that the wound shall heal, and they are intended to play the provisional duty which a cat-gut ligature or suture does to accomplish its work, and then become absorbed later: so that with cat-gut ligatures or sutures, and a bone drainage-tube, it would be possible ideally to do up an amputated stump, as you cover a cut on the finger with a piece of court-plaster, and never remove the dressing until the whole part has become healed, and all the agents which have been used in draining and keeping the parts in position have become absorbed and have disappeared. Therefore, if such a tube was used, it was of little use in such a case as this, where the idea was to keep the wound open all the time.

The washing out of the wound, of the pus cavities, as it was called, which burrowed downward, would involve a washing out of the entire wound, as it was observed at the autopsy.

It was stated to me by a lawyer, that a great point could be made in the defense of the fact that the real wound was never dressed, never was treated by the surgeons, during the whole course of the case; that is, the track in which the ball went, starting from between the tenth and eleventh rib to the spot behind the pancreas. We know a part of that had been obliterated, had healed up, the ball having become encysted, and needed no such treatment. The wound, it seems to me, on more accurate study, was one large irregular cavity, similar in its outline to the ordinary pus cavity in a case of Pott's disease, a tortuous, irregular mass of pus burrowing in different directions, modified somewhat by the two broken ribs, which were centres from which radiated inflammatory tendencies, and that the washing out with the catheter probably effectually cleansed the whole wound.

We come now to the next point of interest, one which is, perhaps, as interesting to the profession as any; the significance of the inflammation of the parotid gland in this case. This brings us to the question of pyæmia and septicæmia. So much was said about these diseases, and so many contrary opinions were expressed as to whether it was pyæmia that the President had, or septicæmia, that I have taken the liberty of bringing a few charts here giving the fever curves of cases of pyæmia and septicæmia, and I will take your time for a moment in rehearsing some of the prominent symptoms of those two diseases, as given to us by modern writers. Let us see, then, what is the character of septicæmia, a poisonous fever arising from

an absorption of the products of decomposition in a wound. Take, for example, an amputation where during the first day or two there had been sloughing of the fat or muscular tissues, the serum of the blood which has been discharged mixing with the decomposed tissues, and there has been some poison generated which has been absorbed. The patient has an unusual amount of fever, an increased temperature, continuing at a high rate, until at the end of a few days death ensues. There has been practically no other symptom but fever, which has been accompanied by delirium, rapid pulse, etc., but no other particular symptom characteristic of a special disease. At the autopsy no particular pathological appearances would be found beyond, perhaps, a cloudy swelling of the liver and some other organs.

Take a case of pyæmia and compare it with that. The patient not having succumbed in the early stages, following an amputation, to a severe attack of fever like this case, suppuration takes place, and having been unusually abundant, the fever curve, instead of going down to normal at the end of a week or ten days has been kept a little above that point. Suddenly the patient has a chill, followed the next day by a chill, and perhaps the next day two chills, and there is a certain discoloration of the skin showing a slight bilious tinge, and the abnormal febrile disturbance continues for a longer or shorter time until death ensues. Before, however, death has ensued there is generally some local manifestation, that is to say, there may be a swelling of the knee-joint or shoulder-joint. At the autopsy pus is found in these joints. Pus may be found in the connective tissue structures, between the muscles of the thigh, for instance; pus may be found in the pleural cavity; small abscesses will be found scattered about in various organs, like the lungs and liver and kidneys. In other words, we have in this case, a disease with marked clinical symptoms, and equally marked pathological *post-mortem* appearances.

Some writers on pyæmia undertake to recognize two kinds: First, that which is caused by the absorption of a poison generated during the process of suppuration; that is, evidently, a case very similar to septicæmia in its origin; secondly, that caused by the dissemination of emboli throughout the different organs. The former is called pyæmia simplex and the latter pyæmia multiplex. Those who recognize these two kinds regard the former simply as the result of a poison which shows a predilection for the connective tissue structures. I spoke of the connective tissue of the thigh, and I find in an article by Heuter, from whom I have just quoted, that we may consider the suppuration of the parotid gland as one of the rare features in the first form of pyæmia, to be classified with suppuration of the connective tissue structures rather than with metastatic abscesses of other organs; that we should regard it rather as a symptom of pyæmia than of septicæmia. The most common form of inflammation of the parotid in febrile disturbance is that known to us in typhoid fever, and also in the malarial and dysenteric fevers of the war.

The multiple abscesses spoken of as seen in the gland in the President's case were due simply to the suppurative infiltration of the gland, the conformation of the stroma giving a carbuncular appearance.

Now the question is, Which of the two diseases we have described did the President suffer from? The increase of fever in the early part of the case, the great emaciation, and the general tendency to extensive sup-

puration render it, it seems to me, extremely probable that there was at that time, and perhaps later still, a decided septicæmic condition of the system; but if we go on further to the last days of the case, we get a very striking clinical symptom similar to those we have already described, that is, on the Friday preceding the end the President had a chill, on the next day another, the next day two, and on the last day a chill, when a sudden hæmorrhage cut short the disease and terminated the case fatally. At the autopsy was found this tortuous wound which was described, a pus cavity six by four inches along the lower borders of the liver, by some supposed to have been actually an abscess of the lower portion of the liver, as the liver itself seemed to be directly involved; by others supposed to be merely a sinus dissecting between the liver and the colon, with a very small amount of pus in it. There was also found an abscess in the left kidney near the cortical portion, and then a peculiar condition of the splenic artery, to which we will allude presently. In the lungs there were no metastatic abscesses. I think the surgeons here recognize the complication of the lungs as showing nothing more than the hypostatic congestion which frequently accompanies surgical cases. With that was a bronchitis, and a free purulent expectoration from the membranes, but no metastatic abscess of any kind.

What light does the autopsy throw on the case? Taking the clinical symptoms, the presence of chills, which are considered so characteristic of pyæmia, we should have expected to find a number of metastatic abscesses after death. There was only one abscess, I think, that we could fairly consider as belonging to that variety, namely, a very small abscess in the cortical portion of the kidney. The larger cavity near the liver, so near the wound, the further portion of the wound directly in front of the spine, has been regarded by some in the light of a metastatic abscess which developed during the last chills. I think that Dr. Hamilton's explanation of it is the most satisfactory. I see that in answer to a reporter he pointed out that as the ball passed the twelfth dorsal vertebra an explosion, as it were, took place in that portion of the bone, the fragments of the bony tissue being scattered broadcast in various directions, causing injuries which produced this long sinus of pus, which may or may not have communicated at some time with the main wound. The pathological appearances, therefore, do not afford us a very complete case of pyæmia. One metastatic abscess is a very small basis on which to build such a diagnosis. But we must remember that an incident occurred at this stage which cut short the disease, namely, a secondary hæmorrhage, and that brings us to the question of the injury to the splenic artery.

It is now stated by Dr. Weisse (I have not seen it stated by any of the physicians in attendance on the case) that as the ball came toward the lower edge of the pancreas it injured the splenic artery, which would be in the course of the ball. It was claimed by some physicians that these chills could have been accounted for by repeated hæmorrhages from the wound in the artery. I should hardly think that any surgeon would agree that the hæmorrhages in this case would cause the chill. That is not a very well recognized cause of chill, certainly, and I should be inclined to object to the theory that hæmorrhage had anything to do with the chill.

In regard to the question of the wound to the artery,

if it had been injured by the ball, there was but one possible termination of the case. The wound of the splenic artery could not be got at, and, in fact, the existence of such a wound could not be recognized in any system of examination with which we are acquainted, and if left to itself it was bound to develop into an aneurism, which would eventually burst and kill the patient. But whether this wound in the artery was made by the ball, or whether it was due to an ulceration of the wall in the course of suppuration is a question upon which, I think, it is but fair and just that we should withhold our opinion until further evidence on that point has been given to us.

Therefore, taking all these facts into consideration, it seems to me that during the last part of the case the President was suffering from marked pyæmic symptoms, which, had they been allowed to go on, would have produced characteristic pyæmic appearances, namely, metastatic abscesses, but that the progress of the disease was suddenly cut short by the hæmorrhage which terminated the case.

I have a chart here which gives the pyæmic temperature, in which an attempt has been made to indicate its peculiarities. I believe the temperature of pyæmia is entirely peculiar to that disease; that is, we have in most diseases a high evening and low morning temperature, comparatively speaking, — only one febrile rise, therefore, in the twenty-four hours. But in pyæmia we should have, not diurnal variations, but hourly variations, and if we would make a careful diagnosis it is necessary to take the temperature at least as often as every two hours. If we only take the temperature morning and evening it might happen that we should have a particularly low temperature in the evening, whereas in the morning we might have taken the temperature on one of the hours of its rise; therefore a morning and evening temperature would be totally inadequate to show this peculiar febrile condition.

Although the fact was not reported in the official bulletins, yet from remarks made by Dr. Bliss I should judge that the temperature was frequently taken in this case. How systematically this was carried out we have not yet been able to learn, but when we do have a complete record of the case (for I hope Dr. Woodward will write out its history and give us all the details) we shall then see whether in the last days of the President's sickness he had this characteristic temperature, this frequent rise in twenty-four hours, and if so, then our diagnosis of pyæmia will be definitely determined.

Gentlemen, I have already taken a great deal of your time, and there are some interesting exhibitions to be made, and I will therefore content myself with making the remarks I have, thanking you for your attention. [Applause.]

— The death is announced of Dr. Giovanni Cabiadis, an authority on the plague, of which disease he had a very large practical experience. He was Sanitary Officer in the service of the Ottoman Health Department, and in this capacity had done much valuable work. Whilst suffering from the effects of an attack of malarial fever he was sent to the Department to superintend the sanitary measures designed to stamp out the plague in Mesopotamia. His disease became aggravated, and his life was really sacrificed in the discharge of his duty. His place will not be easily filled.

THE EPIDEMIC OF TYPHOID FEVER AT NAHANT, MASS.

WE are able to give our readers the following condensation of the report submitted to the selectmen of Nahant by Drs. John P. Reynolds and Thomas Dwight, who were appointed a committee to investigate the cause of the fever, and to make recommendations as to the water supply. The report was read at a town meeting held early in October, and is to appear in print.

The report states that there had been perhaps fifty cases of typhoid attacking persons who either were residing at Nahant or who had left it shortly before the attack. Most of the cases were light, but some had been severe, and two had been fatal.¹ Two theories exist as to the origin of typhoid fever. According to one the poison is conveyed by the discharges of those suffering from the disease, and thus every case is to be traced to some preceding one; according to the other the disease may arise anew from filth and decomposing substances. The committee did not think it advisable to discuss the merits of these theories, as there can be no doubt that, even according to the former, unclean surroundings are most favorable for the development of the disease.

Nahant is certainly exceptionally well situated for health, but this advantage has been counterbalanced by neglect of sanitary precautions, especially in neglecting the cleaning of privies and the placing of vaults and cess-pools at proper distances from wells.

The committee was unable to trace the present epidemic from case to case, but in many instances the surroundings had been found such as to offer a plausible explanation. Special attention had been given to the analysis of wells, but the committee pointed out that polluted water was only one of the means by which fever could be transmitted. The committee had caused to be examined at Professor Wood's laboratory, at the Harvard Medical School, fourteen specimens of well-water (two of which were taken at different points from one well), one specimen of cistern water, one of melted ice, and one of milk from one of the chief suppliers. They had access also to the results of seven other analyses made by Dr. Wood for private parties, and to four made by Mr. Samuel Cabot, Jr. The ice, unfortunately, was melted without proper precautions, but as it had not been considered suspicious, and as even then the analysis showed nothing wrong except somewhat more albuminoid ammonia than should be found, the experiment was not repeated, and the result simply ignored. The milk was pronounced very good. Dr. Wood, however, added that he was not aware that chemical analysis could determine its capability of conveying typhoid fever. The cistern water was very bad, containing .1125 parts of free ammonia and .0200 of albuminoid ammonia in one hundred thousand parts of water. One well contained .2340 of free ammonia and 80 parts of residue. Several other wells were found more or less suspicious. In some cases the disease could be traced to filth conveyed in other ways. As the town had appointed a sanitary expert the committee made few suggestions. As the specimens of water had, for the most part, been collected in a dry season they recommended that certain wells should be examined again after a period of

rain, which very probably would render some suspicious which as yet were not to be condemned, and others very bad which as yet were only suspicious. They advised that certain wells should be absolutely condemned. As the committee could not pretend to say how soon a bad well might become good after the cause of pollution was removed, they advised at least that the prohibition should not be taken off till chemical analysis should give every assurance of safety. Vaults and cess-pools should be cleaned and disinfected, and in some cases where vaults or cess-pools were near wells it was evident that one or the other must be condemned.

With regard to water supply, the committee pointed out that any plan which would give a large amount of water would be a positive evil by increasing the danger unless it include an elaborate system of drains.

We are informed that the town has purchased an odorless suction apparatus to empty vaults and cess-pools, and that the question of having these built so as to be tight and having them emptied at proper intervals has been considered.

RECENT PROGRESS IN DERMATOLOGY.

BY E. WIGGLESWORTH, M. D.

EPILATION FOR FAVUS.

PARASITIC disease of hairs calls for their removal, and epilation of large surfaces with forceps is a slow process. For many years the calotte was employed. This is an adhesive plaster which is applied to the part, after the hairs have been shaved, and the sudden and violent removal of which eliminates the hairs *en masse*. It is still in use in Italy, where it originated, but has been gradually given up, as too barbarous, elsewhere. Dr. Bulkley recommends² *cerae flavae* 12; *laccæ intabulis* 16; *resinae* 24; *picis Burgundicæ* 40; *gummi danmar* 48; thoroughly mixed and rolled into sticks of various sizes. These may be used, like a calotte, for larger or smaller spots, the hair having been cropped to a length of three millimeters. Heat the stick in an alcoholic flame, press quickly upon the hair with a slightly rotary motion, leave till cold, and remove by bending over and slightly twisting. The end will be thickly set with the removed hairs, like a bristle brush. To prepare the stick to use again, burn off these hairs in the flame, and wipe the end of the stick firmly on a sheet of paper. This destroys the parasite while cleaning the stick for subsequent use. Subsequently employ parasitocides.

TRAUMATISM IN THE ETIOLOGY OF FAVUS.

Aubert calls attention³ to the fact that, the fundamental etiology of favus being the presence of the parasite *achorion Schenleinii*, there still remain secondary causes, a knowledge of which, these causes being accessible, may help us to a prophylaxis not to be obtained from a notion of a primary cause which may escape us. Thus, the parasite must exist somewhere; it must, then, somehow be brought in contact with the subject attacked; this subject must have an integument fitted for the reception and growth of the fungus. Aubert believes that the condition of the skin favors or impedes planting and germination, and

¹ Several cases have occurred since this time, and there has been at least one more death.

² Reprint from Archives of Dermatology, April, 1881.

³ Annales de Dermatologie et de Syphiligraphie, April 25, 1881.

that abrasions or wounds are especially favorable to the reception and propagation of the spores. For instance, inoculations are rarely successful if the spores are merely spread upon the skin; they must be forced into dilated and wounded follicles for the skin to accept them. Sex, age, uncleanness are all, he thinks, less important factors than traumatism. In December, 1880, there were 37 cases of favus in Dr. Aubert's hospital wards. Examination showed, among 13 girls, traumatic origin 3; non-traumatic 5; doubtful 5; 24 boys, traumatic origin 6; non-traumatic 14; doubtful 4. That is to say, 9 traumatic cases out of 37; about 25 per cent. During 1879 and 1880 sixteen marked cases were observed where exposure prior to wounding of the skin for long periods produced no effect, while soon after injuries favus developed, starting from the point of injury. Gailleson reports four such cases, one being of rats kept in a cage and examined carefully. Aubert has seen in his own wards circumscribed patches of favus develop upon eczematous areas, or where croton oil had been employed upon the scalp. So, also, anæmic, scrofulous children with pediculi upon the head are very prone to acquire favus. Favus of the nails is very rare, and for the simple reason that patients, when they scratch, do not employ wounded fingers as their implements, it being equally easy to use the sound ones. These facts have an important bearing upon the prophylaxis of the malady in schools, infant hospitals, orphan asylums, etc.

MORPHEA ASSOCIATED WITH ALOPECIA AREATA.

Jamieson records¹ a case of well-marked morphea, characterized by almost perfect symmetry, distinct localization along nerve tracts, and association with alopecia areata of the head and beard. On each side of the abdomen, from the umbilical and hypogastric regions, over the groins, flanks, and thighs, extended white, smooth, punctated, ivory-like areas, lardaceous and slightly thickened, and darkly pigmented areas sprinkled with lighter spots, with others faintly violaceous, these last preceding the white spots in point of time. Over the sacrum was a large lilac patch surrounded by smaller ones. On each side of the spinal column were many faintly tinted ones, roughly corresponding to the emergence of the posterior branches of the spinal nerves. Some followed the course of the intercostal nerves. A large patch upon each arm stretched from the external condyle of the humerus down the outer aspect of the forearm, and patches at intervals ran longitudinally down the back of the thigh and leg as far as the ham. No subjective sensations. Neither anaesthesia nor hyperaesthesia. Upon the white spots the lanugo was deficient or absent. The patient was treated with arsenic, iron, quinine, and strychnia for a month without any improvement. At the end of that time a patch had appeared upon the right side of the chest, extending downwards from the axilla nearly to the ilium and umbilicus, its centre brown, its border, an inch broad, violaceous. This border possessed an extreme margin, lilac in color and well defined; within this the color was still faintly violet, with a whitish gleam, and showing a speckled or stippled appearance. A few whitish spots were scattered over the darkly pigmented central area. The inner part of the margins was waxy, slightly elevated, and depressed in aspect. Lilac patches existed upon the thigh, ham, and calf. A closely correspond-

ing condition existed upon the left side of the body. Posteriorly a triangular violaceous patch, its base at the vertebra prominens, extended downwards; its apex at the dorsal vertebrae. Over the sacrum a transversely ovoid patch of lilac spots. A spot existed over the deltoid of the right arm, and patches on upper and outer aspects of both forearms. Hair returning upon the head but not in beard. General health good.

LICHEN PLANUS OF PENIS.

Bulkley communicates² a case of lichen of the penis, and appearing also there alone before manifesting itself elsewhere. It adds another to the long list of dermatological lesions, non-venereal in nature, which may appear in this locality. We have ourselves seen psoriasis of the glans penis, the rest of the body remaining for more than a month free from all signs of the malady. The moral appears undignified, but is pardonable from its exceeding utility to the average general practitioner, namely, a gold watch is not a moribund cucumber, though found in a pig-pen. A small spot, purplish red and slightly elevated, was first noticed upon the anterior portion of the glans. Some six weeks later other small, more or less circular, spots appeared near the first, all of the same character, slightly elevated, flat on the top, and tending to run together, forming large plaques, all of the same pinkish-purple color, non-indurated, without subjective sensations, smooth, slightly shining, and without desquamation. The patch increased only slowly in size, but three months after the appearance of the first spot upon the penis the patient again presented himself with a perfectly developed lichen planus upon the forearms, and, although to a less extent, upon the abdomen and chest, all having appeared during the last two or three days. The lesions on the penis were still in much the same condition as at the previous visit. Two and a half months later, under treatment by arsenic, nitric acid, etc., all appearances upon the penis had vanished, leaving a slight pigmentation. The lesions upon the body disappeared some three months later under careful dietary and medicinal treatment, their entire duration being about the same as that of those upon the penis.

AUSPITZ'S SYSTEM OF DISEASES OF THE SKIN.

Since Hebra published, in 1815, his dermatological system of nomenclature and classification, no complete classification, in accordance with subsequently acquired knowledge, has been till now attempted. Dr. H. V. Hebra criticises³ at length Auspitz's volume of 250 pages devoted to an attempt at a more scientific classification than has previously existed. The details are interesting only to specialists. Auspitz's general division is as follows:—

Class I. *Dermatidites Simples*. Simple Inflammations.

Class II. *Angioneurotic Dermatoses*. The results of impairment of tonicity of vessels, with more or less marked inflammatory elevation of the surface of the skin.

Class III. *Neuritic Dermatoses*. Due to affection of nerve elements (sensitive, and perhaps also trophic).

Class IV. *Stasis Dermatoses*. With the character of

² Proceedings American Dermatological Association, 1880.

³ Separat Abdruck aus Nos. 1, 2, 3, und 4 (1881) der Wiener Mediz. Blätter.

¹ Archives of Dermatology, April, 1881.

passive disturbance of circulation and marked venous-lymphatic absorption.

Class V. *Hæmorrhagic Dermatoses*. Such as result from excessive exudation of red blood corpuscles through the walls of vessels, without inflammatory exudation or local stasis.

Class VI. *Idioneuroses of the Skin*. Functional anomalies of cutaneous nerves without trophic disturbances.

Class VII. *Epidermidoses*. Anomalies of growth of the epidermis and its appendages.

Class VIII. *Chorioblastoses*. Anomalies of growth of the derma and subcutaneous connective tissue.

Class IX. *Dermatomyceses*. From vegetable parasites.

The volume evinces the author's acquaintance with, almost literally, everything ever written upon the skin, and a dermatological, pathological, and general medical knowledge of the highest order. It shows vast labor and originality, and stimulates in the highest degree to future progress in the direction of an exact, scientific classification of that family of diseases which, lying directly under the eye of the observer, is easiest to study and promises the best results to the research of future investigators.

SYPHILIS OF MENINGES AND RETINA.

Lang adds ¹ to his observation upon the "meningeal irritation" of early syphilis ² the results of his studies since pursued in the same direction. The condition is one of hyperæmia and rarely advances to actual inflammation. Functional action is not influenced, pulse unaltered, temperature only infrequently raised, and then but slightly; in two cases slight paralysis existed, and here for a brief period only; pain existed over the whole skull, or occupied the region alone of the forehead or occiput; at times, however, a band, painful, and as if due to constriction, crossed the skull horizontally, from one ear to the other, like a bow; occipital neuralgia existed in one case; vertigo, nausea, loss of appetite and spirits were the usual concomitant sensations, and, as the rule, were of short duration, though in a case of Professor Schnabel's the occipital neuralgia was more lasting. Schnabel,³ at Lang's request, examined all the latter cases with the ophthalmoscope and ascertained the presence of inflammation of the retina, or choroid, or both, in many cases, although the patients had not complained of any trouble in their eyes. Something is, therefore, to be awaited in the future from the ophthalmoscope as a means of diagnosis, for the condition of the retina can be ascertained when meningeal irritation is only to be surmised. On the ground of clinical experience Lang has asserted since 1871 the existence in syphilis of an organism, a *contagium animatum*, not as yet recognized. This enters the blood current, passes everywhere, is destroyed in most parts, but not in all, and its living presence is shown by the resulting conditions. Then he asserts that an organ affected by a gumma must have been affected irritatively during the early period of the general disease. Diday and Doyon hold views somewhat similar. Hutchinson regards syphilis as past when the early symptoms have disappeared, the late appearances being sequela merely, as after other acute exanthemata.

LEPROSY.

Campana furnishes ⁴ the results of his anatomical investigations upon a case of tubercular and anæsthetic leprosy with recurrent bullæ upon the face and left hand, scabs upon the left foot, enlarged spleen, icteremia, ulceration of soft palate and larynx, adhesive pericarditis; concentric hypertrophy of the left ventricle, partial peritonitis, partial interstitial hepatitis, perisplenitis, interstitial neuritis, hyperplasia generally of the lymphatic glands, and cutaneous and muscular atrophy of the left forearm. Histologically, some peculiarities were observed which have hitherto escaped notice. Thus the adventitia of the vessels running in the connective, under the serous, tissue of the visceral pericardium, but not entering the myocardium, were notably thickened, while under the visceral pericardiac layers there existed a disseminated granuloma (infiltration of endothelial elements and of cells like leucocytes) in spots or reticulated, with accumulations of connective-tissue cells in the sub-pericardial adipose cellular tissue. There was also granuloma of the nerves, as well as the changed conditions in both vessels and nerves to which other observers have already called attention.

URTICARIA.

Rohé attempts ⁵ a rational solution of the unsettled problem of the pathology of urticaria, which he regards as neuropathic in its nature, basing his theory upon the experimental evidence of Stricker's investigations,⁶ following the opinion of Auspitz. Clinical evidence in favor of the neurotic nature of urticaria exists in many cases, markedly those of Leopold, Bulkley, Walton, and Charcot. The treatment of acute cases is anything or nothing, with an emetic or purge and some antipruritic lotion. Chronic cases, on the contrary, are troublesome. Regulate every bodily function in the least degree abnormal. If attacks show periodicity try full doses of quinine or, this failing, arsenic. Salicylate of sodium 1.50 grammes, *ter die*, has been followed by prompt cure in some persistent cases. Schwimmer reports success with one milligramme doses of atropia sulphate. Pick reports brilliant results with pilocarpine. The fluid extract of jaborandi may give good results. With these may be used externally one gramme benzoic acid in one hundred and twenty-five grammes water as a lotion sopped on to the skin.

ONYCHOPATHOLOGY.

Unna publishes ⁷ some investigations upon the anatomy and physiology of the nails, a much neglected subject. The matrix of the nail extends from the furrow of the integument posteriorly to the anterior border of the lunula. The whole nail is here formed, sharply beveled at its origin, thickening in the furrow, but taking up no new elements when once the lunula is passed. It then merely slides forward over the nail bed pushed on by the pressure from behind. Left to itself it would bend over the end of the finger like a claw, scaling off at its free extremity and thus keeping itself sharp. The nail receives, therefore, no accession of elements from the nail bed [and Dr. H. V. Hebra goes farther than Unna in that he thinks that the biconvex lunula itself furnishes no special nail elements, being devoid of papilla; and that the whole nail takes its origin pos-

¹ Separatabdruck aus Berichte des naturw-med. Vereines in Innsbruck, xi. Jahrg., 1880-81, pages 20-24.

² Wiener Med. Wochenschr. 1880.

³ Ibidem, pages 11-19.

⁴ Archivio per la Scienze Mediche, vol. iv., N. 19, 1881, e Giornale Italiano delle Mal. Vens e d. Pelle. Aprile, 1881.

⁵ Allg. Pathologie, page 216.

⁶ Maryland Medical Journal, May 15, 1881.

⁷ Viertelj. f. Dermatologie und Syphilis, viii. Jg., 1881, 1 Heft.

teriorly from the basis of the furrow where the papillae of the corium do exist]. Each papilla shoots up a column of cells and these columns are, like blades of grass or grain growing in a field swept smoothly down by the wind, bent, by the pressure of the integumental fold above them, downwards and forwards, and constitute the nail by their aggregation. The nail is thus made up of columns, sloping from below and behind, upwards and forwards, and its thickness depends upon the angle of inclination of these columns of cells to the nail bed underlying them. Thick nails, therefore, need cutting less frequently than thin ones, though growing equally fast; for we cut our nails transversely and not in the plane of these cell-columns, thus removing, in the thick nails, vertical, in the thin, horizontal, growth. The cell-columns formed from the anterior portion of the matrix remain in front of the overlapping columns formed behind them, throughout the whole nail, as it grows forward towards the end of the finger, and a morbidly thin nail would therefore arise from increased cell production anteriorly, since here the overlapping columns would be left behind in the race of growth. Conversely, diminished cell growth from the posterior part of the matrix would give the same result. So also a reversal of either of these conditions would give rise to an abnormally thickened nail, and also account for its tendency to become claw like. Localized transverse, or longitudinal, hypertrophies or atrophies, are, in the same way, the results of localized transverse, or longitudinal, origins of increased or diminished cell production. The splitting of nails may also be due to these pathological conditions, or a convex or concave free border of the nail, according as the middle layer of cells is more or less abundant than those above or below, that is, those formed posteriorly or anteriorly. In these cases we can hardly speak of hypertrophy and atrophy of the nail, those terms being properly applicable only to the relative excess, or deficiency, of general cell production over, or below, exfoliation, which last represents, for epidermal growths, what disintegration and absorption do for other tissues. Destruction of the whole matrix means destruction of the nail as, for instance, from ulceration. On the other hand, eczema, psoriasis, etc., affecting the integument and the posterior part of the matrix, affect only the upper layers of the nails. Should the nail be absolutely cut in two, the anterior aspect of the posterior portion becomes thick and blunt. So, to a certain extent, when a nail has been lost and is renewed from the matrix. This condition remedies itself in time, as the rule, but may, by exerting pressure, hold back and heap up the advancing cells behind it and call for thinning by scraping and for constant pressure, as by a finger cot. On the other hand, intermittent pressure may be used to thicken and harden nails following the analogy of calluses, corns, etc. Pressure sideways, as from tight boots, may round up the nail bed, causing thinning of the true nail, which is squeezing forward over it. This calls for pressure from above downwards. Thickening of the integument under the nail, or syphilitic ulceration from before backwards, may raise the nail from its bed, admit air, the nail becoming yellowish white, and cause loss of nail back to the matrix. In the latter case the nail may break off unnoticed by the patient. Abnormal spots upon the nails regularly and continuously advancing in a straight line point to affections of the matrix; those not changing their location to affections of the nail bed. Another secondary degenera-

tion is that from fungi. Here the nail is usually affected from the nail bed below it, and the process works from before backwards, rendering improbable any origin of the process in the matrix.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

H. C. HAVEN, M. D., SECRETARY.

STATED meeting, OCTOBER 29, 1881. DR. R. M. HODGES in the chair. DR. J. C. WARREN reviewed

THE CASE OF PRESIDENT GARFIELD.¹

After some discussion, Mr. R. S. Jennings, present by invitation, explained by diagram the

COOLING APPARATUS

used at the White House.

This diagram represented the apparatus used in the White House during the President's illness. It was introduced the sixth day after the shooting and was located in the basement of the house, about forty feet from the register in the President's room. The air was taken from over the door at the western entrance and passed through the machine and into the flue leading from the basement to the State dining-room on the floor above, and then to the register in the President's room on the floor above that, a distance of about forty feet from the machine. The register in the State dining-room was sealed up and the one in the President's room kept wide open, the temperature of the room being regulated by the speed of the machine, as ordered from the physicians' room by telephone, put up for the purpose. The windows of the room were kept constantly open after the first few hours' trial of the apparatus, the President and Mrs. Garfield both objecting to their being closed. The bed was located about twenty feet from the register, and had a low screen in front of it to protect the patient from any current of air.

The average temperature of the air as it entered the room at the register was 50° F., and at the bed 75° F., and the instruments used for testing the humidity of the air always showed that the air averaged about two degrees dryer in the President's room than in the adjoining rooms.

The construction of the apparatus is as follows: This lower chamber is of cast iron, ten feet long, three feet high, and three feet wide, and is filled with vertical horizontal iron frames covered with Turkish towelings. These frames are arranged vertically and horizontally and represent some three thousand cubic feet of cooling surface. The upper tank is of galvanized iron, and six inches smaller each way than the lower one. This chamber is filled with ice and salt, upon which a fine spray of water is allowed to play, percolating through the ice and salt into a perforated coil of pipe, arranged over the three thousand feet of cooling surface in the lower tank, keeping them constantly wet at a temperature of 33° F. The exhaust fan, shown at the left, draws the air to be cooled in through the pipe at the right hand end of the machine and between the cooling frames (most of the reporters state it that the air was drawn or forced through the fibrous screens). The air in passing between the screens be-

¹ Vide this Journal, page 463

comes literally washed and dried, the pulsations of the pump or fan creating a constant flapping together of the wet surfaces, the air being dried by condensation. This machine required less than a horse power to run it, and, using six hundred pounds of ice and thirty pounds of salt per day, supplied twenty-three thousand cubic feet of air per hour, at about forty degrees at the outlet of the apparatus and fifty degrees at the register, forty feet distant. When the weather was very warm a larger quantity of water was allowed to run upon the screens, thereby using more ice. This apparatus may be run with a small water motor requiring a stream of water no larger than a lead pencil, under the usual city water pressure, and the screens may be kept wet with a spray of hydrant water, and a reduction of ten to fifteen degrees secured, well water giving a still greater reduction, and ice and salt, as described, giving a still lower temperature. An apparatus on this principle, five feet high and fifteen inches square, resembling an ordinary card table in appearance, using fifteen or twenty pounds of ice per day, and run with a spring motor, similar to a clock movement, and working without any noise whatever, would reduce the temperature of a room, sixteen by sixteen feet square, and ten feet high, from 95° to 65° F. The cost of such a machine would probably not exceed twenty-five or thirty dollars, and would be of great value in the sick room, using dry ice and salt.

The principle is adapted to a great variety of mercantile and mechanical pursuits, but as they are, perhaps, foreign to subjects introduced here, I will only say further, that I shall be pleased to answer any questions or give any information in my possession on the subject.

Dr. GARRATT also exhibited a cooling apparatus, and explained its operation as follows:—

Mr. President, — I have the pleasure of calling your attention to a very small apparatus, which shows in great contrast to the large cooling apparatus you have had shown you this evening that was actually in use for cooling the President in his sickness. This was also made expressly for the President at about the same time, and would not have had an existence here had it not been for his sickness. It has been seen by no one but myself except one or two physicians. It was made in the first week in July when the President was suffering so much, and I was about to ship it when the news came that the medical attendants had a very large and efficient apparatus which was making him comfortable. The apparatus was then taken back to my office and put away, and has remained in the dark from that to this, when we saw a notice in the paper that this question was coming before the Medical Society, and I thought it was no more than right that Boston should show that we tried, even with a small apparatus, to help the President, although it was not found efficient like that larger one.

The aim of this was to cool the bed. It was a matter I had been thinking of a great while, and it came up fresh to me on the morning of the 5th of July. On that morning news came from Washington that the President had suffered greatly on the 4th from heat, and between eight and nine o'clock I telegraphed to Dr. Bliss, suggesting to him politely to raise a box with three or four hundred pounds of ice in it over the sick-bed, so as to let cold air out, catching the drip in a pail, and to look for a letter fully explaining what the arrangement was.

Gentlemen here will recollect that years ago I brought this matter to the attention of the Society of elevated ice to cool the air over the sick. It was referred to a section. The apparatus was small, and simply illustrated the principle; it was taken to Dr. Bowditch's house, and placed upon a table, but was so small it was not found practical. It was not a quarter the size of what I had used, and as I had used it in only two or three cases I dropped it. Naturally this thought came to me when the news arrived that the President was suffering so intensely from heat, and when I telegraphed this suggestion the papers brought back word that the Boston method had partly failed. Why? Because they did not elevate the ice. I set men at work preparing this apparatus, and attempted to ship it.

This is the history of the device. It is simply a cylinder containing broken ice. The air is passed down through it. By pulling off the caps at the bottom the cold air will rush through of itself. By putting a pipe on the cold air is forced out, and the pipe could be made to lead to the patient's bed, or to his face, or any part of the body, or it would diffuse itself over the whole bed.

Dr. Garratt then explained the operation of the apparatus by working it, stating that the only noise it makes is a little buzz, which would be comparatively beneficial rather than otherwise.

SEVENTH ANNUAL MEETING OF THE TRI-STATE MEDICAL SOCIETY, ST. LOUIS, MO.

THE seventh annual meeting of the Tri-State Medical Society was opened in the Ladies' Ordinary of the Lindell Hotel, St. Louis, on the morning of October 25th. The Society embraces the States of Illinois, Indiana, and Kentucky, and the cities of St. Louis and Cincinnati, which latter, however, furnished no delegate to this convention. The number of delegates appointed from the various local medical societies of the above-mentioned places numbered about two hundred, but a great many failed to present their credentials, and the attendance was not as large as had been expected. There was no lack of interest or good feeling among those present, however, and no doubt those who did attend have been amply repaid for coming. Three sessions each day were held, — morning, afternoon and evening, — and the following programme was offered.

It was not strictly adhered to, however, as many of the authors were absent and their places were supplied by volunteer contributions.

The papers were as a rule interesting and instructive, but among so many only a few can be noticed.

First Session, Tuesday Morning, October 25th, nine o'clock. (1.) Call to Order. (2.) Statements of Officers and Committees. (3.) President's Address. (4.) Medical Orthodoxy, T. D. Washburn, Hillsborough, Ill. (5.) Pediatric Practice, G. Wheeler Jones, Danville, Ill.

Second Session, Tuesday Afternoon. (1.) Convulsions in Children, J. M. Henry, Rockport, Ill. (2.) Scarlatina, D. S. Booth, Sparta, Ill. (3.) Diphtheria, W. J. Chennoworth, Decatur, Ill. (4.) Practical Observations in Typhoid Fever, H. V. Ferrell, Carrierville, Ill.

Third Session, Tuesday Night. (1.) Impotence, Ruben A. Vance, Cincinnati. (2.) The Mechanical Treatment of Bilateral Paralysis of the Crico-Arytenoidei-Postici and Post-Nasal Catarrh, B. Tauber, Cincinnati. (3.) Certain Intra-Ocular Affections, William Dickinson, St. Louis. (4.) Suppurative Inflammation of the Middle Ear, J. E. Harper, Evansville, Ind.

(5.) Human Temperature, Normal and Abnormal, Charles T. Reber, Shelbyville, Ill.

Fourth Session, Wednesday Morning, October 26th. (1.) Fracture of the Radius; Treatment by Rubber Bandage, Edward Borch, St. Louis. (2.) Use and Abuse of Splints in Fractures about the Elbow, Heber Roberts, Carbondale, Ill. (3.) Excision of the Larger Joints, J. M. Holloway, Louisville, Ky. (4.) Reformation of Bone, J. E. Link, Terre Haute, Ind.

Fifth Session, Wednesday Afternoon. (1.) Report on Battery's Operation, J. N. McCormick, Bowling Green, Ky. (2.) Peritonitis, Archibald Dixon, Henderson, Ky. (3.) Puerperal Eclampsia, C. D. Pearson, Indianapolis, Ind. (4.) Puerperal Septicæmia, S. H. Charlton, Seymour, Ind.

Sixth Session, Wednesday Night. (1.) Observations on the Use of Static Electricity, Edwin Walker, Evansville, Ind. (2.) Superficial Diseases of the Eye, William Cheatbam, Louisville, Ky. (3.) Demonstrations of Visual Anomalies, John Green, St. Louis. (4.) Associated Movements of the Eyes and Indications for Prismatic Glasses, A. E. Prince, Jacksonville, Ill.

Seventh Session, Thursday Morning, October 27th. (1.) Headache, Cause and Cure, B. M. Griffith, Springfield, Ill. (2.) Spinal Irritation, J. S. Jewell, Chicago. (3.) Reflex Contraction of Corpora Cavemosa, J. T. Hodgen, St. Louis. (4.) Hyoscyanin in Nervous Diseases, C. H. Hughes, St. Louis.

Eighth Session, Thursday Afternoon. (1.) Care of the Insane, H. Wardner, Anna, Ill. (2.) Ligatures, C. H. Todd, Owensboro, Ky. (3.) Pylephlebitis, Portal Thrombus, etc., J. Adams Allen, Chicago. (4.) How to give Tone to Weak-ned Hearts, W. M. Fuqua, Hopkinsville, Ky. (5.) Thoughts on the Social Evil, J. Gardner, Bedford, Ind.

Ninth Session, Thursday Night. (1.) Stump Water, E. S. McNaire, Mitchell, Ind. (2.) Intussusception, A. P. Berry, River Vale, Ind. (3.) Reports of Cases, J. W. Thompson, Paducah, Ky. (4.) Vaginal Fi-tula, W. A. Mathews, Louisville. (5.) Penetrating Gun-Shot Fracture of Skull-Case, F. J. Gutz, St. Louis.

The meeting was called to order by the President, Dr. A. M. Owen, of Evansville, Indiana, who, in his opening address, gave a brief outline of the history of the Society as follows: The Tri-State Medical Society had its origin in the Indiana Mitchell District Society, and the resolution for its organization was introduced by the present Secretary, Dr. G. W. Burton. The meeting of organization was held at Vincennes, Ind., on the fourth Tuesday of October, 1875. From small beginnings it has grown to be the most important medical society—outside of the National Association—in the country. In conclusion, he alluded to the Social Evil question and expressed the hope that it might in some way be regulated by law. He hoped that there would be a free discussion of the subject, and some plan devised to subdue or hold in check this mighty evil which is now attaining such vast proportions in our cities. Discussion was, however, postponed, and no action was taken on the subject during the meeting.

Dr. Washburn advocated less subjection to the canons of so-called medical orthodoxy, and a freer and more intimate association with other schools. He himself would not hesitate to meet in consultation a homœopathic eclectic, or anybody else, if only he knew him to be a man of sense. His remarks were not received with unanimous favor, and the sense of the meeting seemed to lean the other way. The Doctor desired legislative action in the Western States forbidding any medical college to receive any one as student who could not pass a good English examination. Dr. Hancock, of the Illinois State Board of Health, agreed with the speaker, in regard to the necessity of raising the standard of medical education, and suppressing many of the smaller schools; but thought legislation on the subject difficult. On the whole, he considered that the law in Illinois worked as well as any, though some States, New York for instance, had laws which looked better on paper.

In the afternoon session Dr. D. S. Booth, of Sparta, Illinois, read a paper on Scarlatina, giving cases from his own practice, the peculiarities of which were insidiousness of invasion and hybridism with other diseases. He said that another doctor had visited patients in a tenement house and pronounced the disease to be measles. The other families, not being afraid of this disease, remained in the house and several of their members died of scarlatina. He concluded by giving the usual modes of invasion of the disease in question.

Dr. W. J. Chennoworth, of Decatur, Ill., followed with a paper on Diphtheria. He considered tracheotomy of little benefit in severe epidemics, and that the medical treatment ought to be governed by the special indication of individual cases.

Dr. Wm. Porter, of St. Louis, agreed with the latter idea, and held that the septicæmia in most dangerous cases arose from the retention of some of the poisonous matter in the alimentary canal. Therefore he believed in the use of slight aperients, sometimes of purgatives, amongst others, of large doses of calomel.

Dr. Buck had used the following formula in a case with very pronounced false membrane. In a two-ounce mixture he put fifteen or sixteen drops carbolic acid, half an ounce of pinus canadensis, and the remainder glycerine; with this the throat was painted, and the same mixture diluted used as a gargle. In addition he used chlorate of potash, quinine, and whiskey.

Dr. Reber thought the gagging and straining did more harm than the application did good, and rather discolored any swabbing.

Dr. H. V. Ferrell thought that he had seen typhoid fever originate *de novo*, noting cases where the disease had broken out in families living under the best hygienic conditions. He claimed that remittent fever is fast disappearing in Southern Illinois, and typhoid taking its place. He considered rest and alimentation an important part of the treatment. In the discussion the opinion of Eastern physicians that there is no real typhoid fever in this Western country, but only typho-malarial, was severely criticised.

Dr. Hughes, of St. Louis, considered the name typho-malarial a very convenient and desirable one. He indorsed the views of treatment advanced in the paper, but had added a hypnotic in the stage of delirium, generally chloral hydrate, so as to secure cerebral rest during some part of the twenty-four hours. He was in the habit of giving a small amount of ammonium bromide during the day to tranquilize the patient.

Dr. Reber suggested as a good preventive of delirium and prostration twenty-grain doses of sulphite of soda four times a day. Dr. Ferrel said that one peculiar feature of the disease in his locality was that it was generally better treated without the use of quinine.

Dr. J. G. Carpenter, of Kentucky, presented a volunteer paper on a case of traumatic tetanus successfully treated.

Drs. Vance, Tauber, and Harper being absent their papers were omitted.

Drs. Dickinson and Reber presented their regular papers, and Drs. Carter, of Evansville, and Byrd, of Quincy, presented volunteer papers, the former on the Autopsy of Garfield's Body, and the latter on Lumbar Colotomy in the New-Born, with a case.

Dr. Carter's paper was based upon the official report of the case and autopsy as published in the *Medical Record*. His conclusions were as follows:—

"The assassin's bullet did not make an opening in the abdominal cavity. The surgeon's probe did.

"The wound did not cause septicæmia. The false passage did.

"The bullet did not wound the arteries and cause the aneurismal sacs. The carbolic acid poisoning did (by softening the tissues).

"The blood pressure did not rupture the sacs. The embalmer's force-pump did."

Many of Dr. Carter's statements were called in question, and the general impression of the meeting was that there had been no injurious probing, and that the treatment in the case should be indorsed, an opinion that had previously been officially expressed by a vote in the St. Louis Medical Society.

Dr. Borek's plan of treating fracture of the radius was to apply a straight splint, just the shape of the arm, or it anything a little narrower, to the palmar aspect of the limb, and after well padding it to apply a rubber bandage in the ordinary way. The objection was raised that this had a tendency to press the two bones together, and thus encroach upon the interosseous space, interfering with the movements of pronation and supination. Dr. Borek met this objection by sufficient padding on the splint to press the bones apart. The objection seems to be well founded. The advantages claimed are ease of application and the maintenance of steady, regular pressure on the parts.

Dr. Prince read a portion of his paper on Extrophy of the Bladder, and then presented it in printed form.

Dr. W. S. Ross read a paper on the Prevention of Vesical Calculus, which was published in the *Medical and Surgical Reporter* for September 10th, and exhibited a simple device for cleaning out the bladder.

As none of the gentlemen who were to present papers at the fifth session were on hand, Dr. Ireland, ex-president, gave an address on Puerperal Fever; this opened up considerable discussion, which finally turned upon peritoneal surgery and antiseptics.

Dr. Bauer considered that the only good in Listerism was its "absolute cleanliness." He used cold water instead of carbolic acid or phenol with equally good results.

Dr. Schenck referred to the immense amount of literature and opinions on the subject, and thought the profession ignorant on the question and in need of instruction. "In fact, peritonitis, metritis, septicæmia, pyæmia, and everything was included under one head." He declared that there was an infinite difference between septicæmia and puerperal fever.

Dr. Burton moved that at the next meeting a day be set apart for the discussion of the whole subject of puerperal fever.

The feature of the sixth session was a Demonstration of Visual Anomalies, by Dr. John Green, of St. Louis.

[This paper will be reported in full at another time.]

Dr. B. M. Griffith, of Springfield, Ill., read a very interesting paper on Headache, that opprobrium of medical science. He made an extensive classification of its causes, and recommended that treatment be directed to the cause rather than the effect merely. Eye-strain, he said, was a more frequent cause than was generally believed, and glasses to correct any inequality in vision should be at once adopted in such cases. In the discussion the use of a constant current from the frontal lobe to the medulla was highly spoken of.

Dr. Hughes, of St. Louis, was down for a paper

entitled Hyoseyæmia in Nervous Diseases, but instead read one on Insanity in Relation to Law, on which there was no discussion.

Dr. Hodgen, of St. Louis, followed with Reflex Contractions of the Corpora Cavernosa. This was a report of nine cases, two of which had been previously reported before the Missouri Medical Association. The peculiar feature in these cases was a circumscribed, depressed hardening of either one or both corpora. There was some tenderness to lateral pressure, not to direct. This apparent induration caused the penis, on erection, to curve to one side or the other or upward according as one or both corpora were affected. From the various dissimilar causes of the affection he concluded that it was due to nervous influence, and decided that the hardening was due to a reflex contraction of the muscular fibres found in the fibrous trabeculae of the corpora cavernosa, which reflex action may be set up by various peripheral stimulants, as cold, fissure of the anus, etc.

Dr. Ford thought Van Buren had described a similar condition, but had failed to give the correct explanation of it.

Dr. Bernays mentioned a case of the same kind where the peripheral exciting cause was a varicocele, for on its removal the trouble disappeared.

In the eighth session, in discussing the paper on Care of the Insane, it was conceded that the cottage plan in connection with a main building as headquarters was by all odds the best, and the action of authorities in pursuing the course of filling up buildings of five or six stories, with the idea of economy, was condemned.

Dr. F. J. Gutz presented his paper, which was accepted without being read.

The next meeting will be held at Terre Haute, Ind., some time in September, 1882, day not fixed.

The president for the ensuing year is Dr. J. M. Holloway, of Louisville.

BOSTON SOCIETY FOR MEDICAL SCIENCES.

DR. JAMES J. PUTNAM, SECRETARY.

MARCH 15, 1881. DR. PUTNAM showed two MODIFICATIONS OF THE POND SPHYGMOGRAPH, which will be described elsewhere in detail.

DR. WADSWORTH gave an account of the views held by different observers as to the

CIRCULATION IN THE MACULA LUTEA RETINÆ, and described the evidence afforded by some sections of his own which ran through the fovea centralis. On these sections capillaries could be seen nearer the centre than the point where the dip of the fovea began.

In reply to Dr. C. H. Williams Dr. Wadsworth said he thought the eutoptic test might give a better way of determining the size of the space free from vessels, provided one were certain of the value of the optical constants of the observing eye. It would not, however, necessarily give the relation of this free space to the fovea.

DR. BOWDITCH made a communication on the ARRANGEMENT OF THE PAPILLÆ ON THE ENDS OF THE FINGERS AND TOES,

as shown by impressions on smoked paper. Referring to a recent statement in *Nature*, that such marks are

occasionally found in ancient pottery, and might perhaps be of ethnological interest, Dr. Bowditch spoke of their value for identification during the lifetime of the individual, and illustrated this point by showing impressions from his own forefinger while a medical student in 1865, and again recently in 1881, the two being exactly alike.

He had also tried with about a dozen cases to see how the two sides of the body correspond with each other with regard to the exact arrangement of the papillae on symmetrical parts.

Such a symmetry was found to exist in very many, but by no means in all, cases. It was noticed that instead of being "symmetrical" the markings were sometimes "alike," and in his cases the fingers in which this happened were always the index fingers.

The best method of getting the impressions was either to put printer's ink on the finger or to use smoked paper.

In reply to Dr. Williams Dr. Bowditch said that not only are the fingers of different persons unlike each other but no two fingers of the same person are alike. There are several types of arrangement of the papillae, of which the chief are that of loops and that of whorls.

Dr. CHAS. H. WILLIAMS reported a series of

MEASUREMENTS OF THE BONY PORTION OF THE LACHRYMAL CANAL.

suggested by the statement of Dr. Theobald, of Baltimore,¹ that he was in the habit of using probes up to four mm. in diameter to dilate the lachrymal duct.

Dr. Williams had measured two hundred skulls at the Peabody Museum in Cambridge by using small plugs of wood turned down to the standard French bougie sizes. He had found the average size of the dry, bony canal to be 4.75 mm., that is, very little larger than Theobald's larger probes, but in many instances the canal was much smaller than four mm., showing that often the probes recommended could not be used without crushing the delicate bones forming the lachrymal canal.

Most of the measurements (one hundred and twenty) were made on the skulls of Mound Builders, but these did not differ materially from more recent skulls in this particular.

In two old skulls the passage on one side was occluded, presumably from disease.

Dr. WADSWORTH stated that Dr. Theobald had also made such measurements, and justified his treatment by them.²

APRIL 19, 1881. Mr. MINOT showed a number of

MICROSCOPIC PREPARATIONS

illustrating the Development of the Chick, and described his method of making some of them. It was to float off the object on to the glass slide, at the very outset, retaining it there during the subsequent manipulation by allowing the edges to dry and adhere to the glass.

Dr. JEFFRIES showed a method of detecting false statements in persons assuming not to be color blind.

Dr. PUTNAM related two cases of

FRACTURE OF THE SKULL

that he had seen recently, both of them with rupture of the tympanum and facial paralysis.

Dr. GREEN asked as to the position of the rupture, and the exact nature of the loss of hearing, and spoke of the importance of a careful examination of these points as determining the exact path of the fracture. Dr. Buck's observations were referred to.

MAY 16, 1881. Dr. FITZ reported a case of

ACUTE MILIARY BULBITIS,

occurring at the Massachusetts General Hospital, in the service of Dr. Ellis, of which he had made the autopsy. Sections of the medulla presenting the lesions found were shown under the microscope. The case will be published in the Boston Medical and Surgical Journal at length. The symptoms which preceded the immediately fatal attack of dyspnoea had been but slight, consisting almost exclusively of difficult articulation and thickness of speech, with inability to read fine print, for a week or two. Loss of power in the arms and hands, with numbness and stiffness of the fingers then ensued, and a feeling of general weakness was complained of.

Dr. BOWDITCH made a communication (illustrated), descriptive of some experiments made by Mr. G. Stanley Hall and himself upon the

ILLUSIONS OF MOTION

excited by the movement of cards bearing lines and figures of different shape and position, etc. Dr. Bowditch referred to the observations of Addams, on the apparent movement of rocks behind a waterfall, and rejects as unsatisfactory his explanation that the phenomenon was due to movement of the eyes following the streams of water for a moment and then returning to their starting point. This explanation might suffice for the particular case, but not for others, as, for example, where the apparent movement is spiral. The suggestion also that these illusions are due to an expansion and contraction of the retina appear untenable, and the only conclusion seems to be that they rest on a mental judgment rather than on an actual sensation; that is, that they consist rather in an idea of motion than in a physical sensation of motion.

This is especially well illustrated by one experiment in which, after this feeling of motion has been excited by gazing at a rotating spiral figure, the field of vision is transferred to another surface, such as a blank sheet. It will then be seen that although the whole surface of the sheet seems to expand, the relative position of any two fixed points upon it remains unchanged, showing that the idea of motion which had been excited does not depend for its existence upon an apparent movement of any particular objects in the field of vision.³

Dr. JEFFRIES referred to the report of the committee of the Ophthalmological Society of Great Britain on Color Blindness. They had tested over sixteen thousand persons with results similar to his own. The greater frequency of color-blindness among the Society of Friends, found by this committee, Dr. Jeffries thought might be explained by intermarriage of color-blind families, whilst the sombre garb of the Quakers would not be displeasing to the color-blind eye, and we cannot imagine its constant presence before the eyes as impairing their color-sense in any way.

³ Vide Foster's Journal of Physiology. 1881.

¹ Transactions American Ophthalmological Society, 1879.
² On the Use of Large Probes in the Treatment of Structure of the Nasal Duct. Transactions Medical and Surgical Faculty of Maryland, 1877. Further Testimony in Favor of the Use of Large Probes in the Treatment of Structure of the Nasal Duct. Archives of Ophthalmology and Otolaryngology, Knapp, vol. vi, p. 477.

EXTRACTS FROM A HISTORICAL SKETCH OF
THE OBSTETRICAL SOCIETY OF BOSTON.

BY B. E. COTTING, M. D. (HARV.),

*Member of the Society, etc., etc.**"Historia quoquo modo scripta deletat."*
PLIN. 2dus. V. 8.

THE idea of establishing an Obstetrical Society in Boston originated with Dr. William Read, while he was engaged in writing his monograph on *Placenta Prævia*, an exhaustive treatise, which was published in 1861 by the Massachusetts Medical Society as Vol. XXIII. of its Library of Practical Medicine.

Dr. Read enlisted in the cause his near neighbor, Dr. Charles E. Buckingham, and these two communicated the project to Dr. Charles G. Putnam, who at once readily joined them. At Dr. Putnam's house, in Temple Place, the subject was discussed, and a plan proposed. A circular, without signatures, was sent to such of the profession as were thought to be interested in obstetrical studies, inviting them to meet at the Medical Rooms, 36 Temple Place, to consider and to act upon the matter. A number, thus invited, took no notice of the invitation. If a circular was sent to the writer it failed to reach him. Probably there were others, expected at the meeting, who in like manner never received the notification.

At the meeting, December 7, 1860, there were present, at 36 Temple Place, Drs. Walter Channing, John Homans, Sen., D. Humphreys Storer, Charles G. Putnam, Anson Hooker, Charles E. Buckingham, William Read, John P. Reynolds, Charles D. Homans, Calvin G. Page, Lucius M. Sargent, Alexander D. Sinclair, B. Joy Jeffries, and the writer drawn in as before described.

Drs. George H. Lyman and Zabdiel B. Adams appeared at the second meeting.

Two meetings were occupied in preliminaries, and in adopting a plan of organization, with Constitution and By-Laws. Dr. Charles D. Homans was secretary of these meetings. . . .

In summing up the work accomplished in the first ten years of its existence, we find from its records that almost every *special* topic considered in other States or countries was brought up, for a word at least, before this Society. It is true that we did not have elaborated discussions, with set speeches prepared beforehand, or learned dissertations exhausting subjects under notice, as some foreign societies were favored with. But almost always there was some member present who was able to give the real gist of the matter, or the actual state of existing knowledge, in the questions at issue, — information often quite as satisfactory to the practitioner as that deducible from pretentious discussions like those alluded to.

Nor were the social additions to the meetings without marked beneficial results. They revived and strengthened the Society, and saved it from disorganization. They caused meetings to be fully attended when without them, as had been proved, few if any members would have appeared. Not that any member ever went to a meeting solely for the sake of the entertainment; though there is hardly one who can say that he has not been induced at times to be present because of the invitation, or that he has not made special exertion, more than once, to be in attend-

ance because the meeting was to be held at the house of a particular friend. Of a truth, science, pure and simple, is wonderfully stimulated by the introduction of the social element, as has been notably demonstrated in higher academies, as well as in our unobtrusive special Academy.

As a final and impartial conclusion to this chapter of our history, it may be averred that if, in its first decade, the Obstetrical Society of Boston was not a complete success, professionally and socially, it cannot be called a failure. The opinion of its founders that there was need of it was amply justified. Their hopes were largely fulfilled. Their efforts in its behalf were not unrewarded.

THE SECOND DECADE.

"Vel eadem, vel etiam alias, veras modo."

QUINT. x. 5.

It was not until the introduction of the social element that the survival of the Society seemed probable. But on this addition to its attractions a greater interest was awakened, and it began to prosper. Thenceforward the Society strengthened year by year, and by the end of the first decade had become firmly established. Its meetings were held regularly on the second Saturday evening of each month, except in summer. From the year 1867 to the present time there have been nine meetings every year, with one omission only, that of February, 1875, out of respect to Dr. Putnam, its best friend, then recently deceased. All these meetings were held at the houses of members, who each, as may be truly said, felt a personal disappointment whenever illness or imperative professional duty prevented attendance. The happy combination of the useful with the agreeable, of science with sociality, has done this, and is destined to do much more in the same direction as, in the course of nature, new and better life gradually supplants that passing away. This is the present promise, — one of certain fulfillment, unless discontent with attained good demoralize, or laxness in restrictions be permitted to undermine the Society.

Originally the Society was to consist of twenty-five members only. In 1871 the number was increased to thirty. The election of a candidate likely to prove displeasing to any member was carefully provided against by formalities in nomination, and in the election itself. Two negative ballots, cast unseen in a covered box, were sufficient for rejection. The strictness of these formalities has been remitted somewhat, and the number of negative ballots has been increased to four. But whether these alterations will prove eventually to be beneficial remains to be seen, and is still problematical.

In general those societies thrive best whose portals of admission are most strictly guarded. Societies open to everybody, or of easy entrance, are not held in high esteem even by those who enter; nor is membership in such considered of much honor by the outside world. That numbers may inspire to greater exertions and loftier efforts, that meetings in halls devoted to science only may conduce to worthier labors, restless individuals would fain have their associates believe, not content with quiet progress which perhaps they do little or nothing themselves to stimulate or to promote. Such reformers seem to forget that the amount of "energizing force"² they thus detrimentally waste, if

¹ Written and privately printed for distribution among members of the Society only, at the request of its President.

² Not long ago *force* was the scientific word; recently *energy* obtained; now we have "energizing force." What next?

rightly directed, would obviate the indifference or remove the inertia of which they complain.

That our Society should wholly escape such murmurings was not to be expected; that it has suffered so little therefrom is a matter of real congratulation. There has been from the beginning a repressed inclination in some members to advocate the admission of a greater number than the by-laws allowed. But the social addition, now become essential, putting a limit, though as yet not a rigid one; the necessarily small number who can ever make a specialty of this department; and, more than all, the risk of admitting discordant elements should numbers prevail over proper selection; — these are some of the reasons which have hitherto restrained the conservatives of the Society from permitting changes in its original plan; changes offering uncertain advantages only, while inevitably accompanied with great dangers to the harmony if not the existence of the Society. In fact, however, the rejection of candidates has seldom occurred; and notably there has been a corresponding desire not to press the election of personal friends or acquaintances, if there was found even a chance of disturbing a single member. In this way our Society has avoided dangers and escaped mistakes which have ruined the fair prospects of many a worthy enterprise.

Attendance at meetings has been usually prompt, and reputable in numbers. Members in active obstetric practice cannot ever command a given hour. Temporary absence, illness, and the various haps of life often defeat the best intentions. If there has not been always a large proportion present, the exceptions have been such only as are said to prove a rule.

As a matter of statistics, eight members have died: Channing, Putnam, Hooker, Buckingham, Coale, Page-Palmer, and Sargent; sixteen have resigned member, ship: J. Homans, Sen., Storer, Read, Dupee, Adams, Jeffries, Crane, Damon, Ayer, Shaw, Borland, Lincoln, Treadwell, Oliver, Parks, and Tuck. The present number is twenty-nine. Of the dead, the President has directed suitable notices to be prepared by another and able member. Of the living, long may it be before any pen shall be required to date a completed record.

The Society was formed, and has existed in a period when there seems to have been an increased activity on all sides in subjects connected with its special department. That it kept pace with whatever originated or was held worthy of consideration elsewhere has been already indicated. That of itself it has done something in original work, or newly-tried observations, — enough at least not to be discreditable where the field is so small and the laborers so few, — is susceptible of satisfactory confirmation.

Among matters most frequently discussed that of puerperal fever appears prominent in the Records. Accounts of cases, occurring in numerous instances, singly, in groups, or in series, have been detailed and critically analyzed with convincing evidence that there is such a disease *per se*, distinct from and not induced by simple peritonitis, erysipelas, or other disorders; that while it is usually sporadic, it is occasionally epidemic; that, though sometimes seeming to follow an individual practitioner, conveyance by him is more in appearance than reality; in which respect this disease differs not from other diseases where, when so following an individual, there cannot be the least suspicion of contagion through him.¹

Puerperal convulsions also have occupied much of the Society's attention. That there are various conditions and grades classed under this one term, from the slightest tremor or hysterical agitation to the severest form of apoplexy, is clearly deducible from the Society's Records on this subject. That the presence of albumen, casts, etc., in the urine, and of œdema, general or partial, does not necessarily indicate uræmic poisoning or diseased kidneys — to be followed inevitably by convulsions and a fatal result — is no less certain from the reported experience and observations of members.

Forceps; their history and improvements, their utility, when preferable or not to turning, their judicious but not too frequent use, their application to the pelvic form of the mother rather than to a theoretic place of selection on the child's head — these points have all been frequently under discussion, restraining hasty and confirming deliberate action.

Abortion, justifiable in extreme cases, its proper treatment in prevention or after delivery; these and kindred matters, such as dilatation of the cervix for relief of obstinate vomiting in pregnancy, and the use of chloral in the first stages of labor, have not been neglected.

The number of morbid specimens presented, and of monstrosities of especial interest, has been unexpectedly large, and important points have been illustrated on their dissection.

Milk-leg, so called, local œdema, phlebitis, emboli, pelvic hæmatocele and abscess, erysipelas at or after confinements not communicating itself nor inducing puerperal fever in other parturients, though in adjoining beds, local vulvar erysipelas without internal disturbance, these and other post-partum complications or abnormal appearances have been frequently the subjects of oral or written communications.

Cases of malignant uterine disease, uncomplicated or occurring in the course of pregnancy, have been reported from time to time, giving rise to interesting discussions; so, also, of subinvolution and other embarrassing abnormalities. Dr. Putnam's successful restoration of the organ in cases of long-standing inversion of the uterus, showed wonderful self-reliance in the operator in the adoption of the measures decided upon, and extraordinary dexterity, skill, and long-sustained endurance in carrying them out; and were, moreover, examples of applied science memorable in themselves and notable in the transactions of the Society.

Of the original, as well as most able, communications to the Society were the papers read in February and May, 1878,² by its present president, on The Tonic Spasm of the Internal Os, an intra-uterine annular constriction, tetanic in its firmness and persistence, producing one of the worst forms of dystocia. These papers give an account of his first encounter with this formidable affection, and his original investigations to solve its mysteries, together with his subsequent studies thereon, and the aid he obtained in arriving at a just comprehension of the true clinical condition involved. To these papers the American profes-

18, 1875, pages 323, etc. One member reported five consecutive cases of mammary abscess in his own practice, when there were not any others in the practice of physicians around him. Another practitioner had eight consecutive cases of scarlet fever, in as many different houses, while there were not any other cases in his city. Of course he did not "carry" the disease in these cases, as he was not called to the patients until after it had declared itself.

² Published in the Boston Medical and Surgical Journal, March 21 and May 30, 1878.

¹ See, for example, Boston Medical and Surgical Journal, March

sion¹ are chiefly indebted for their first and full knowledge of what came to the author "with startling impression" as a new and unheard-of experience, and as, in his own words, "an alarming and troublesome novelty."

Sinclair's Method of Introducing Premature Labor, by manual dilatation of the os uteri, is another instance of original work promoted and brought out by this Society. Although he had reported to another society,² several years before, a case in which this method was resorted to, the procedure appears to have failed to make any impression, as the whole discussion which followed digressed entirely to other points in the case; and it did not obtain general recognition until after Dr. Sinclair brought forward his further experience to this Society in October, 1874.³ This new method affords ready, safe, and practical means to control much of the danger and difficulty in cases of convulsions, placenta previa, and accidental hemorrhage.

Uterine measurements post-partum, originating with Dr. W. L. Richardson,⁴ and systematically followed up by him and Dr. Sinclair in their services at the Boston Lying-In Hospital, have afforded interesting original communications to this Society. Among his many other valuable papers, here and elsewhere, Dr. Richardson was the first to call attention of the Society to sub-acute cystitis following pregnancy,⁵ and that produced by tedious or instrumental labor. He also gave us new and practical views on parenchymatous nephritis.

From the foregoing short synopses may be inferred the nature and range of the work accomplished or undertaken by the Society. These synopses do not present the whole, nor even any considerable portion of what has received its attention.⁶ They show, however, personal independence in the observation and study of cases, fearless utterance of opinions formed through practical investigations; and a readiness to submit to the test of discussion and criticism, creditable alike to individual members and the Society. These synopses show also that originality has not been wanting. Still it is not given to every one to make discoveries which shall be accepted everywhere as new and useful. Many things quite valuable in themselves never get into the books or professional traditions, but, if kept alive, must be re-discovered, over and over again, and brought to light with as much real originality in each new as in each preceding instance. Some of the cases cited may be claimed by others at work, at the same or previous times, in the same line of investigations; or something not wholly unlike them may be unearthed by burrowing resurrectionists delving in the dust of long buried records. But such a possibility should not detract in any case from the credit of meritorious activity and public spirit, or honor of originality, of any one, who without mercenary motive unselfishly hastens to communicate his pre-sunable discovery to his associates.

It may be that an eminent foreign professor had already recognized, clinically or in pathological specimens, the peculiar contraction reported to our Society

as a newly demonstrated fact, but that should not render our President, who knew nothing of any such foreign work, any the less an original observer.

It may be that one or another medical man had practiced manual dilatation, in some pressing emergency, but that should not detract from the priority established by a first systematic exposition and publication. The Records of the profession do not appear to show anything of the kind before Dr. Sinclair made known his method.

It may be that post-partum measurements may seem to some an affair of no great moment, but this, if true, which it is not, would not diminish the scientific character of the proceeding, nor abate its merits as an original investigation.

Hence it may be claimed, and not unjustly, that, although it has not had the "inexhaustible stores of obstetric experience"⁷ to draw from, nor "the prodigious advantages afforded by an enormous population,"⁷ which the Obstetrical Society of London may exult in, our small Society, in its narrow opportunities and with its limited number of workers, has not been unmindful of its obligations to science. In this regard it has not hid its one talent in the earth.

But after all our Society was not founded solely, nor even in a secondary degree, with a view to original discoveries. Its founders had in mind mutual improvement in a particular department of medicine,—the better understanding and the better performance of the every-day routine-work of the individual practitioner,—and all that renders that work safe, quick, and successful to both the patient and the attendant. Common cases, common experiences, common practice, frankly related and freely discussed for the benefit and further re-assurance of all; these were held of first importance. The extraordinary and the terrific would of themselves force recognition. Original investigations would follow as a matter of course. Discoveries would from time to time reward the painstaking searcher into the secrets of nature. These, and such as these, were the objects, hopes, and expectations of the original founders of the Society.

This, then, is the simple and unvarnished story of our Society, as it appears to one observant of its origin, its methods, and its progress since its foundation. It has survived the dangers of infancy, and the complaints of childhood. Its commencing adult age is one of confidence and promise. Unnoised advancement, *viresque acquirit eundo*, is its present encouraging characteristic. Admission into its circle is now sought for; and is becoming, more and more, an object of ambition with those interested in obstetrical studies. It offers advantages of inestimable value to members more especially engaged in practice in this department of medicine.⁸

—According to the *British Medical Journal*, recent numbers of the Russian medical journal, *Tratchebniya Vedomosti*, contain translations of Professor Lister's address on the Cat-gut Ligature, delivered before the Clinical Society; of Dr. J. S. Billings's address on Modern Medical Literature, delivered before the International Medical Congress; and of M. Pasteur's address on Vaccination in Relation to Chicken-Cholera and Splenic Fever.

⁷ Transactions of the Obstetrical Society of London, vol. i., pp. 3, 8.

⁸ To be followed by extracts from biographical sketches of deceased members, by Dr. W. W. Wellington.

¹ See second edition of Playfair's Midwifery, page 350. See Pacific Medical and Surgical Journal, January, 1879, page 345.

² See Records of the Boston Society for Medical Improvement, vol. vi., pp. 129, 130.

³ Boston Medical and Surgical Journal, February 4, 1875.

⁴ See Transactions American Gynecological Society, vol. iv., p. 231.

⁵ Boston Medical and Surgical Journal, February 3, 1876, page 113.

⁶ The present recording secretary, Dr. C. W. Swan, reports that twenty-seven separate papers, seventeen as leading articles, and seventy-two reports of meetings, have been published in the Boston Medical and Surgical Journal.

Medical and Surgical Journal.

THURSDAY, NOVEMBER 17, 1881.

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INSANE ASYLUM MANAGEMENT AND CONSTRUCTION.

SIXTH BIENNIAL REPORT OF THE BOARD OF STATE COMMISSIONERS OF PUBLIC CHARITIES OF ILLINOIS.¹

THE Report referred to in our heading contains many good things concerning the charities of Illinois. In this review, however, we shall bring forward only those portions regarding the subject of insanity, as they possess great interest at this time. The writer, though it is to be assumed that he is not a medical man, sees far below the surface, and grapples with problems which have hitherto been a snare and pitfall, in a highly original and common-sense manner.

Concerning the subject of pathological work in insane hospitals, the Report says, "We hardly know how to treat the request for one thousand dollars for apparatus for a pathological laboratory without seeming, on the one hand, to discourage investigations of whose scientific value we are fully aware, or, on the other hand, without leading the State to expend money to no purpose and cherish expectations which ultimately may be disappointed." The writer proceeds to say that the duties of the officers of an insane hospital are so arduous that they do not have the time for pathological work. The work could only be properly done by special pathologists, and if one hospital has one, others, to be on an equal footing, should have them also. "There is no department of medicine which requires such special faculties, such special knowledge, and such special training as this. Whether a young man of average ability can ever overtake the masters of this branch of medical research is doubtful. . . . But if we understand the subject at all, the special purpose of this microscopical research is to determine the truth or falsity of the modern theory of the localization of central function. Publications, therefore, which do not address themselves directly and pointedly to the solution of this question and carry the investigation to a point beyond any to which it has already been pushed, are of comparatively little value. Instead of confining their delicate research to a novice in his profession, part of whose time is taken up with the visitation of the insane wards of a hospital and the other subordinate duties, incident to his subordinate position, we should very much prefer that, should the State deem it advisable to undertake the pathological investigation, of the propriety of which we have not the slightest doubt,

it should employ a man of commanding ability . . . who should give his whole time to this exclusive work."

It would be better, undoubtedly, in the interest of pure science to have a special pathologist in each hospital, but we very much doubt if the men of "commanding ability" can be got to do the work. We can hardly hope to gain the great results spoken of in any of our American insane hospitals at present. We cannot even expect to verify the discoveries already made by European investigators. The whole standard of American medical education must be considerably raised before the staffs of insane hospitals will have the knowledge to do very simple pathological work. Every year, however, sees progress, every year better educated men enter insane hospitals. In a small State like Massachusetts we think now that a State pathologist might be appointed. He would be an organizer of work in his department, — the founder and teacher of a system. By and by, when the hospital staffs were large enough and when they were educated up to the work, they might be safely left to stand on their own feet.

We do not agree with the writer that pathological work would be comparatively useless unless it added to the existing stock of information on the subject. Such work is not usually undertaken to determine the truth or falsity of cerebral localization, but rather to aid the physician in his study of the case in hand. Each hospital physician should, in a perfect state of things, be able to use the microscope to clear up symptoms, define accurately probable changes during life, and thus gradually learn how to better manage similar cases. In this way he adds to his own knowledge, and in every way helps himself in his practical understanding of disease. He must use the microscope more than others, because the organ which he studies betrays its disease in many cases only by its use. He cannot, does not expect, in fact, to make discoveries for the world. When, however, the use of the microscope is general, occasionally a genius will be found who will, from his own transcendent abilities, make investigations which will carry science further on than it was before.

The description of the new Eastern Insane Hospital at Kankakee, now under the superintendence of Dr. Richard Dewey, is extremely interesting, not only from the originality of arrangement of the buildings, but also as it is highly probable that Massachusetts may soon be called upon to take steps toward the erection of a hospital within her borders.

The plan of the hospital embraces as its central feature a building constructed very much after the plan of the ordinary insane hospital. There will be the same "centre building," on a much smaller scale, however, than is usual, for a few officers. To this will be attached wings, one for either sex, each accommodating one hundred and fifty patients. The rear buildings also conform to existing models.

At this point begins the new departure. The wings cannot be extended further as the roadways will prevent. "Two broad avenues, parallel with a line, at right angles to the line of the wings, present

¹ Presented to the Governor November, 1880.

the appearance of village streets, bordered with sidewalks, and shaded by elms and maples. On each side of these two streets the land is laid off in lots for building purposes, and the original plan contemplates the separation of each lot by a simple fence, with a gate in front communicating with the street. . . . Each lot is to be occupied, as occasion may require, by a detached ward for insane patients, or by any other building, for instance, by a private residence for an assistant physician,"—assistant physicians will at once apply in a body for positions at Kankakee,— "or by a work-shop or general bath-house." The buildings, thus far, are of wood, but may be of other material. The appearance of these detached wards is like an English asylum, except the wards of the latter are connected by corridors. "A marked difference between these wards and those of any other institution on either side of the Atlantic consists in their being built each after a different pattern, both as to exterior aspect and the internal arrangement. No two are alike. To a certain extent they resemble the French asylum wards in this, that they are all two stories in height, and are so planned as to provide in some form day rooms upon the lower floor and dormitories above. But the proportion of single dormitories is smaller than that usually found in American hospitals for the insane. These buildings are designed to be the homes of a class of chronic insane who either have no homes of their own, or who, for special reasons, cannot live at home. The patients residing in them will sleep, for the most part, in large associated dormitories under the eye of their attendants, and herein lies the great secret of cheap construction." Each of these buildings will contain twenty-five to thirty inmates, and be a detached ward rather than a "cottage."

In the organization of this hospital an effort is made to solve the question of how the management can be made most effective. Generally persons living outside of insane hospitals say that superintendents do not give enough attention to their medical duties and too much to business details, and are of opinion that the latter should be left entirely to a business head. At Kankakee they recognize the difficulties, but deal with them in an original manner. The Report says that the plan "contemplates a more complete separation between the medical and business control of the establishment. Not that it is designed to have two heads and a divided responsibility, nor is the officer in charge to be a non-medical man, but, in reality, whatever may be the amount of individual attention paid to certain patients by a medical superintendent, and however familiar he may be, not only with the general physical and mental condition of his patients, but with the capacity of his medical assistants and their treatment of individual cases, we think that it remains true that his time is and must be principally taken up with details and administration. . . . It is important for all parties that the superintendent should be known as the business manager; and that his first assistant should be known to be in fact the principal medical officer, notwithstanding his responsibility for his medical practice to his chief. By taking the business offices out of the hospital proper, by giving to the superintendent a

private residence outside of the centre building, by placing the first assistant in the centre building, in proximity to the patients and freeing him from all connection with the business management, so that he can give his individual care to the patients, and, above all, by paying him an adequate salary, enabling the institution to command the very best medical talent, and notifying the public of the estimation in which he is held, this important end can be attained." This plan of organization and the plain, bold way in which it is advocated deserves careful consideration, for it offers a way out of a perplexing situation. We ourselves are most anxious to see the highest standard of scientific attainment arrived at in the management of insane hospitals, and would much prefer, theoretically, that medical superintendents should devote all their time to medical duties, but when, practically, we see an insane hospital managed by a non-medical man, we see at once a falling off in the high character of care and treatment furnished the patients. As a matter of experience we should say that only medically-educated men could be expected to fully understand at their full worth the very varied and peculiar necessities of the insane.

On the subject of restraint the following very sensible remarks are made among others: "Nor is it necessary to advocate any extreme and foolish doctrine on the subject of restraint, such as its entire abolition, or even the abolition of mechanical restraints by making a *bond-fire* of crib-beds, camisoles, and leather muffs. All we claim is that any man, sane or insane, should not be deprived of any part of his liberty any further than is required for his own good, or the safety and comfort of others; and that the monotonous uniformity, both of architectural plan and of internal discipline, which characterizes many, if not all, insane asylums in the United States, does tend to deprivation of their liberty by compelling the application of prohibitions to the vast majority of patients which with many are useless and with some positively injurious. . . . We do not pretend to say what proportion of patients are suited for a freer life in detached wards; nor what is the best form for such wards. . . . If it is said a superintendent cannot know whom to trust, we reply that it is his business to know, and that he can only ascertain this by trial."

As bearing on the subject of provision for insane criminals, it is interesting to know that an asylum for *insane convicts* is about being built in connection with the State Prison at Chester. Of insane convicts there are, in the insane hospitals and prisons of Illinois, at present, seventy-eight. The Report before us recommends that the *unconvicted* insane criminals should be sent to this asylum, as well as the insane prison convicts. No one longer doubts that insane criminals should be removed from our insane hospitals, and as the numbers of the convicted and unconvicted are, as yet, not large enough to warrant separate hospitals, it would seem most expedient to place them together.

We see several objections to the building of a criminal asylum on the grounds of a prison. These are the following: (1.) The entire change of life and surrounding, so important in the treatment of insanity,

would not be attainable for the convicts from the prison. (2.) Intercourse with the prison officials and among the sane and insane convicts would be almost unavoidable, thus keeping up the pernicious prison influence. (3.) The discipline of the asylum would be more rigid than necessary at a greater distance from the prison, and probably would be modeled after the prison. Very probably, too, this would be promoted by keepers transformed into attendants. (4.) A sufficient area of farming land, we should suppose, could not be furnished within the prison walls. A good-sized farm would be required for one hundred insane criminals. (5.) The food, which would probably be largely cooked within the prison and furnished from its stores, would not be the proper fare for a large proportion of the criminal insane, who are often anæmic and dyspeptic, and require more nourishing food than the ordinary hardy convict. (6.) Such an insane department of the prison would have more or less of the disgrace attached to it belonging to the prison, and it would, therefore, be difficult to get the consent of the friends of the unconvicted insane to place them in it.

Such an insane department may be better than nothing, but, in our opinion, the wisdom of creating it would depend on the number of criminals needing this separate treatment. Twenty insane men from the prison would perhaps do well in the corner of a large yard, walled off by themselves with five or six acres of land to till, but if a building for one hundred is to be built, we hold that a building remote from the prison, with fifty to one hundred acres, under proper medical supervision, will in the end be as cheap, and will do far more to relieve the insane hospitals, the prisons, and the public of the troublesome class of insane criminals than any kind of building within the prison walls, to say nothing of the greater chance of recovery under these more favorable circumstances.

A GOOD CAUSE AND AN IMPULSIVE FRIEND. THE INDEX MEDICUS.

WE were sorry to read an editorial in the last number of the *Philadelphia Medical Times* on the duty of supporting the *Index Medicus*, which seemed to us to be conceived in poor judgment and composed with poor taste. As an example of what we mean, and by request of the editor, we quote the following passage, not being able to copy the whole:—

"As Philadelphians we are proud that three of our local societies—the Philadelphia County Medical Society, the Philadelphia Pathological Society, and the Philadelphia Obstetrical Society—subscribed each fifty dollars to keep alive last year this great bibliographical magazine. As Americans we are ashamed that in the whole length and breadth of this land not one State or local medical society outside of this city was found to follow the example set. It is no less surprising than depressing that with associate intelligence they have all stood by and seen the great work tottering to its fall. New York, boasting continually of its greatness, its progress, and its wealth,—New York, where the *Index* is published, where so many of the profession dwell in palaces, are clothed in purple and fine linen, and fare sumptuously every day, has done nothing. Boston,—in its own conceit the Athens of America,—with its perpetual smile of self-congratulation, its lips dripping with the honey of self-congratulation, has done less. Philadelphia has done no more, in its rush and greed for material wealth. St. Louis, Cincinnati, Baltimore,

New Orleans, San Francisco, Pittsburg, Albany, and our innumerable smaller cities,—where are they? An annual subscription of twenty dollars from each of the societies of these cities would enable Mr. Leypoldt to continue the publication of the *Index*. Will they not give it?"

Now if one really has the welfare of the *Index Medicus* at heart this is not the best way to further it. What the *Index Medicus* requires is support, and the cordial coöperation of its friends is needed to procure the same. The exact form of the support is of less immediate consequence. We venture to say that if the *Medical Times* will take the trouble to inform itself it will find that in the amount of support given the *Index Medicus* Philadelphia occupies neither the first nor the second place, but that New York and Boston, respectively, do. We happen to know that one individual physician in Boston this year contributed half the sum named as the amount subscribed by the Philadelphia County and the other Philadelphia medical societies.

What has been done, however, is no good reason for not doing more, and we are glad to say that one Boston Society, that for Medical Improvement, has voted to contribute fifty dollars to the *Index* the coming year. It is undoubtedly an excellent opportunity for friendly emulation, only let us all be pleasant about it, and if it so happen that there are any ancient grudges which must be fed fat let it not be at the expense of the *Index Medicus*. We hope Boston medical societies will bestir themselves, that individual enthusiasts will multiply in Philadelphia, and that Chicago will have the grace to surpass both places in both forms of support.

DR. O. W. HOLMES' BOYLSTON PRIZE ESSAY ON INTERMITTENT FEVER.

THOSE who by reason of its reappearance may now feel an awakened interest in intermittent fever, as it formerly exhibited itself in New England, would do well to consult Dr. O. W. Holmes' Boylston Prize Essay, written in 1836, entitled *Facts and Traditions, Respecting the Existence of Indigenous Intermittent Fever in New England*. Dr. Holmes' very complete and instructive historical essay is freely quoted from in Dr. Adams' paper on Intermittent Fever, published in the recent report of the Health Department of the Massachusetts Board of Health, Lunacy, and Charity.

MEDICAL NOTES.

—The Boston Board of Health has recently inspected the Cochituate and Sudbury Rivers systems in company with a member of the Water Board. This latter board seems disposed to hold Farm Pond, and it alone, responsible for the present wretched condition of the Boston water. It may not be loam at the bottom of the Sudbury River Basin and it certainly is not cels. The Board of Health assures inquirers that the health of Boston was never better, and if it is a consolation to its inhabitants to know that they can not only drink such abominable stuff as is now supplied them, but thrive thereon, they had best make the most of it.

— One death was reported in Providence from malarial fever during the month of October.

— On Saturday last there were in hospital three cases of small-pox and no further cases were known to the Board of Health. One case has recently shown itself in western Massachusetts in a young man who went home sick from this city.

— Dr. H. O. Marcy addressed the Society of Arts of the Massachusetts Institute of Technology on Some Factors in the Sanitary Condition of Boston, on Thursday last.

— In last week's note of changes in instructors at Harvard Medical School, Dr. E. H. Bradford was noted as assistant in clinical surgery. He is also to give special instruction in orthopaedics.

Miscellany.

PRACTICAL DEDUCTIONS DRAWN FROM ONE THOUSAND DIGITAL EXAMINATIONS OF THE PHARYNGEAL ORIFICE OF THE EUSTACHIAN TUBE AND FOSSA ROSENMÜLLER.

BY H. H. WYNNE, M. D.

IN the study of pathological conditions of the organ of Audition, of the aetiological relation to disease of the throat being of so intimate a character, it is to be regretted that an anatomical distinction, or a separation between the cavity of the ear and that portion known as the nasopharynx, should at all be attempted by anatomists. This portion, the nasopharynx, is no less a part of the ear pathologically than is the middle ear itself; seventy-five per cent. (Heuson) to ninety per cent. (Mittendorf) of ear disease finding its cause in disease of the pharynx, of which the nasal part is here important.

It has been well said that the nasopharynx, pathologically, and therapeutically, is of greater importance than the drum cavity itself to the organs of hearing as a whole. Why? With a closure of the Eustachian tube at its pharyngeal orifice referable to disease of this part, we have a deafness that yields only to the re-establishment of the patency of these openings. Again, the middle ear may be deprived of one of its walls, the tympanum, lose its contained ossicles, even suppurate for a long time, and yet retain a certain and valuable degree of its function. This rehearsal of acknowledged facts sufficiently recalls to the mind the pathological importance of the nasopharynx to cause it to be considered, for other than anatomical reasons, as a part of the ear.

The nasopharynx, therapeutically, is the most important part of the ear.

What is understood by the nasopharynx is all that part of the pharynx above the level of the soft palate. Opening anteriorly are the important orifices known as the posterior nares, and partly in the cavity of the nasopharynx we have the orifice of the tube that forms the connection between these cavities and that of the tympanum. The orifice and tube being lined by the membrane common to the pharynx and nose, and participating directly and indirectly in the inflammatory affections common to this mucous lining. Of all the secreting surfaces of the cavities of the body this is the one that is most frequently found to be the seat of dis-

ease; the inflammatory action passing directly through the tube and involving the tympanic cavity, hence the aetiological origin of the seventy-five per cent. to ninety per cent. of ear disease.

The pharyngeal orifice of the tube, and fossa Rosenmüller lying immediately posterior, are the parts to be examined. The cavity containing these anatomical parts admits of inspection by methods direct and indirect. Direct, when the patient has a large mouth and wide facial opening, which is not at all infrequent; then by rotating the inferior maxilla to the side opposite to the orifice of the tube to be examined, at the same time depressing its angle, the orifice of the opposite Eustachian tube often lies in a direct line and can easily be seen together with the posterior depression known as the fossa Rosenmüller. This procedure is aptly shown in the work of Professor J. Solis Cohen, a case of cleft palate affording the extensive view there presented. The method by the use of the rhinoscope constituting the indirect one need not now be further mentioned.

It is, therefore, to present the claim for the support of a method that is rapid, easy of execution, and one that does not necessitate the use of scientific instruments, that I write this article, to present my views on a subject of importance to the profession, and they are submitted for all they may be found to be practically worth. The method to be proposed has no element of novelty, introduces nothing new to overburden the methods already in use for diagnosis in this region of the respiratory passages. The method is one of simple digital examination. The fact of its not being made routine practice in our large throat hospitals is to be regretted, as it never fails to provide for the most serious emergencies of practice. Its origin, history, etc., I am unable, from suitable reference, to discuss. I consider this method to be entitled to higher rank than those constituting routine practice in the private office and hospital clinical service. To the general profession this method commends itself most highly and does not necessitate a loss of time and the so-called scientific use of paraphernalia. This method is not new, and is only going a step further in parts to be examined, than the region so frequently explored digitally by the dental profession.

While a student in the large general and special hospitals of New York, I have had ample opportunity to practice this method of examination, and I am now as independent of the use of the rhinoscope as I am dependent upon the use of my laryngoscopic mirrors in the examination of the larynx. By its use I can immediately determine the normal or pathological condition of parts within reach of the finger, namely, the pharyngeal orifice of the Eustachian tube, the posterior fossa of Rosenmüller, Luschka's tonsil, occupying a central position in the posterior wall of the pharynx, and terminating laterally in this fossa, the posterior nares immediately in front, and here by the digital examination I am able to diagnose the existence of polypi and hypertrophy of the membranous covering of the inferior turbinated bones. A most important point gained by the method is the *direction* of the Eustachian tube at its pharyngeal extremity, and the existence of delicate contracting bands in the fossa of Rosenmüller.

Professors Cohen and MacKenzie mention the existence of these bands, but they are more numerous than the writers would lead an inexperienced operator to

suppose. Whenever in a new case I find it difficult to pass my Eustachian catheter, I immediately make a digital examination, and I find many times the difficulty lying in the mis-directed orifice, this being drawn backward by contraction of bands or by contraction of the membrane itself lining the fossa posterior to the orifice, as is frequent in the condition known as pharyngitis sicca. Many times, by rupture of these bands, I have succeeded in guiding the curved end of my Eustachian catheter by the finger passed up and behind the soft palate into an otherwise practically closed tube, inflated the ear by the bag, and sufficiently increased the hearing to warrant the successful treatment of a case which I could not otherwise have undertaken. The pathology of the fossa of Rosenmüller offers an inviting field of study.

I shall never regret having commenced early the practice of this method of pharyngeal examination, having first had my attention directed to it by a fellow-student of disease of the throat at the Bellevue Hospital, who had practiced it in three thousand cases at the age of twenty-three years, and who was most rapid in his examinations, and equally definite as to the condition present in any given case. It may not be improper to state that this young man was blind, and that he had acquired a proficiency by touch that excelled in rapidity, correctness, and minuteness of detail the use of our complicated instruments and much-valued eyesight.

The method of digital examination consists in passing the index finger of the right hand, when the right tube orifice is to be examined, into the mouth, up and behind the soft palate to the orifice, which can easily be distinguished by its slight depression, the operator standing upon the right side of the patient. In examining the left tube the order is reversed. The time of the examination varies from half a minute to three minutes, and disease of any of the structures that can be examined is immediately determined. This method can be used in cases where, by complication, the use of the rhinoscopic mirror is either unsatisfactory or impossible.

I think that in the future the digital method of rapid examination will become one of routine practice in diagnosis of diseases of these parts, and that the close aural relation of the naso-pharynx will become a more generally recognized element among the profession in the study of pathology and therapeutics of ear disease.

JONESTOWN, PENNA., October, 1881.

NON-VENEREAL SYPHILIS.

MR. EDITOR.—I wish to record the following case as evidence of the entire possibility of a perfectly healthy individual becoming infected with constitutional syphilis from using the same drinking-glass with a person having constitutional syphilis even in its later forms.

B., a young American, enlists in the navy at Charlestown, Mass., and is assigned for duty as a servant to one C., whose nose is depressed, and whose throat and shin-bone are plainly diseased,—syphilis. All in the yard well know of the nature of C.'s malady, and family troubles on that account had previously occurred. After serving a short time, some four weeks or six, B. notices "his own mouth to be sore, with a punched-

out, yellowish-looking spot on his lip, followed shortly by other sores on other parts of his mouth and tongue," as he describes it. On application to the surgeon he is told that he has a canker spot, and it is burned with lunar caustic; later the truth is told him, and mercury ordered, and in June last he is discharged, having well-marked mucous patches and enlarged glands of whole neck, nasal and laryngeal catarrh.

At the Boston Dispensary, on August 22d, he was seen by the writer together with Dr. Bush and others, and he then presented all of the above-named constitutional signs of syphilis. No marks of former disease, no trace of history of other cause could be obtained other than that B. drank from the same tumbler at the ice-pitcher as did C. often. No pipe was ever used by either, cigarettes alone. The boy was healthy, twenty years old, when he passed the examination, and was enlisted in the service six or eight weeks prior to his presenting the first-seen sore mouth. Since discharge he has been married, and his wife now has some throat trouble and enlarged glands of the neck. (No examination as yet has been obtained of her, however.)

As every pains were taken to exclude sources of error in the case, it has been thought to be, perhaps, of sufficient value to present these brief facts for publication.

JOHN DIXWELL, M. D.

LONDON SANITARY PROTECTION.

At the first general meeting of the London Sanitary Protection Association, after an account of certain financial details had been given by the treasurer (Mr. Holmes), Prof. Fleeming Jenkin said that the cost was small, the importance great, and already many similar institutions had been established all over the country. Inspections had been made of one hundred and eight houses, and of these seven were found to be entirely without drainage, the drains having become completely choked. In several instances no suspicion existed of this state of things, for the sewage was making its way into the soil under the houses. In thirty-three houses the drains were found not to be gas-tight, and allowed the sewage-gas to go into the houses. This was discovered in a very simple way, namely, by pouring a little oil of peppermint into the sewer, from which the smell rose into the house. In twenty-seven cases the overflow-pipes from cisterns were connected with the drains. Professor Huxley said that when they came to congregate three or four millions of people on a surface of fifty square miles, if care were not taken they would be decimated, not as in the old days, by the black death, but by other diseases which were readily disseminated by the system of water drainage if it were imperfect. The old cesspool was, he thought, far less dangerous than an imperfect system of water drainage, which was a perfect machinery for disseminating disease, while the water drainage if in perfect order was the best that could be. Therefore the question was, how were we to see that this water-sewage system was maintained in a reasonably perfect condition. A government inspection he did not think would be tolerated by householders, and it would be most expensive. The best mode was that of a regular sanitary inspection by our own engineers, and this was what the Association offered at a cheap rate. He hoped it would become extensive and useful.—*Medical Times and Gazette*.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 5, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Diarrhoeal Diseases.	Typhoid Fever.
New York.....	1,206,590	673	271	26.00	14.41	8.60	7.30	1.63
Philadelphia.....	846,984	324	119	22.84	4.63	8.33	1.23	5.25
Brooklyn.....	566,689	292	121	30.82	14.38	13.69	6.84	1.37
Chicago.....	503,304	222	87	34.70	13.06	13.51	3.15	9.46
Boston.....	362,535	167	51	25.75	10.78	8.38	9.58	5.99
St. Louis.....	350,522	161	53	27.95	4.97	3.73	8.70	4.97
Baltimore.....	332,190	163	62	50.06	2.45	17.18	3.68	4.29
Cincinnati.....	255,708	99	37	19.19	10.10	2.02	8.08	7.07
New Orleans.....	216,140	93	20	23.66	3.23	2.15	12.90	1.08
District of Columbia.....	177,638	91	42	23.08	8.79	3.30	6.59	8.79
Pittsburgh.....	156,381	94	31	54.26	11.70	4.26	7.45	8.51
Buffalo.....	155,137	—	—	—	—	—	—	—
Milwaukee.....	115,578	37	16	16.22	5.41	5.41	2.70	5.41
Providence.....	104,857	34	13	23.53	5.88	17.65	5.88	—
New Haven.....	62,882	22	6	18.18	4.55	13.64	—	—
Charleston.....	49,999	48	18	20.83	4.17	4.17	8.34	6.25
Nashville.....	43,461	18	7	38.89	—	5.56	16.67	5.56
Lowell.....	59,485	26	4	7.69	15.38	3.85	—	3.85
Worcester.....	58,295	16	8	31.25	18.75	—	18.75	—
Cambridge.....	52,740	22	5	22.77	9.09	4.55	—	18.18
Fall River.....	49,006	20	13	10.00	15.00	5.00	—	—
Lawrence.....	39,178	14	5	21.43	14.29	7.14	7.14	7.14
Lynn.....	38,284	8	2	25.00	—	12.50	—	—
Springfield.....	33,340	10	2	20.00	10.00	—	—	20.00
Salem.....	27,598	14	4	28.57	14.29	—	7.14	14.29
New Bedford.....	26,875	9	3	22.22	—	—	—	11.11
Somerville.....	24,985	6	1	16.67	16.67	16.67	—	—
Holyoke.....	21,851	11	1	9.09	36.36	—	—	9.09
Chelsea.....	21,785	7	3	14.29	—	—	—	—
Taunton.....	21,213	—	—	—	—	—	—	—
Gloucester.....	19,329	9	2	44.44	11.11	33.33	—	—
Haverhill.....	18,475	5	1	20.00	—	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	5	2	20.00	—	20.00	—	—
Fitchburg.....	12,405	4	0	—	50.00	—	—	—
Twenty-one Massachusetts towns..	160,034	49	8	28.57	8.16	18.37	4.08	6.12

Deaths reported 2773 (no report from Buffalo); 1018 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 752, consumption 407, lung diseases 281, diphtheria and croup 247, diarrhoeal diseases 166, typhoid fever 123, malarial fevers 64, small-pox 55, scarlet fever 53, whooping-cough 19, cerebro-spinal meningitis 10, erysipelas six, measles four, puerperal fever four, typhus fever one. From *malarial fevers*, St. Louis 13, New York 12, Brooklyn 10, New Orleans eight, Philadelphia six, Baltimore and District of Columbia four, Chicago three, Nashville two, New Haven and Charleston one. From *small-pox*, Pittsburgh 24, Philadelphia 13, Chicago eight, New York seven, Brooklyn, Baltimore, and Gloucester one. From *scarlet fever*, New York 23, Brooklyn 10, Philadelphia six, St. Louis and Pittsburgh three, Cincinnati two, Chicago, Milwaukee, Worcester, Fall River, Lynn, and New Bedford one. From *whooping-cough*, New York six, Brooklyn four, Chicago three, Baltimore two, Philadelphia, Boston, St. Louis, and Pittsburgh one. From *cerebro-spinal meningitis*, New York six, Brooklyn, Boston, Worcester, and Chelsea one. From *erysipelas*, New York and Pittsburgh two, Baltimore and Salem one. From *measles*, Chicago and Pittsburgh two. From *puerperal fever*, New York, Chicago, Boston, and Haverhill one. From *typhus fever*, Chicago one.

Two cases of small-pox were reported in Brooklyn, three in Boston, four in St. Louis, two in Baltimore, five in Cincinnati, 52 in Pittsburgh; typhoid fever 34, diphtheria 29, scarlet fever two, in Boston; diphtheria five, scarlet fever four, in Milwaukee; typhoid fever 20 in Cambridge.

In 38 cities and towns of Massachusetts, with a population of 1,039,737 (population of the State 1,783,086), the total death-rate

for the week was 20.16 against 19.64 and 21.29 for the previous two weeks.

For the week ending October 15th in 149 German cities and towns, with an estimated population of 7,936,736, the death-rate was 22.9. Deaths reported 3499; under five 1576: pulmonary consumption 453, acute diseases of the respiratory organs 300, diphtheria and croup 153, diarrhoeal diseases 136, scarlet fever 111, whooping-cough 70, typhoid fever 51, puerperal fever 23, measles and r6theln 17, typhus fever (Thorn, Erfurt, Bremen) three, small-pox (Aachen) one. The death-rates ranged from 14.5 in Halle to 31.4 in Posen; K6nigs-berg 28.8; Breslau 27.7; Munich 30.5; Dresden 14.4; Berlin 22.7; Leipzig 21.3; Hamburg 21.7; Hannover 17.8; Bremen 21; Cologne 24.1; Frankfurt 21.2; Strassburg 23.6.

For the week ending October 22d in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 21.2. Deaths reported 3097: acute diseases of the respiratory organs (London) 319, scarlet fever 138, fever 102, measles 74, whooping-cough 61, diarrhoea 57, diphtheria 31, small-pox (London) 14. The death-rates ranged from 15.6 in Bristol to 29.9 in Hull; Birmingham 16.2; Leeds 16.6; Sheffield 20.1; Manchester 20.6; London 21.6; Liverpool 28.9. In Edinburgh 23.5; Glasgow 22.6.

For the week ending October 15th in the 21 chief towns of Switzerland, population 479,934, there were 29 deaths from pulmonary consumption, acute diseases of respiratory organs 21, diarrhoeal diseases 19, diphtheria and croup 13, typhoid fever three, whooping-cough and measles each one. The death-rates were, Geneva 20.5; Zurich 21.7; Basle 19.3; Berne 29.3.

The meteorological record for the week ending November 5th, in Boston, was as follows:—

Date.		Baromet- eter.	Thermom- eter.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
			Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
October- November, 1881.																					
Sun.,	30	29.985	59	63	51	100	100	94	98	SW	S	S	7	3	11	R	G	O	—	—	
Mon.,	31	29.993	61	66	58	95	95	100	97	SW	W	W	7	4	2	O	R	R	—	—	
Tues.,	1	30.074	51	61	49	86	80	86	84	NE	NE	NE	12	16	7	R	O	O	—	—	
Wed.,	2	30.091	50	52	48	88	93	100	94	NE	NE	NE	11	8	6	O	O	R	—	—	
Thurs.,	3	29.686	59	70	49	100	90	93	94	E	S	S	6	12	5	G	O	O	—	—	
Fri.,	4	29.572	42	61	36	96	76	75	82	NW	W	W	17	19	12	R	O	C	—	—	
Sat.,	5	30.134	47	59	32	78	55	72	68	SW	S	S	9	7	18	C	F	O	—	—	
Week.		29.778	52																34.45	2.12	

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

PRIZE-REWARDS OFFERED BY THE DANISH SOCIETY FOR PROTECTION OF ANIMALS.

The Danish Society for Protection of Animals (under patronage of His Majesty, the King of Denmark) offers two prizes, of 2000 and 1000 francs respectively, for the best and second best scientific essay on that part of the vivisection question which concerns the possibility of replacing *living* by *recently-killed animals* during physiological investigations, and sufficiently indicates not before known cases, in which such a substitution of dead material may be applicable.

It refers specially to a well-known declaration of Professor M. Schiff, that "under certain circumstances the functions of life may be studied in recently-killed animals."

In these essays the possibility and desirability of replacing painful experiments on animals by some other methods of research may also be a subject of inquiry.

The essays may be written in the Danish, Swedish, English, French, or German language; they must be clearly and legibly written, signed with a motto, which is also to be placed on an accompanying sealed envelope, containing the name and address of the writer. These are to be forwarded before the 1st of September, 1882, to His Excellency, Mr. A. de Haxthausen, President of the Danish Society for Protection of Animals, at the office of the Society, Copenhagen.

The board of directors will secure scientific assistance in awarding the prizes; in the event of none of the essays possessing sufficient merit to warrant a prize, smaller rewards will be given to those competitors whose essays bear evidence of ability as well as sympathy with the objects of the Society, which reserves all rights of publication.

The Society expresses itself as only too well aware that the claims of humanity are not to be satisfied by these means as extensively as it should wish. It will, however, feel itself richly rewarded if its efforts result in diminishing the number of experiments in which animals are subjected to great and lingering agony. In this earnest hope it respectfully requests all humanely feeling scientists of every country in the world kindly to comply with its challenge.

OBITUARY.

Dr. ALSTON W. WHITNEY died at his residence in West Newton, November 11th, at the age of about fifty years. He practiced his profession for a short time in Boston, and at the opening of the war of the rebellion he entered the service as surgeon of the thirteenth Massachusetts regiment, and was afterward promoted to brigade surgeon, with the rank of lieutenant colonel. He was taken prisoner and sent to Libby Prison, where he was confined six months before being exchanged. While in Libby he, with several other officers, also prisoners, was ordered to be shot, in retaliation for several rebels executed by the Federals, but he was saved by the decisive action of General Butler, who notified the rebel authorities that if the men were shot he would immediately shoot two rebel generals held as prisoners by him. At the close of the war Dr. Whitney located in Newton, where he has remained ever since, and his death will be felt by a large circle of friends.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 5, 1881, TO NOVEMBER 11, 1881.

KING, WILLIAM S., colonel and surgeon. The extension of leave of absence on account of sickness, granted him in S. O. 105, May 7, 1881, from A. G. O., still further extended six months on account of sickness. S. O. 251, A. G. O., November 7, 1881.

McCLELLAN, ELY, major and surgeon. Now awaiting orders at Louisville, Ky., to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 252, A. G. O., November 8, 1881.

HARTSUFF, ALBERT, major and surgeon. The leave of absence granted him in S. O. 214, October 20, 1881, Department of the Missouri, is extended nine months, with permission to go beyond sea. S. O. 251, A. G. O., November 7, 1881.

MEACHAM, F., captain and assistant surgeon. To accompany from Fort Trumbull, Conn., to the Military Division of the Pacific, Batteries C and M, First Artillery, ordered to start on 11th inst. Upon completion of this duty to rejoin proper station in Department of the East. S. O. 66, Military Division of the Atlantic, November 8, 1881.

FINLEY, J. A., captain and assistant surgeon. To accompany from Fort Adams, R. I., to the Military Division of the Pacific, Light Battery K and Batteries B and E, First Artillery, ordered to start on 14th inst. Upon completion of this duty to rejoin proper station in Department of the East. S. O. 66, C. S., Military Division of the Atlantic.

TERRILL, H. S., captain and assistant surgeon. To accompany Battery H, Third Artillery, from Madison Barracks to New York city, and on arrival report in person at these headquarters for further orders. S. O. 67, Military Division of the Atlantic, November 9, 1881.

HALL, W. R., captain and assistant surgeon. Granted leave of absence for one month. S. O. 224, Department of the Missouri, November 2, 1881.

The following-named medical officers will report in person, without delay, to the commanding general, Military Division of the Atlantic, for temporary duty with regiments about to change stations. Upon completion of their duty with these regiments to report by letter to the Surgeon General: First Lieutenant E. C. CARTER, assistant surgeon; First Lieutenant H. I. RAYMOND, assistant surgeon; First Lieutenant T. J. C. Maddox, assistant surgeon. S. O. 248, A. G. O., November 3, 1881.

RAYMOND, H. I., first lieutenant and assistant surgeon. To accompany Batteries A and D, First Artillery, from Fort Columbus, New York Harbor, on 10th inst., for San Francisco. S. O. 66, C. S., Military Division of the Atlantic.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held on Monday evening next, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Knight. Subject, The Treatment of Posterior Hypertrophy of the Tubulated B. nes. M. H. RICHARDSON, M. D., Secretary.

Original Articles.

CASE OF PYEMIA OF OBSCURE ORIGIN.¹

BY FRANCIS MINOT, M. D.

THE unusual duration of the following case renders it impossible for me to report it, on the present occasion, in all its details. I shall, therefore, confine myself to the most prominent points, taken from the daily record, trusting that nothing essential will have been omitted.

The patient was a married lady, forty-seven years and nine months old, the mother of four children. She was of a nervous temperament, and had formerly been subject to attacks of hysteria, and possessed unusual intellectual endowments. Although somewhat delicate in general health, she had never had any special febrile or constitutional disease since childhood. Her menstruation was regular. She passed the summer of 1880 at the seashore, as usual. While there she had a succession of boils in various parts of the body, without any other manifestations of sickness, and shortly before the beginning of her last illness was in her usual health. She occupied the same house during the summer as in several previous seasons, and there was no other case of sickness in the family. On September 23d, shortly after her return to Boston, she went to Newport, R. I., where she passed two nights and one day in a house which was quite isolated, and in which there neither had been, nor has been since, any sickness.

A few days after her return from Newport she began to complain of pain in every part of the body, and of inability to sleep. At my first visit, October 2d (the sixth day of the disease), the pulse was at 100; tongue much coated; bowels regular; there was no appetite. In the course of a few days she had some hysterical symptoms, occasional sobbing, a feeling described as faintness, but without the objective symptoms of syncope. There were no symptoms of typhoid fever. The first and second joints of the right little finger were red, swollen, and painful. There was also pain and tenderness, but no redness, in the calf of the left leg. She complained of wakefulness and of loss of appetite. The menstruation appeared at the regular time, October 4th (eighth day), and, except that it was rather less abundant than usual, was normal. It did not recur afterwards. For the next few days her condition varied but little. She was despondent, and did not wish to recover. On the sixteenth day (October 12th) a small painful swelling was observed at the base of the little toe of the right foot, on the plantar surface, the finger meanwhile having become well. The swelling increased, fluctuation appeared, and on the twentieth day it was incised, and a free discharge of pus took place. The patient now began to complain of pain and distress in the abdomen, and this symptom was prominent throughout the remaining course of the case, but repeated careful examinations failed to elicit any evidence of disease in that region beyond occasional flatulence.

On the twenty-fourth day a hard, tender swelling, with redness, was found in the calf of the left leg, where there was much complaint of pain. There was also a small tender swelling in each axilla. About

this time an alteration in the patient's mental condition became noticeable. Sometimes she was much excited, at others she was depressed, frequently weeping and sobbing. On the twenty-seventh day she was quite "out of her head," and thenceforward she was completely delirious for the greater part of the time. On the twenty-eighth day (October 24th) it was found that an abscess had burst in the right axilla, and that another was forming in the left axilla, but no complaint had been made by the patient of either.

On the thirtieth day (October 26th) the patient passed into a state of complete dementia. She was unconscious, whining, crying out, sobbing, or chattering unintelligibly. The limbs and trunk were in constant slow, writhing movement, and she frequently tried to get out of bed. The discharges from the rectum and bladder were involuntary. She resisted the efforts of her attendants to administer nourishment, but with great difficulty they managed to get down about a quart of milk and half a bottle of champagne daily. Emaciation, which had progressed regularly from the beginning, was now very manifest.

About the thirty-sixth day (November 1st) the pulse and respiration became rapid, the former being at about 130, and the latter at 60 in the minute, and these rates increased gradually during the remainder of life. The general condition remained the same. Owing to the difficulty of feeding by the mouth the nourishment was given almost exclusively by the rectum. Abrasions were produced on the ankles, heels, etc., from the incessant motion of the limbs. On the forty-first day an abscess burst in the left axilla. On the sixty-fourth and seventieth days (November 29th and December 5th), respectively, she vomited all the contents of the stomach, being the only instances in which this symptom occurred. A few râles were noticed in the lower part of the back, but there was no dullness nor bronchial respiration. There was no cough. The calf of the left leg remained swollen, hard, and tender, but not red nor fluctuating. The right breast became hard and tender. Large dark-brownish spots of pigmentation were noticed on the abdomen, on the legs, about the knees, and on other parts of the body. There was desquamation of the skin of the feet and legs. She became moribund December 8th, and died December 9th (seventy-fifth day) at four o'clock and twenty minutes P. M.

There was no chill and no paralysis during any part of the disease.

The urine, examined by Professor Wood, October 14th, was of specific gravity 1012; acid; urea much diminished; uric acid increased; albumen a trace; all the phosphates diminished; indican diminished (the patient was a dark brunette); much free renal epithelium; a very few hyaline and finely granular casts. October 21st, an examination showed no material change. November 28th, the urine contained much pus, considerable albumen, and a few granular casts.

The record of the temperature is imperfect, as it was sometimes impossible to obtain a trustworthy observation for several days in succession, owing to the incessant movement of the patient. It was generally moderate, not rising above 102.5° F. until the thirtieth day, being the one following that on which the abscesses in the axillæ were discovered, when it was 103° F. in the morning, and 102.4° F. in the evening. After this date it remained below 102° F. until the sixty-fourth day, when it rose to 103° F., and fell again below

¹ Read before the Boston Society for Medical Improvement, November 14, 1881.

102° F. After the sixty-sixth day it rose daily, with evening increments, till the day before death, when it reached 106° F., falling the next morning to 105.2° F.

The pulse was high at the beginning (108 to 116 in the minute), and its rate began to increase on the twenty-ninth day, when it reached 120, corresponding with the rise of temperature. Between the sixty-first day and that of death it rose from 132 to 141.

The rate of respiration was not regularly noted, but it was always fast. Between the twenty-third and the forty-seventh day it varied from 41 to 62 in the minute. After the sixty-second day it gradually rose to 70, and occasionally to 86. On the morning of the last day it was at 70, at noon 30, shortly before death 15, in the minute.

Autopsy, by DR. E. G. CUTLER, twenty-three hours after death. The skull and integuments of the head were normal. The dura mater was also normal, and nothing pathological was found in the pia. Some of the convolutions of the vertex were atrophied, and the subarachnoid fluid was accordingly increased. The vessels of the base of the brain were normal. No change was found in the great centres of the brain. The heart was of natural size, and apart from a slight fatty condition of the muscular fibrils, as determined by the microscope, there was no change. The fatty degeneration was recent, and affected the papillary muscle most. There was a very small amount of fatty degeneration of the interior of the aorta, near the aortic valves. The left lung was oedematous in a limited area of the upper lobe; and near the lower portion of the upper lobe, anteriorly, there was a wedge-shaped, embolic infarction, with a softened centre; the pleura over it was thickened and covered by a thin false membrane. In small portions of the lower lobe, behind, there were several localized spots of lobular pneumonia of very recent date. A microscopic examination showed the cells filling the alveoli to be chiefly large epithelial cells, mixed with catarrhal cells. The bronchi contained a rather frothy secretion, not abundant nor sticky. The right lung also contained a number of the same localized pneumonic lobules, behind and below, and there had been one old adhesion at the apex. The bronchi also contained the same sort of secretion as the other lung. There were no embolic infarctions. The lung was quite oedematous. The spleen was very pulpy, the Malpighian bodies large, and in a condition of hyperplasia, as was also the pulp of the spleen. There were no embolic infarctions. The liver was engorged with blood, its acini fairly distinct in outline and rather large. Microscopic examination revealed a rather granular condition of the hepatic cells, and a slight icteric discoloration. The kidneys were the seat of old embolic infarction at the central portion, the spots being very minute and circumscribed. The tubules of the cortex were quite cloudy; casts were found in many of the tubules, and wandering cells outside the vessels in the region of the plugged vessels. The supra-renal bodies were healthy. The stomach contained some liquid food. Its mucous membrane was healthy, except in one portion, near the greater curvature, where there was punctiform ecchymosis, due to the presence of ingesta. The intestines and pelvic organs appeared to be healthy. In the left breast there was a small circumscribed abscess, and in the right one containing from two to four ounces of creamy pus.

Although I have entitled this paper a case of pye-

mia I am aware that it differs in some respects from typical examples of that disease, particularly in the absence of rigors and in the fact that no pus was found in the principal internal organs, as well as in the prolonged course of the case. But the progressive prostration of the patient and her nervous and mental condition, without adequate inflammatory symptoms or lesions, render it highly probable that she was suffering from some abnormal state of the blood, which the presence of pus beneath the integuments and in both mammary glands, and of wedge-shaped embolic infarctions in the lungs and kidneys would indicate to have been one of purulent infection.

The origin of the disease seems to be inexplicable. I saw the patient in good health, September 23d, the day she went to Newport. She returned home on the 25th in the same condition. There was nothing suspicious about the hygienic condition of the house in which she spent the summer, in that which she visited at Newport, or in her dwelling in town, and there has been no other sickness in either house. No local source of infection was revealed at the autopsy.

The treatment consisted in as much nourishment and stimulants as the patient could easily take, with quinine, bromide of potassium, and morphia, the latter chiefly by subcutaneous injection.

I omitted to mention that examination of the calf of the left leg, at the autopsy, showed nothing to account for the symptoms in that region during life.

SCHOOL HYGIENE: HEALTH OF GRADUATES OF THE CLEVELAND SCHOOLS.

THE tables which follow express in a concise form the results of the investigations into the health of young people at school, and recent graduates of schools of the city of Cleveland by a committee, on statistics of the Board of Education of that city.

In regard to the objects of the committee's investigation the words of the chairman may be quoted. He says:—

"As chairman of your committee on statistics—aided and assisted by the other members of this committee—I have, without expense to this Board, authorized a thorough and careful canvass, in statistical form, to be made of a large number of the pupils of our high schools, with a view of learning, first, why so many scholars who enter for this course drop out before it is finished, and, second, why so many, and especially the girls, have apparently suffered in health beyond the usual ills of life during their high school days. I am led to this course by a long period of observation of the pale cheeks, dull eyes, stoop-shouldered forms and worn and weary look of many of the pupils in the Central High, at an age when we expect to see bright faces, rosy cheeks, and erect forms, and the fact that not only here in Cleveland but elsewhere the high pressure principle of education seems to need an air-brake.

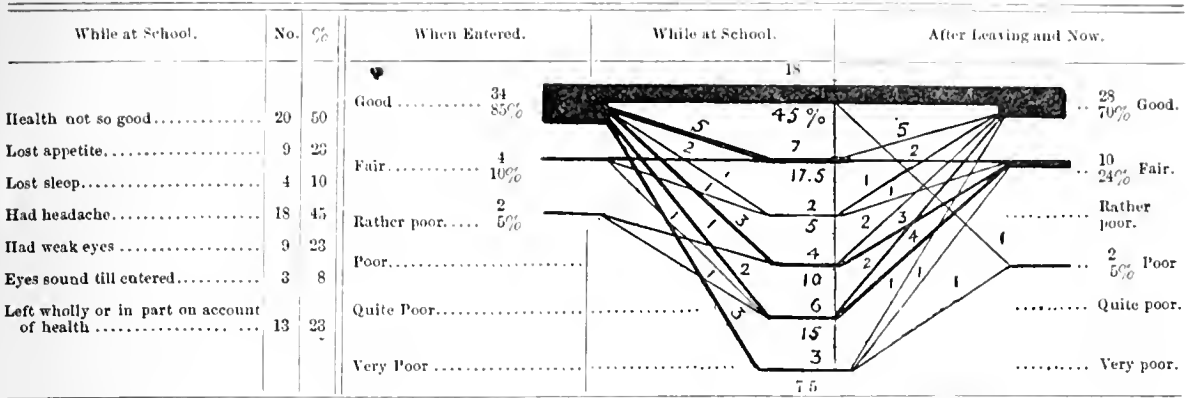
For the tabulation and diagrams of the main features of the report to the committee and the conclusions to be drawn therefrom we are indebted to its author, Dr. L. B. Tuckerman, of Cleveland. The report itself, not having been made to a medical body, is more general in its character than it otherwise would have been. These tables and diagrams will repay careful study, especially on the part of those interested in matters pertaining to

Whole number enrolled in Central High School during the year beginning September, 1880, and ending June, 1881: Boys, 316; girls, 410.

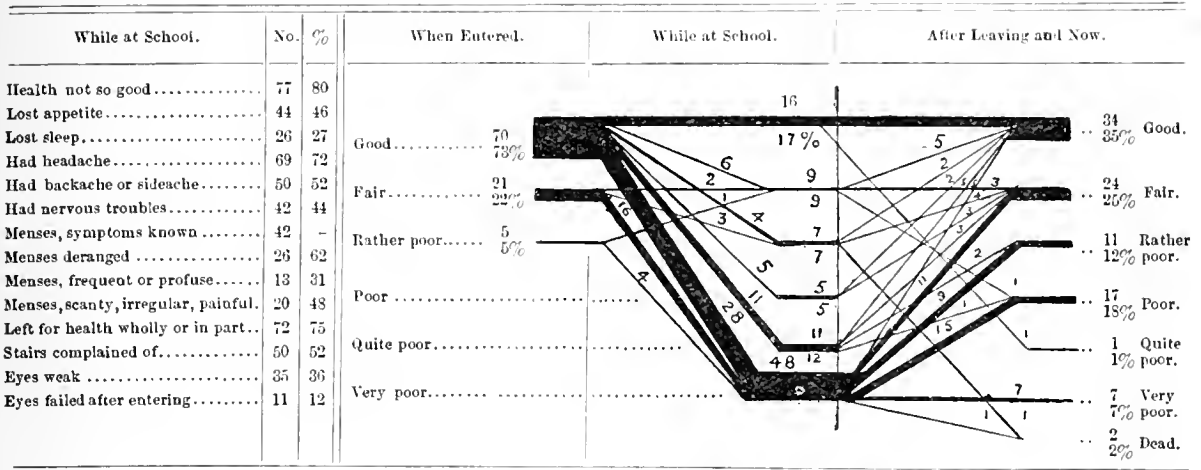
Withdrawn during the year: Boys, 56, 18%; girls, 108, 25% of the number enrolled.

The first perpendicular line in the diagram shows the time of entering; the second, that of leaving school. The upper figure shows the number of pupils in any given grade; the lower, the per cent. Width of lines corresponds to the latter.

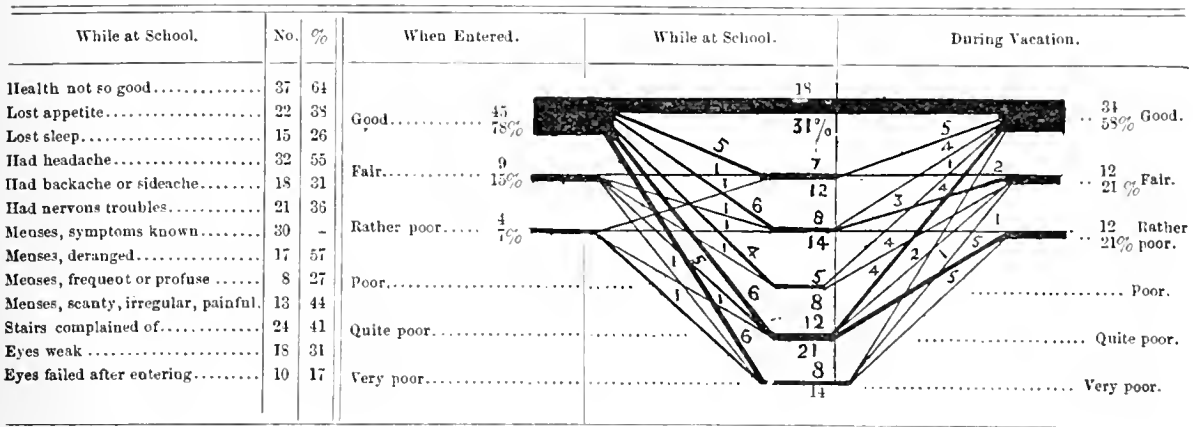
I. HEALTH RECORD OF FORTY BOYS WHO LEFT THE HIGH SCHOOL, 1880-1881.



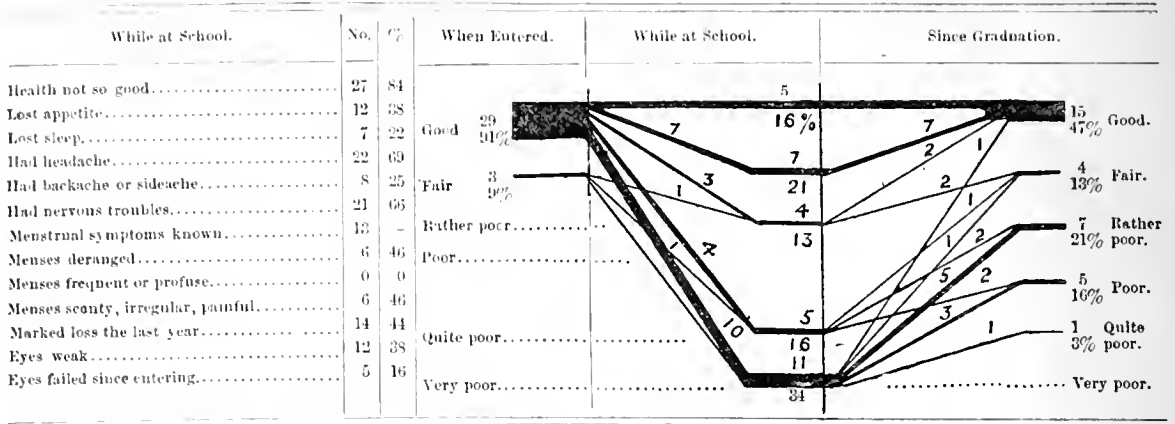
II. HEALTH RECORD OF EIGHTY-FIVE GIRLS WHO LEFT IN 1880-1881, AND ELEVEN WHO LEFT IN 1879-1880; NINETY-SIX IN ALL.



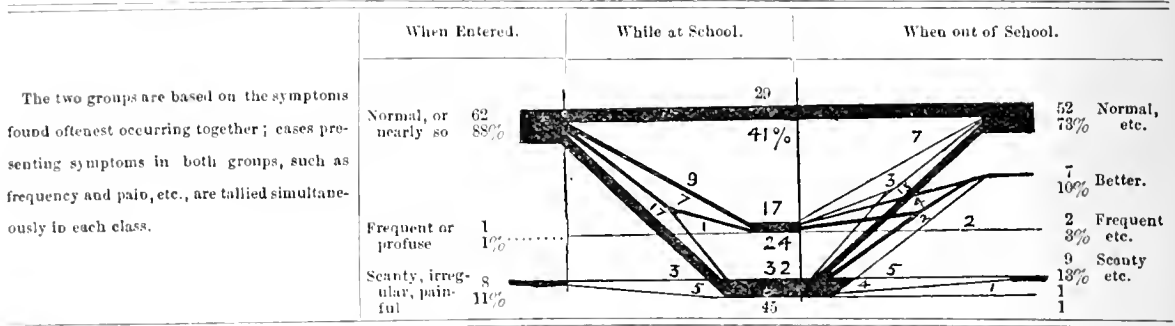
III. HEALTH RECORD OF FIFTY-EIGHT GIRLS WHO ARE NOW ATTENDING HIGH SCHOOL.



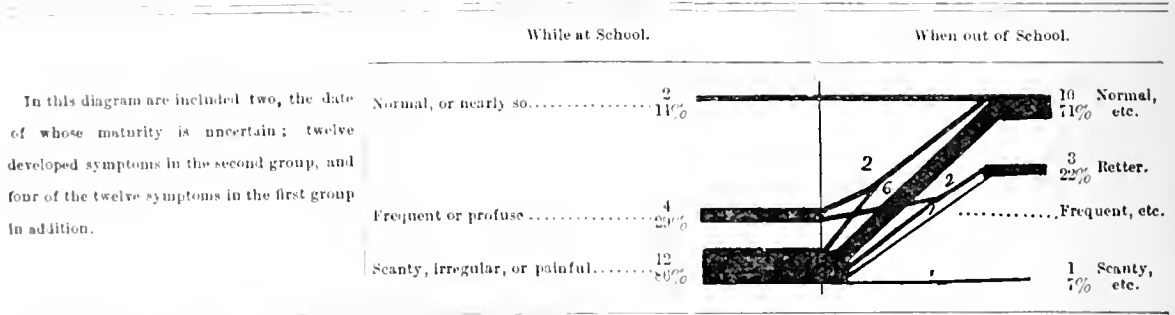
IV. HEALTH RECORD OF THIRTY-TWO LADIES, GRADUATES OF EITHER HIGH OR NORMAL SCHOOL.



V. MENSTRUAL RECORD OF SEVENTY-ONE WHO MATURED EITHER BEFORE OR SHORTLY AFTER ENTERING.



VI. MENSTRUAL RECORD OF FOURTEEN WHO MATURED DURING THEIR HIGH SCHOOL COURSE.

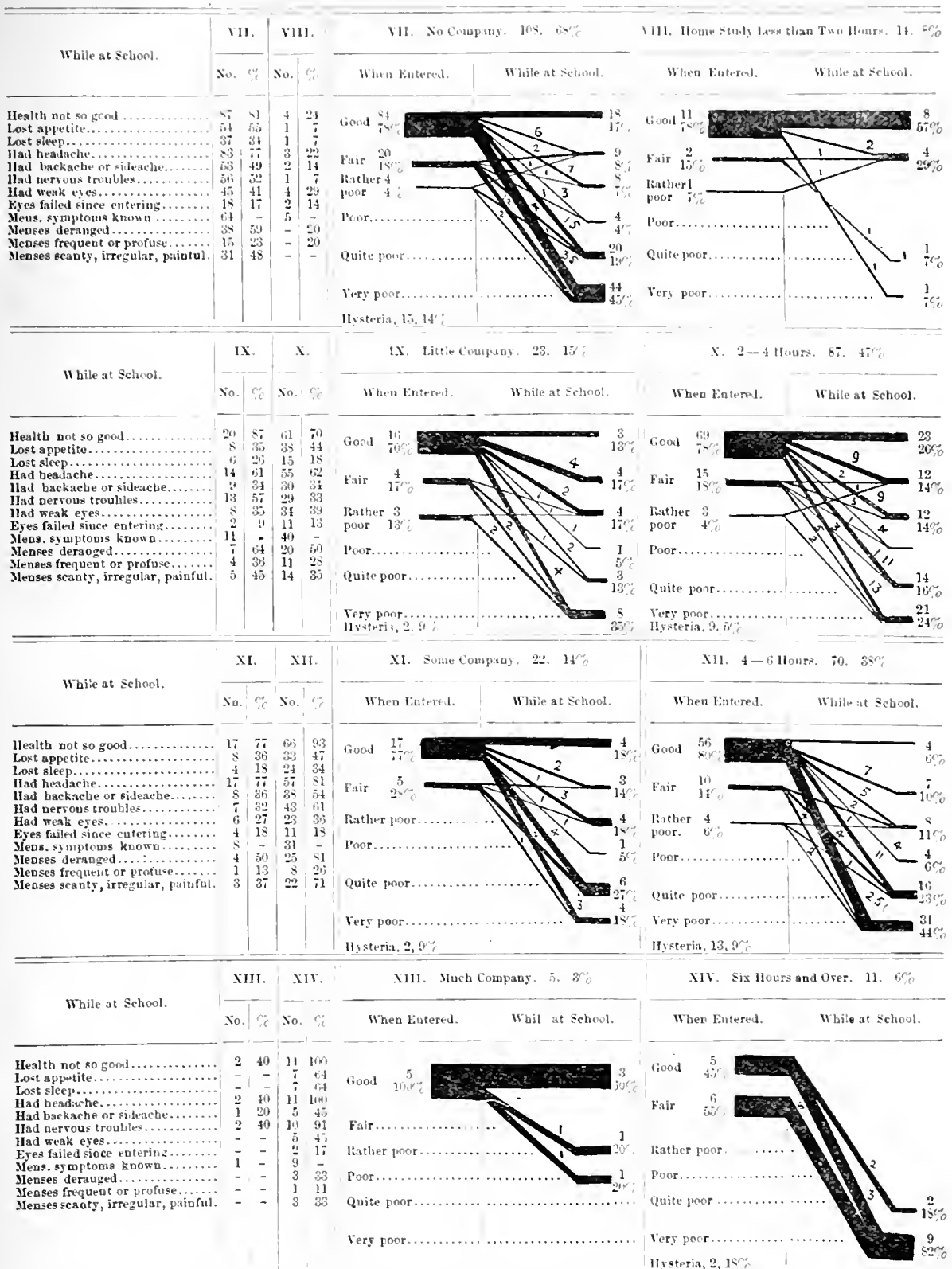


The grade of health in which each pupil was classed was determined partly by the number and partly by the severity of the abnormal symptoms developed during attendance at school. If a pupil developed a single symptom, for example, headache or loss of appetite, etc., he was classed as "Fair." Headache and loss of appetite and the like would class him as "Rather poor." Where all, or nearly all, the abnormal symptoms existed the case was classed as "Very poor."

The better average health of the boys will be at once noted, also the close correspondence between II and IV, owing to the marked failure

in health of fourteen in IV, during the last year of their course. The fact that the menstrual irregularities of the graduates are all of the second group is also worthy of note, as well as the enormous proportion of nervous troubles among them. In Diagram V, the five that descend from the level marked "Scanty, etc.," had their already existing irregularities aggravated during attendance at school. Many of these cases, of course, had not as yet become so severe as to come under professional care.

SOCIAL AMUSEMENT COMPARED WITH STUDY AS TO EFFECT ON HEALTH



Among the pupils included in diagram II., there were 11 cases of hysteria, 11% of the whole; in diagram III., 3 cases, 5%, and in IV., 5 cases, 10%. These last 5 cases all occurred among the 15 who were graduates of the Normal school.

The better average health among those pupils that take more social recre-

ation is very apparent. Also the rapid increase of abnormal symptoms with the increase of home study.

The increasing ratio of scanty, irregular, etc., menstruation, as home study increases, is also worthy of note.

school hygiene. Such study, Dr. Tuckerman points out, develops the fact that ill-health among the scholars increases directly as the amount of time spent in study beyond school hours, and inversely as the amount of recreation taken. He goes on to say:—

"Of course we do not seek to draw positive and sweeping conclusions from so few cases, but they show a certain drift, and they show also the necessity of further investigation,—and investigation not confined to one city only. We are working toward a definite end, not without opposition from some who think our present school system an almost sacred thing, and that end is the regulation of the sanitary affairs of our public schools by the Board of Health. We are trying, also, to bring about a systematic registration of the pupils in our public schools as to their physical condition from time to time.

"Such a registration would go far in a year or two to settle many questions now *sub judice*. The Health Boards of Baltimore, Milwaukee, Minneapolis, and Chicago are interesting themselves in this matter, and I hope that a wide interest may be aroused in the work of *gathering facts* as a basis for the solution of this greatest of our sanitary problems."

PROGRESS IN PHYSIOLOGY.

BY GEORGE M. GARLAND, M. D.

MUSCULAR TONICITY.

THE phenomena embraced under the head of muscular tonicity have been almost universally referred to the influence of nerve centres, either central or peripheral, and the muscles themselves have been credited with the subordinate rôle of responding to the impulses generated in such centres. Small arteries separated from the central nervous system will in a short time recover from their paralysis, and therefore their tonicity was supposed to be due to peripheral ganglia, while muscular dilatation was thought to be produced by the action of certain central nerves which neutralize the stimulating influence of the peripheral cells.

When strong pressure is made across the middle of the ventricle of a frog's heart, the apex ceases to beat; it becomes paralyzed. This was explained on the assumption that the apex contains no nerve ganglia, and hence the paralysis. Merunowicz,¹ however, discovered that an apex thus paralyzed will resume beating if stimulated by the constant current or by an artificial blood supply. This immediately necessitated the hypothesis that the apex does contain its own nerve centres, although no nerve cells can be detected microscopically.

Gaskell² reviews this entire subject in an interesting article, in which he is disposed to recognize the muscles as responsible to a certain extent for their own action. He fed a frog's heart with different kinds of artificial food, and observed that an alkaline fluid favored the contraction of the muscle, while an acid fluid produced an atonic condition of the same. Seizing upon this important fact as a hint, he argues that it is worth while to consider first the possible influence upon the muscles of the chemical changes which are constantly going on within themselves and within the

blood-vessels, before resorting to purely hypothetical and invisible nerve centres.

Interchange between blood and tissue cells is constant, both in activity and in rest. During activity the waste products are more numerous. They pass directly into the lymph spaces, where they bathe the small vessels, and he thinks that the degree of alkalinity or acidity of this bath must have a direct effect upon the tonicity of those vessels. Severini³ says that CO_2 formed by the activity of muscular tissue brings about such an alteration of shape in the nuclei of Golubew as to cause an enlargement of the calibre of the capillaries. The effect of oxygen is just the reverse. The nuclei become more spherical, project into the lumen of the capillary, and thus diminish the calibre of the same. We know that the activity of all muscles produces an acid, and the experiments of Heidenhain upon the pancreas render it probable that acid is also formed by glandular activity.

Although Gaskell proves nothing in his article, he opens up an extremely interesting and suggestive field of inquiry.

CORONARY ARTERIES.

The theory of Thebesius and Bruecke, that the coronary arteries of the heart are filled during the cardiac diastole by the aortic rebound, and that their orifices are closed during the cardiac systole by the aortic valves, has been hotly contested by numerous observers. Drs. Martin and Sedgwick⁴ have recently investigated this point by attacking the arteries *in situ*. After numerous failures they finally succeeded in introducing a canula into the coronary artery of a narcotized dog. Then placing a canula in the carotid artery, they were able to obtain simultaneous tracings from the two.

They found the blood pressure of the coronary arteries to be very high, nearly if not quite equal to that in the carotids. They also proved that the coronary and carotid pulses are practically *synchronous* in time, and that every feature of the carotid tracing was simultaneously and perfectly repeated in the record of the coronary artery.

This seems to prove conclusively that the aortic valves do not cover the mouths of the coronary arteries, and that those arteries are filled during systole.

STUDY OF FROGS' BLOOD.

A number of observers have noticed that frogs' blood, during the spring months, contains numerous formations which possess independent living motion, and are distinct in shape from all other ordinary constituents of the blood. These intruders are about the size of the red corpuscles, and resemble well known infusoria, so that they have been actually classified as parasitic infusoria. Gruby gave them the name *trypanosoma sanguinis*, and Mayer described two species of the same as *paramoecium boricatum* and *amaba rotatoria*. Gaule⁵ has made a prolonged study of these creatures, and decides that they are not independent animalcules, but are simply metamorphosed white blood cells. In studying the conditions of their appearance and preservation he found that they are much more abundant in the spring, and that they can exist only in blood or in a one fourth or one half per cent. solution of salt.

³ Intern. d. Vas. Sang., Perugia, 1878.

⁴ The Johns Hopkins University Circular, April, 1881.

⁵ Beobachtungen der farblosen Elemente des Froeschblutes. Aus der Physiol. Anstalt zu Leipzig.

¹ Lelwig's Arbeiten, 1875, p. 132.

² The Journal of Physiology, vol. iii, No. 1, p. 48.

In an alkaline solution they dissolve immediately, and in acetic or hydrochloric acid they shrink into round, coarsely granulated, colorless cells.

They are most abundant in the blood of a frog which has been previously thoroughly bled. He says that one should pith a frog, bleed him from the abdominal vein, and keep him in a moist dish for two or three days. If he be then killed one will find a very thin blood in his heart, which not only contains a number of trypanosoma, but also a number of elements from which trypanosoma will develop on the object-glass. If the preparation be surrounded by paraffine and kept at a temperature of 32° C. the development and movements of these curious cells can be watched at leisure. At first the white blood cells send out a slender projection like a whip-lash, which vibrates actively and stirs the water around the cell. This lash is so slender that it can be seen only with a high power (immersion 11 of Hartnack). Then the granular protoplasmic contents of the cell are seen to be in commotion, and several (three to seven) fine projections appear on the side opposite the whip-lash. These projections vibrate actively, and may again be withdrawn, or they may become so vigorous as to move the entire cell. The cell continues to change its form. Its border projects here and there, and it may assume very grotesque shapes. He concludes, therefore, that the trypanosoma are merely leucocytes.

In questioning regarding the purpose and aim of such eccentric cell activity, Gaule remarks that these cells, with their whip-lash appendix, bear a strong resemblance to spermatozoa. Inasmuch as they are most common in the spring of the year, that is, during the breeding season, he remarks that those conditions which affect the sexual products and cause the development of peculiarly-endowed cells in the sexual organs also seem to exert a powerful influence upon the protoplasm of other cells.

NORMAL TEMPERATURE OF THE BODY.

Dr. Jaeger¹ reports a series of observations upon the normal temperature of a number of soldiers in Tübingen. Eleven men were chosen. They were fed on ordinary diet, but were confined to their beds, and the temperature was taken in the rectum every hour for two days. The appended extract, giving the tabular results for three of the men, will serve as examples of them all.

The highest average which he obtained from any man was 37.35°, and the lowest average was 36.95°, giving a difference 0.4° between the two. Reckoning up all of his observations he found that the average normal temperature for the twenty-four hours is 37.13°. This is in accord with the results of Jürgensen, who says that the average temperature of adult men for each day is a typical constant. Whatever influence may temporarily raise the temperature, a reaction will take place which will restore the sum total to the typical average.

With regard to the hours of absolute maximum and absolute minimum temperature, Jaeger noticed that the minimum occurred, sixteen times out of twenty-two, at two o'clock in the morning, and once it came as early as eleven o'clock. The maximum temperature appeared four times before noon, six times between twelve and one o'clock, and ten times after four o'clock.

¹ Ueber die Körperwärme der gerunden Menschen. D. Arch. f. k. Med. 29 Bd. 5 an 6 Heft 3, 516.

Jaeger next examined a series of men who were employed at hard work in a warm but well-ventilated room. He found that the temperature is elevated by such work. But the law of compensation still holds, and the reaction of the temperature during repose is sufficient to keep the average constant. The maximum temperature of one man reached 38.1° at four P. M., while his minimum temperature was 35.6° at midnight. His average temperature for two days 37.18°, that is, only .05° more than that of the men who lay in bed.

	No. 1.		No. 2.		No. 3.	
	1st Day.	2d Day.	1st Day.	2d Day.	1st Day.	2d Day.
12 N.	26.9	36.9	37.0	37.3	36.8	36.8
1	36.9	36.6	36.9	37.3	36.7	36.7
2	36.8	36.6	36.9	37.1	36.7	36.7
3	36.7	36.7	36.7	37.0	36.7	36.6
4	36.7	36.7	36.6	36.9	36.7	36.6
5	36.9	36.8	36.7	36.9	36.8	36.7
6	37.1	36.9	36.7	37.0	36.9	36.8
7	37.5	37.2	37.1	37.3	37.1	37.1
8	37.4	37.3	37.2	37.4	37.0	37.0
9	37.5	37.2	37.3	37.4	37.1	37.0
10	37.5	37.3	37.3	37.3	37.3	37.3
11	37.3	37.3	37.2	37.3	37.3	37.3
12 M.	37.5	37.2	37.3	37.5	37.6	37.6
1	37.4	37.2	37.2	37.5	37.6	37.5
2	37.5	37.1	37.5	37.5	37.7	37.6
3	37.5	37.3	37.3	37.6	37.3	37.5
4	37.5	37.3	37.4	37.6	37.3	37.8
5	37.5	37.3	37.5	37.7	37.8	37.7
6	37.4	37.3	37.5	37.6	37.7	37.6
7	37.3	37.2	37.5	37.6	37.3	37.5
8	37.1	37.0	37.3	37.5	37.4	37.3
9	36.9	36.9	37.3	37.4	37.3	37.1
10	36.8	36.9	37.0	37.4	37.2	37.1
11	36.8	36.8	36.9	37.3	37.1	36.9
Average	37.18	37.03	37.14	37.35	37.19	37.19
Total Average	37.15		37.25		37.19	

Reports of Societies.

THE NEW YORK NEUROLOGICAL SOCIETY.

THE QUESTION OF REFLEX PARALYSIS FROM GENITAL IRRITATION.

STATED meeting, November 1, 1881. Dr. Langdon C. Gray, of Brooklyn, who had been announced to read a paper on the above topic, stated, before commencing the reading of it, that the title was properly the following: "The effect of genital irritation in the production of nervous disorders." In giving a *resumé* of the history of the subject, he mentioned that the first paper in regard to it which attracted the general attention of the profession was that of Mr. Stanley, which appeared in 1833. He had found that in certain cases of nervous disorder there were marked lesions in the genito-urinary apparatus, while none could be discovered in the spinal cord, and therefore concluded that the trouble was reflex. The position thus taken received the support of a number of distinguished writers, and was for a long time accepted by the mass of the profession. It was not till 1856 that the first critic of these views appeared in the person of Mr. Gull, now Sir William Gull, who maintained that the facts reported in Stanley's cases were utterly worthless as proofs. In 1861 he still more forcibly set forth his opinions in a paper which Weir Mitchell had charac-

terized as nothing less than brilliant, contending that, although there may have been no gross lesions of the spinal cord in Stanley's cases, it was altogether probable that there had been microscopic lesions. Primarily influenced by Gull's able papers, the tide of professional opinion now ran in the opposite direction, and Dr. Weir Mitchell had even suggested that the trouble about the genito-urinary apparatus might perhaps be the result of lesions in the nervous system. In 1873 Brown-Séquard had appeared as the champion of the old doctrine; but this had been a mere episode in the history of the subject. At the present day all the leading authorities had discarded Stanley's opinions.

In this country, Dr. Gray continued, the question had assumed a somewhat different phase, on account of the attention that had been attracted by Dr. Sayre's two papers on want of coördination and partial paralysis due to genital irritation. Brown, Bryant, and Barwell had also reported cases in England, and Dr. Otis, of New York, had supplemented Dr. Sayre's cases with a number of analogous ones of his own. The matter had excited great interest in the minds of the profession, and one gentleman had gone so far as to claim that he had cured cases of cerebral softening and of general paralysis of the insane by means of circumcision. The writer remarked that the histories of Sayre's cases were, as a rule, so incomplete that it was difficult to form a definite opinion in regard to them, and then criticised a number of them singly. Thus, in the first case reported, it was mentioned that the penis was inflamed, and he claimed that the patient instinctively flexed his legs in order to relieve the pain that he suffered, and that he refused to walk on account of the aggravation of the pain thus caused. After referring briefly to the other cases of the series, Dr. Gray went on to say that the first case reported in the second series published by Dr. Sayre was evidently one of well marked spastic disease, while the second was probably a case of myelitis affecting the anterior horns of the cord. He remarked incidentally in this connection that circumcision was sometimes of great service in myelitis, and referred to a patient of his own in which this was the case. The case was given more in detail later on in the paper. Dr. Sayre's third case (in the second series) he believed was probably one of meningeal hemorrhage, with secondary degeneration of the lateral columns of the cord. The two cases reported by Mr. Barwell were also unsatisfactory, and in not one of the eighteen cases of reflex paralysis supposed to be dependent upon genital irritation, which had thus far been published, was there conclusive proof of this relation of cause and effect. While preparing this paper, Dr. Gray had taken the trouble to write to Drs. Weir Mitchell, Jewell, Edes, Hammond, Seguin, and a considerable number of other well-known neurologists, to inquire if they had ever met with a single case of paralysis arising from this cause, and they had all replied in the negative.

Still, notwithstanding the fact thus substantially demonstrated, there was just reason to believe that operative procedures not infrequently afforded relief in the course of nervous disease. Thus, in a case of post-pleuritic paralysis, in the hands of Dr. C. Fayette Taylor, the operation of circumcision had been followed by the greatest possible benefit. Dr. Gray then gave a detailed account of three very interesting cases in his own practice. The first was one of tubercular meningitis, in which circumcision had the effect of

causing the child to sleep much better, increasing its appetite, and rendering its temper less irritable. After a time, however, the unfavorable symptoms returned and seven months after the operation the patient died, when an autopsy proved the correctness of the diagnosis that had been made. The second was one of myelitis involving the anterior cornua, which showed very marked improvement after circumcision. Yet for four months previous to the operation the patient had been under treatment without any improvement whatever. In the third case the patient was a male twenty-three years of age, who had a fine rhythmic tremor of the upper and lower extremities from the effects of brass-poisoning. For seven years he had been employed in some brass works, and had been obliged to breathe a fine copper dust. In this case a complete cure was effected by circumcision, and by the wearing of a respirator.

Dr. Gray believed that the improvement that was seen in such cases after circumcision was largely due to the rest that was afforded the patient by removing a source of irritation from an exquisitely sensitive organ. The cutting or tearing resorted to in the operation made a decided impression upon the nervous centres, and acted in the same way in which a fit of alcoholic intoxication sometimes broke up an attack of *tic dolo-reux*. In one case of epilepsy and kleptomania he had known the greatest possible relief to follow an operation for the removal of some old cicatricial tissue from the scalp. The fact that operation afforded relief in such cases, however, should not render one the less cautious in accepting the statement that reflex paralysis depends upon genital irritation. The cases of Otis and Bryant, it was true, did serve to afford some ground for such an opinion; but if they were carefully examined, it was seen that there was no real ground for it.

Dr. Gray next mentioned some experiments upon animals which had resulted in causing reflex paralysis by means of temporary pressure upon nerves, and then stated his firm conviction that at present it could not be accepted that paralysis ever depends on coexistent genital irritation. At the same time, it was perfectly right and proper to remove this coexistent source of irritation, and it was plainly the duty of the medical attendant to do this. But while paralysis was not caused by genital irritation, it was altogether probable that other and slighter nervous troubles might depend upon it.

At the conclusion of the paper Dr. Sayre, being called upon by the chair, remarked that he had learned many things from Dr. Gray's essay, and especially in regard to the history of the subject under discussion. When he published his first cases, in 1870, he thought he was the first in the profession to call attention to the matter, and in this he had been confirmed by the vast number of letters attesting the apparent truth of his statements, that he had received from all parts of the world. One surgeon in Edinburgh, Mr. Black, had embodied nearly the whole of his paper in his systematic work on Genito-Urinary Diseases. He did not like to gainsay the assertions of the writer of the paper, and yet he could not see how organic disease of the cord (whether this consisted in hardening or softening of its tissues) could be cured in the short time in which some of the cases under his charge had gotten well. He was perfectly willing to acknowledge that he had probably not been so minute in the description of his cases as the importance of the subject demanded;

but he certainly could not doubt that relief of the paralysis and restoration of power to the muscles had followed the measures which he had adopted in his treatment. The cases now amounted to nearly one hundred in all, and as soon as he was able to get the time to do so he hoped to lay them before the profession. Instead of mentioning his own cases on this occasion Dr. Sayre read a number of extracts from letters which he had received from a number of well-known physicians and surgeons in different parts of the country, in which some very successful cases were reported. He spoke of one striking case of his own, however, in which paralysis seemed to be induced by tightly constricting the penis with a string, and which entirely disappeared after the removal of the cord. The necessity of operating when there was an adherent prepuce was now generally admitted, and his success in removing paralysis by this means had now been so great in such a number of cases that he could hardly believe that organic trouble was present in the greater number of them. While, however, Dr. Gray was of the opinion that the genital irritation was only a coincidence, he was very glad to find that he was nevertheless an advocate of operative procedure for its removal. In conclusion, Dr. Sayre related a case which had been sent him by Dr. Kuapp, the distinguished ophthalmologist. The patient was a man of thirty-five, who was excessively nervous, and was apparently suffering from atrophy of the optic nerve. It was found that he had marked phimosis, and, strange to say, after circumcision his vision became perfectly restored, while all the nervous symptoms disappeared.

Dr. F. N. Otis said that he had hoped to find something new in Dr. Gray's paper; but in this he had been disappointed. From the special character of his practice he had not had the opportunity of seeing cases of paralysis like Dr. Sayre; but from his own experience in regard to the effect of irritations about the genito-urinary tract he was perfectly prepared to accept the truth of all the latter's statements on the subject. He had certainly seen a very large number of cases of nervous troubles of other forms arising from this cause, and the records which were now in his possession, he was convinced, would prove beyond a doubt that there was something more than a coincidence in the relief of such troubles by operations upon the genito-urinary apparatus. Thus, in the case of a gentleman who had consulted him on account of profound melancholia he had found a contracted meatus, and though he merely distended the orifice to some extent, this simple procedure had the happiest possible effect in relieving the mental depression of the patient. In a few weeks, however, the trouble returned; but the melancholy was again dissipated in the same way. For three or four years the dilatation was repeated from time to time (always with the effect of temporary benefit), and finally the gentleman consented to have the meatus permanently enlarged by a cutting operation; since which time there had been no return of the trouble whatever. In this and similar cases, Dr. Otis remarked that he recognized a reflex irritation upon the brain. The next case he mentioned was that of a medical student who had epilepsy (suffering from five or six attacks of *petit mal* a day) which seemed to be dependent on a contracted meatus. He had performed three operations upon him altogether; the first two being followed by marked relief, and the third by an entire cure, as there had been no return of the epilepsy

since, and the patient was now an interne in one of the New York hospitals. In another case of the same trouble the patient had phimosis, and complete relief from the epileptic attacks was secured by the operation of circumcision. A third case was also entirely cured by the removal of an elongated prepuce, without other treatment. This was one of weakness in the genital apparatus in which there were seminal emissions and premature ejaculations, and the patient had previously been under treatment for a long time without avail. He could not believe that such cases were mere coincidences; but, on the contrary, felt convinced that these genital irritations did cause reflex troubles in the brain and spinal cord. In concluding, Dr. Otis mentioned a case which was sent to Dr. Taylor as one of hip-joint disease. It was true there was a halting gait; but this was the only evidence of the affection, and as the boy had an adherent prepuce, this was removed; after which considerable relief followed. As there was still some lameness remaining, however, Dr. Taylor brought the case to him, when he found that the patient had a contracted meatus. As it was thought worth while to make the trial, the meatus was extended, and by the very next day all the lameness had disappeared. This case showed that it was important in such patients to examine not only the prepuce, but the meatus urinaris. It was only fair to state, that in the above patient the lame leg was slightly smaller in its measurements than the other limb.

Dr. Frederick Sturgis thought that one distinction had been lost sight of in the discussion, namely, that between reflex paralysis and reflex irritation. The point that the writer of the paper had made was, that in time the paralysis would return in cases such as Dr. Sayre had reported. With regard to the fact that genital irritation gave rise to nervous symptoms of various kinds, he thought that no one who had had any experience in genito-urinary affections, could doubt it. But as to the question of paralysis he would suggest that the verdict of—not proven, would apply to Dr. Gray's cases equally as well as to Dr. Sayre's. He saw no reason, he continued, why men should not be hysterically paralyzed as well as women. Dr. Sturgis then related an interesting case of a female patient under his care at Charity Hospital, on Blackwell's Island, and concluded by thanking Dr. Gray for the statement that he had made in one part of his paper, that an elongated prepuce was always a cause of disease.

Dr. Seguin agreed with Dr. Otis in the opinion that a vast number of nervous symptoms had their origin in genital irritation; yet, in all his experience, he had not once seen a case of paralysis which he could attribute to that cause. At the same time, however, he was very far from denying that paralysis never did arise from preputial irritation. He had hoped that Dr. Jacobi would be present this evening, but as he was not, he would mention that in a recent conversation the latter had stated that he also had never met with such a case; and it was probable that Dr. Jacobi had seen more of children's diseases than any other medical man now in the city. In the course of the paper the writer had stated that Dr. Martin had called attention to the fact that the operation of circumcision seemed to have the effect of narrowing the meatus urinaris, and that this result was frequently noticed in the case of Jews. Dr. Otis, on the other hand, had distinctly denied that this was really the fact; but he himself had noticed this tendency in a considerable number of in-

stances, and he had had quite a large experience with Jewish patients.

Dr. George M. Beard mentioned two conclusions that he had arrived at. The first was that the presence of contracted meatus or redundant foreskin in the vast majority of instances bore no relation whatever to the condition of the nervous system and the general health, and the second, that there never was any immediate result from operation, as far as he was able to judge. Only in a comparatively few cases could the brilliant results achieved by Sayre and Otis be obtained; and on the contrary, he believed that these operative procedures sometimes did harm, instead of benefiting the patient. In one case that he recalled the man had become impotent after an operation for stricture, and no course of treatment that he could devise had been able to restore him. In regard to the Jews he had found them as a class exceedingly liable to nervous disorders; and he concluded, therefore, that circumcision was not much of a protection against such afflictions.

After remarks by Dr. Spitzka and others, the discussion was brought to a close by the reader of the paper.

BIOGRAPHICAL SKETCHES OF DECEASED MEMBERS OF THE OBSTETRICAL SOCIETY OF BOSTON, WITH AN OUTLINE OF THE EARLIER OBSTETRICAL HISTORY OF BOSTON AND VICINITY.¹

BY WILLIAM W. WELLINGTON, A. M., M. D. (HARV.),

Member of the Society, etc., etc.

"Foot-prints on the sands of time."

AMONG the passengers of the Mayflower, who landed at Plymouth in December, 1620, was Dr. Samuel Fuller. He was the first regularly educated physician in New England. He was also a deacon of the church, and his services were in demand both for the souls and the bodies of the Pilgrims.

He must have had a sad time during his first winter in Plymouth. Nearly half of those who landed in December died before spring. We know little of what they suffered, or of what was done for their relief. But the mortality was enough to paralyze the energies of any physician.

Dr. Fuller's practice seems to have been heroic. In a letter to Governor Bradford, dated June, 1630, he writes: "I have been to Matapan, and let some twenty of those people bleed." Good Dr. Thacher is at a loss to determine what disease prevailed among "those people" that required such a loss of blood "in the warm season of June." If the Old Colony pilgrims were subjected to the same treatment as were the unfortunate Matapanese we may perhaps account in part for the remarkable mortality of that first winter in Plymouth.

Dr. Fuller died in the summer of 1633. His wife at a later period became a midwife. We know but little of her except "that she was held in esteem." She probably did most of the obstetrical work in the colony, and as her husband was the first physician so she was the first midwife in Massachusetts.

It is obvious that the obstetrical art must have been almost coeval with mankind. Until recently, among

all nations, and in all times, this art has been practiced by women. From the passages of Scripture where midwives are mentioned it is plain that women were the only practitioners of obstetrics among the Hebrews and Egyptians. The first recorded case of labor was under the care of a midwife, and was a fatal one.² According to the account in the Book of Genesis, "the soul of Rachel departed from her in giving birth to her son Benjamin."

It should be stated to the credit of the Hebrew midwives that, when commanded by the King of Egypt to kill all the male children who should be born under their care, they feared God and refused to obey, and thus "saved the men-children alive." These midwives not only "feared God," but they were bright women. When the king called for them, and asked them why they had not obeyed his command, they promptly replied: "Because the Hebrew women are lively, and are delivered ere the midwives come in unto them."

The Greeks and Romans also confided this important branch to the female sex, a surgeon being occasionally called in desperate cases. But the dangers of child-birth could not have been greatly diminished by the exercise of the best skill which medical men then possessed in this department.

Ancient medical writers lay down sundry rules for guidance in difficult cases of labor; but generally these rules are not of great practical value. Frequent mention is made of midwives. Phanarete, the mother of Socrates, and Aspasia, the friend and companion of Pericles, belonged to this class.

The first obstetrical treatise of which we have any knowledge was written in 1513 by Eucharius Rhodion, a German, and was translated into English, in 1540, by Richard Jonas. It is evident from this book that at the beginning of the sixteenth century midwifery was a sorry art, and that the lot of parturient women in those days must have been deplorable.

The employment of men in the practice of midwifery goes no farther back than the middle of the seventeenth century. In 1663, Madame de la Vallière, the mistress of King Louis XIV., saw fit to place herself in her first confinement under the care of Clement, a surgeon of high reputation. When labor came on he was conducted with great secrecy to the house where the lady resided. Her face was covered with a hood, and the king is said to have hidden himself behind the curtains in order to be sure that everything was right. The same surgeon was employed in the subsequent labors of this lady; his practice being successful other ladies of note were led to employ surgeons on similar occasions, and accoucheurs, as they began to be called, came into repute.

It is a singular fact that while, until the middle of the seventeenth century, midwifery in Europe received from medical men but little attention in comparison with physic and surgery, the reverse was the case in China. There, both physic and surgery are in a low condition; but, for hundreds of years, midwifery has been practiced by a set of men destined, and we may infer educated, for the work by the government. These men are called whenever a woman has been in labor more than a specified number of hours. A proportionate number of such persons is allotted to each district containing a certain population. This course was originally adopted "because annually many women

¹ Read June 11, 1881. Prepared at the request of the President, and printed for distribution among members of the Society only.

² Genesis xxiv. 24-26 may perhaps be considered as recording a still earlier case — of twins.

died undelivered, whose lives, it was thought, might have been saved."

Tracing down the obstetrical history of Massachusetts for a century and a half, from the days of Mrs. Samuel Fuller, of Plymouth, midwife (1633 *et seq.*), we find midwifery, as in European countries, largely in the hands of women. A few of them may be named:

Mrs. Ann Hutchinson, who resided in Boston about the year 1637, had the reputation of being a very skillful midwife. She was banished, however, from the colony for agitating measures against the state.

In the town records of Rehoboth it is recorded that, on the third day of July, 1663, it was voted "that Mrs. Fuller, of Plymouth, be invited to come and dwell among us, to attend on the office of midwife, to answer the town's necessity, which at present is great."

In Blake's Annals of Dorchester is this record: "1705. This year died old Mrs. Wiat, widow, being ninety-four years of age, having as a midwife assisted y^e birth of one thousand one hundred and odd children."

Mrs. Elizabeth Phillips, wife of John Phillips, was born in Westminster, England, and was commissioned by John, Lord Bishop of London, in the year 1718, to the office of a midwife. She came to Boston in 1719, and, according to an inscription on her gravestone, "by the blessing of God brought into this world above three thousand (3000) children." She died May 6, 1761, aged seventy-six years.

A noted midwife of Boston was Ruth Barnaby, who practiced her calling for more than forty years, and died in 1765 at the mature age of one hundred and one years.

Mrs. Ruth Stebbins, born in 1769, is spoken of as an excellent and successful nurse, who labored untiringly to benefit her sex.

It would be interesting to know what success attended the practice of midwifery during this century and a half. The midwives could not have received a medical education worth the name. What little they knew was derived from their own imperfect observation or from the experience of others as ignorant as themselves. They must have been ill-equipped for their work, and probably the work was not well performed.

At any rate, in the latter half of the eighteenth century, the condition of obstetrical practice was such that the medical profession began to think that a change was necessary. Midwifery in Massachusetts was behind the times. In France, since 1663, when Madame de la Valliere had the good sense to employ Julian Clement, this branch had been advancing. An obstetrical department had been established at the *Hôtel Dieu*, in Paris, with public instruction and lectures. In England, Dr. William Harvey, after giving publicity to his discovery of the circulation of the blood in 1628, either from inclination or necessity, engaged in the practice of midwifery. In this way he acquired a practical knowledge of obstetric work, which enabled him to write, and about the year 1653 to publish, his *Exercitatio de Partu*.

Dr. John Nowbray, in 1724, gave public courses of lectures on obstetrics at his house in London. A syllabus of these lectures (twenty in number) was published under the title *Midwifery brought to Perfection*.

Edmund Chapman was the second public teacher of midwifery in London, and is said to have been the

first to describe the forceps, originally invented by Peter Chamberlen in 1610, and kept secret by him.¹

Sir Richard Manningham, in 1739, established a small hospital in Westminster for the reception of parturient women, which was the first institution of the kind in Great Britain. Here he gave lectures and clinical instruction. He was a man of much learning, and published several essays relating to the practice of midwifery.

In 1740 William Smellie came to London from a small country town in Scotland, and for twenty years taught and practiced in that city. He became a celebrated obstetrician, and his name is respected wherever the obstetrical art is cultivated. He was an eminent lecturer, and among his pupils were many who afterwards became distinguished men. He published a treatise on midwifery, and also a volume of fine anatomical plates.

Contemporary with Smellie was William Hunter. Born in Scotland, a pupil of William Cullen, and his partner afterwards, he went to London in 1741. The most elaborate and brilliant of his publications, the *Anatomy of the Human Gravid Uterus*, appeared in 1775, and gained for him a foremost rank among obstetrical writers. In 1778 he published *Reflections on the Section of the Symphysis Pubis*, designed to show the impropriety and inutility of that surgical operation. He gave special courses of lectures on midwifery, and became accoucheur to the Middlesex, and afterwards to the British Lying-In Hospital. He was a man of polished manners and cultivated mind, and was a successful competitor of Smellie in practice. He died in March, 1783.

Dr. Thomas Denman, a pupil of Smellie, and himself an able teacher and writer, says in relation to this period: "The English may be said at this time to have been in full possession of the obstetrical art; books written in the neighboring countries had been translated, public lectures given, and a hospital established, for its improvement, and men of ability and eminence were engaged in its practice."

But in Massachusetts no such progress had been made. Obstetrical work was still largely in the hands of uneducated and unqualified persons, mostly women. When Dr. Holyoke settled in Salem, in 1749, as we learn from his biography, this department of the healing art was entirely in the hands of ignorant midwives, and the physician was only called in extraordinary cases, or to rectify the blunders of these practitioners. The first case in which he was "persuaded to engage" occurred in 1755, after he had been in practice six years, and it was not till four years afterwards that he makes record of a case "which was the first common easy birth that ever came under his management." The necessity of elevating this important branch was immediate and imperative. The time had come for a new departure, and the man came with it. His name was James Lloyd.

Dr. James Lloyd was born at Long Island, in March, 1728. His family was ancient and reputable. One of his ancestors was "Doctor in Physic" to Queen Elizabeth. At an early age he was sent to Stratford, in Connecticut, to get his education; where, and at New

¹ The forceps, or something similar to it, was probably used at an earlier date. An instrument resembling a modern obstetrical forceps was exhumed from the ruins of Pompeii. Avicenna, an Arabian physician (born A. D. 980), after advising a fillet around the child's head to aid in its extraction, says, "when this fails apply forceps."

Haven, he remained several years. At the age of seventeen, he left Connecticut for Boston, and entered upon the study of medicine with Dr. William Clark, one of the noted physicians of his time, under whose instruction he continued for five years. In 1750, at the age of twenty-two years, at the suggestion of the physicians of Boston, and chiefly for the purpose of thoroughly qualifying himself for the practice of obstetrics, he embarked for England, and devoted two years to an attendance on the London Hospitals. Here he had the opportunity to witness the practice of Cheselden and Sharpe, to attend the lectures and private instructions of William Hunter, of William Smellie, and of Joseph Warner, the principal surgeon of Guy's Hospital. He also made the acquaintance of John Hunter, and of other prominent medical men in London. On leaving England he received an autograph certificate from Mr. Warner, closing thus: "As I know him to be perfectly well qualified in his profession, I think it incumbent on me to recommend him in the strongest manner I am capable of."

In 1752 Dr. Lloyd returned to America, and, at the age of twenty-four years, began practice in Boston. Occupying a good social position, fully equipped for his work as physician, surgeon, or obstetrician, he soon gained a high professional reputation, and a large and lucrative business. He is said to have included in the list of his patients every member of the clerical profession in Boston. "He scarcely," says Dr. Thacher, "enjoyed an undisturbed night's rest, and the residents of the street in which he resided as regularly expected to hear, during the stillness of the night, the well-known clatter of his horse's feet as the cry of the watchman."

Dr. Lloyd was the first regularly educated physician in Boston who paid special attention to midwifery. In this branch he manifested cleverness and skill. With signal ability and devotion he led the way in raising it from the low condition into which it had fallen, and placing it where it rightfully belongs, and where we hope it will long remain, in the hands of well-educated physicians. His professional books were not preserved, and no record remains of the amount of his obstetrical practice. It was undoubtedly very large.

He was a lover of horticulture. His estate on Pemberton Hill, previously a gravel-bank, was transformed into a beautiful garden, stocked with choice fruit trees and vines, and adorned with lawns and terraces. It was his habit to carry fruit from this garden to sick children under his care, calling it "God's medicine."

He was a social man, and entertained his friends with a generous hospitality. He kept open house, especially welcoming the visits of merchant captains, who came hither from China, the East Indies, and other distant places. He was the constant recipient of rare and beautiful presents from his foreign guests, and his house was full of such treasures.

He was a man of elegant appearance and manners. He kept fine horses. One in particular, coal-black, of great speed, which he often rode, went by the name of "Steel-Trap." He owned on Long Island a great deal of land, then wooded, which he frequently visited for recreation.

He received, in 1790, from Harvard University, one of its first honorary medical degrees.

He was a conservative in politics, and did not sympathize with the patriots in the early stages of the war of the Revolution. But he was a wise man and kept his own counsel, and so weathered the storm.

He lived to the age of eighty-two years, and died in March, 1810. He was greatly honored, and beloved by the whole community, and his death made a deep public impression. His funeral, with its stately ceremonial, is remembered by some of our elder citizens.¹

The following passage is the close of the funeral sermon delivered on the occasion of his death by Rev. Dr. Gardner, Rector of Trinity Church: "If the value of a citizen is to be estimated by his public and private utility, this town has never, perhaps, sustained a greater loss. For nearly fifty-eight years he was in extensive practice, and there is, perhaps, no physician now living to whom so many individuals have been under professional obligations. The public have lost in him a practitioner of first-rate skill and ability: polished society, a gentleman of consummate good breeding; his country, a firm friend; the poor, a most benevolent benefactor. He has descended to the grave full of years and honor, an ornament to his profession, and an example to his survivors."

Dr. Isaac Rand was a pupil of Dr. Lloyd. He settled as a physician in Boston in 1764, and soon gained distinction. He fully sympathized with Dr. Lloyd in his obstetrical work, and cooperated with him in his attempt to improve the practice of midwifery. He helped to complete what Dr. Lloyd had begun, and had the satisfaction of witnessing the good results of their mutual efforts.

He was one of the petitioners for the incorporation of the Massachusetts Medical Society, and in 1798 became its president. In 1804 he delivered the annual discourse on Phthisis Pulmonalis. He died September 11, 1822.

Dr. John Jeffries graduated at Harvard College with its first honors in 1763, and immediately began his medical studies under the direction of Dr. Lloyd. He afterwards went abroad to perfect himself in his profession, and placed himself under the tuition of eminent physicians in England and Scotland. He attended several courses of lectures on the theory and practice of midwifery by Dr. Colin McKenzie. The University of Aberdeen conferred on him the degree of Doctor of Physic, and he was the first native of the American Provinces who obtained that honor.

He returned to Boston, and entered upon his professional labors. The Revolution came and found him a royalist. When the British evacuated Boston he went too. He served as surgeon in the British army and navy, and afterwards practiced his profession in London. He became interested in midwifery, and at one time thought of confining his attention to this branch. From this, however, he was dissuaded.

He was interested in scientific investigations. He made two aerial voyages, in one of which he crossed the British Channel from Dover to France. From these voyages he gained some reputation and more notoriety.

He once more returned to Boston, in 1790, and resumed practice. He became eminent as a physician, obstetrician, and surgeon. He attempted to give a course of lectures on anatomy, but a mob gained possession of his subject, and carried it off in triumph. He took special interest in midwifery, and left on record nearly two thousand cases of labor. He died in 1819, aged seventy-six years.

¹ Among these may be named the venerable Dr. Edward Reynolds, to whose kindness I am indebted for several facts in relation to Dr. Lloyd.

Dr. Oliver Prescott was another of Dr. Lloyd's students. He was born in Groton, and began practice in his native town. He removed, in 1811, to Newburyport. He delivered the annual discourse of 1813 before the Massachusetts Medical Society, on the Natural History and Medicinal Effects of the *Secale Cornutum* or Ergot. Dr. Prescott was one of the first to suggest the use of this drug to American physicians, and he carefully studied its effects. His discourse was very favorably received, was reprinted in Philadelphia and London, and was translated into the French and German languages.

Dr. Marshall Spring, of Watertown, graduated at Harvard College in 1762, and a few years later settled as a physician in his native town. He became the most famous doctor in the neighborhood. His house, especially on Sundays, was thronged with persons seeking professional advice. We may infer that his obstetrical practice was large from the fact that in 1776 such was his notorious torquism he would have unquestionably been sent out of the country, "if the exigencies of the ladies had not prevented."

Dr. Moses Little deserves mention as an obstetrician of good reputation. He practiced in Salem at the beginning of the present century, and was celebrated as a surgeon and accoucheur. In the year 1808 he was present at the births of precisely one half of all the children born in Salem during the year. He died of phthisis. His wife had died a few years before of the same disease. He wrote for himself the well-known epitaph: "Here lies the body of Dr. Moses Little, who died about forty-five years old."

Phthisis insatiabilis!
Patrem matremque devorasti —
Parce O parce liberis."

Dr. Thomas Kast, the son of a physician, began his medical studies under the care of his father, spent two years in England, where he studied practical midwifery under Dr. Mackenzie, and settled in Boston in 1774. He was an able man, and had a large obstetrical business.

Dr. James Lloyd and his contemporaries, several of whom were his pupils, rendered a service to the art of midwifery which should be gratefully acknowledged and remembered by the medical profession.

We have now reached the close of the second century of our obstetrical history. During this period the practice of midwifery has been gradually passing from the hands of incompetent women to the charge of educated physicians. And it is a noteworthy fact that during these same two hundred years there was a signal improvement in the practice of this branch. It appears from the mortality bills of London, that for twenty years ending in 1680, one in every forty-four delivered died, while for twenty years ending in 1820, only one in every hundred and seven died, so that the number of parturient mothers lost during the last years of the seventeenth century was about double the number lost during the first years of the nineteenth century. It is perhaps fair to infer (although we have not the statistics at hand to prove it) that a similar improvement took place in other cities and large towns.

The medical department of Harvard University was organized in 1782. In November, 1815, Walter Channing was announced as the first professor of the theory and practice of midwifery.

No doubt midwifery had been taught in the Medical School to a certain extent during the thirty years pre-

ceding Dr. Channing's appointment. The professors of anatomy and of the theory and practice of medicine would naturally give a few lectures upon it in their annual courses. But it had evidently been considered a subordinate branch.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

THE ARNOLD ARBORETUM.

NOVEMBER 14, 1881. DR. T. B. CURTIS presided. The meeting being called to order, the chairman stated that a petition to the city government requesting its acceptance in behalf of the city of Boston of the Arnold Arboretum as offered for a park by Harvard College was awaiting the signatures of the members. The chairman requested Dr. Williams to say a few words to the Society in regard to the advantages of the arboretum as a park. In compliance Dr. Williams entered upon some details concerning the character of the arboretum itself, describing its situation and surroundings, the beauty and extent of the views from the more elevated points, the facilities afforded by a running brook for artificial bodies of water, the pleasure and instruction offered by the beauty and variety of the trees, a large number of which are already well grown. Dr. Williams then reverted to the extremely favorable terms of the offer made by Harvard College, and to the very small outlay and annual charge for which the city of Boston had the opportunity to make so desirable an acquisition. Dr. Williams's remarks closed with an allusion to the enigmatical apathy of some of the members of the city government in responding to the offer of the college, an allusion which seemed to express the sentiment of the Society.

PYEMIA.

DR. F. MINOT read a paper entitled *A Case of Pyæmia with Obscure Origin*. Vide page 485 of the JOURNAL.

DR. H. I. BOWDITCH inquired if an examination of the blood had been made to see if there was pus in the blood, and questioned the propriety of calling the disease pyæmia unless there was evidence of pus in the blood.

DR. MINOT replied that no examination of the blood had been made.

DR. GOSS referred to a case somewhat similar to that of Dr. Minot's, reported by Dr. Cook before the Massachusetts Medical Society.

DR. E. G. CUTLER said that Dr. Minot's case resembled one reported by Dr. Cook before the Massachusetts Medical Society a year and a half ago. The heart and large vessels were carefully examined for evidences of ulcerative endocarditis, but nothing of the sort was found. Similar cases had been reported in Germany, one observer having met with no less than six. In the report on pyæmia to the Pathological Society of London about a year ago these cases were included in a distinct class.

DR. FITZ suggested the view that the case may have been primarily one of rheumatic arthritis, and that the infective element was later introduced through the abscess near the toe.

The various cases of infective osteo-myelitis and

periostitis reported within the past few years suggested the possibility that infective material might even be brought into the body without any obvious external wound. The hypothesis that the respiratory and intestinal tracts might serve as channels for absorption under such circumstances had been presented, and was not without evidence in its favor.

It did not seem necessary to demand a common local origin for the abscesses in the case reported. Although the condition of the lungs indicated a probable embolic affection, it was not equally probable that the mammary abscesses were of like origin. There was no sufficient evidence of a source for arterial embolism, and it seemed highly improbable that emboli of venous origin, of sufficient size to produce such disturbances, could have passed through the capillary plexus of the lungs.

The axillary abscesses in turn were directly attributable to the suppuration in the mammae, through the medium of the lymph circulation, and did not demand an embolus as a cause.

The case was an exceptional one in many respects, and as one of pyæmia could not be exclusively classified under any one of the sub-divisions usually recognized.

DR. CHEEVER said that he had seen cases in children which he had supposed to be pyæmia, though not proved by autopsies, caused by fractures and bruises.

In these cases no cause of infection could be discovered, and the patients died after some weeks with symptoms of pyæmia.

Dr. Cheever also referred to a case reported by Dr. Hodges some years ago, where a boy, while sliding down hill, received a blow on the nates, without any open wound or abrasion, and yet symptoms of pyæmia followed, and death ensued.

In none of these cases was there any abscess at the seat of injury. Dr. Cheever supposed it possible that some change from injury to the veins, from the blow, might take place, followed by the formation of thrombi and their subsequent detachment.

to do is already answered in part, — more in detail, — he gives first the anatomy of each portion of the nervous system beginning with the brain. This anatomical review is not exhaustive, that could not be expected, but it is sufficient for understanding the physiological and clinical sections which follow. The account of the functions of the different parts of the brain is given with reasonable fullness, and is followed by a section upon the surgical bearings of cerebral topography. The part devoted to the brain closes with sections upon the clinical subdivisions of the brain and a summary of the physiology of the cortex, and the effects of disease located in that portion of the cerebrum.

This will perhaps sufficiently indicate the plan of the work. The same general plan is followed in regard to the other divisions of the nervous system. There is very little to criticise in the execution of this plan, and the descriptions are reasonably good. Only a few minor errors are to be found, which are not worth mentioning. The illustrations are partly original and partly derived from a variety of sources, and are very important aids to understanding the text. The book is especially valuable as bringing together in convenient relations facts and inferences which aid greatly in forming correct diagnoses in nervous disease.

Indigestion, Biliousness, and Gout in its Protean Aspects. Part I. Indigestion and Biliousness. By J. MILNER FOTHERGILL, M. D. New York: D. Appleton & Co. 1881.

Dr. Fothergill has produced a very readable, if not a very original, book on subjects concerning which the last words are very far from having been spoken. Advances in physiology and chemistry necessitate a frequent revision of theories concerning the digestive processes and the causes of mal-assimilation.

The present volume, or part first of the subjects embraced by the title-page, offers a chapter on natural digestion; three chapters devoted to primary indigestion; two chapters on secondary indigestion, under which head in the first are included neuro-sal, reflex, cardiac, and toxic indigestion, the second considering indigestion as an intercurrent affection; the next chapter treats of diet and drink; and the remaining four of the functions of the liver, and the phenomena of liver disturbance with its medicinal and dietetic treatment.

The volume closes with an appendix on the failure of the digestive organs at the present time which draws rather a gloomy picture of the future, if in truth there be any for the Anglo-Saxon race on both sides of the Atlantic unless some radical changes ensue in the nourishment and rearing of infants. The author's prophetic eye sees the disembodied spirits of Indian braves gloating over the summer mortality tables of our cities, and dancing a retributive war dance over the graves of the little victims of diarrhoeal diseases.

Dr. Fothergill's ready pen has served him well in setting forth what he has wished to say about the subjects embraced in his book, and he has shown good judgment in selecting freely and with due acknowledgment from the materials of other writers. The chapter on suitable forms of food owes much to Dr. Wm. Roberts, and those on the liver and its disturbances to Dr. Murchison. Lithæmia and the lithic acid diathesis receive attention in these chapters on the liver,

Recent Literature.

The Applied Anatomy of the Nervous System, Being a Study of this Portion of the Human Body from a Standpoint of its General Interest and Practical Utility, designed for Use as a Text-Book and a Work of Reference. By AMBROSE L. RANNEY, A. M., M. D. With Numerous Illustrations. New York: D. Appleton & Co. 1881. Pp. xxvii., 500.

This is a useful book, and one of a novel design. In brief the object has been to include in one volume the anatomy and physiology of the nervous system, at least so much of these as may be necessary to explain the clinical points depending upon these two departments. There is no complete description of diseases, pathology and treatment and ætiology are either entirely omitted, or only incidentally referred to when thereby the chief object of the book can be promoted.

The author says in his preface that "it is not to be expected that many points stated in the physiology, symptomatology, or even in the anatomy will not be open to discussion, and, possibly, to contradiction." This might be said of almost any department of medicine.

The question as to what the author has undertaken

and will probably come in for a share of discussion more proportionate to their present popularity in Part II., which will treat of gout in its protean aspects.

On the Antagonism between Medicines and between Remedies and Diseases. By ROBERT S. BARTHOLOW, M. D., LL. D. New York: D. Appleton & Co. 1881.

This work, which is a compilation of six lectures delivered at the expense of the Cartwright fund, was first presented in writing in the *New York Medical Journal* for January and February, 1881, and is now reproduced as a separate memoir.

These lectures present the antagonism of certain drugs, for instance, as between atropia and physostigma, pilocarpin, quinia, aconite, phytolacca, muscarin, and bromal-hydrate; chloral with strychnine, prototoxin, and atropia, as well as that most commonly known antagonism between opium and belladonna. Then, following the lead of other recent therapeutical writers, he presents the view of drugs which antagonize certain physical functions, such as that of cardiac pulsation and respiratory movements, also the antagonism of drugs to inflammatory processes, with an explanation on this basis of their selective action. This kind of therapeutical literature is, in our opinion, very valuable to the progress of scientific medicine, and we sincerely hope that such original workers as Professor Bartholow will continue in the field of experimental therapeutics, and push the study of physiological action of drugs as far as possible.

We cannot do better in presenting the character of the present work than by copying a few sentences from the lecture of "Antagonism between Remedies and Diseases." "As respects diseases of particular organs, we find that antagonism is exerted in two modes. . . . The antagonism by similarity is the action of the remedy on the same tissue, and with similar objective signs; but the effect on the tissue is opposed, for the disturbance produced by the remedy must necessarily be different in kind from that produced by the disease. . . . In the treatment of inflammation we have an illustration of how the successive steps in the development of the process are in turn subjected to the action of opposing agents. As this process enters largely into the structural alterations produced by disease, we are thus encouraged in our efforts to obtain results by the application of the law of antagonistic action."

The Harrowgate Waters, Data Chemical and Therapeutical, with Notes on the Climate of Harrowgate. By GEORGE OLIVER, M. D., Member Royal College of Physicians of London, etc. London: H. R. Lewis. 1881.

This memoir contains a description of an English inland watering-place having an elevation of between 400 and 600 feet above sea level, very favorably situated for a dry and stimulating climate, meteorological observations for ten years showing that only an annual average of 156 days are rainy, while at Leamington, also an inland town, this average is 169 days, and at Torquay, by the seaside, this average is 190 days. The mortality rate among the residents of Harrowgate is

only 12.1, whilst, including also the population and the number of temporary visitors, it is only 16.5 per 1,000; the author calls attention to the fact that these "visitors are, as a class, more ailing than such as resort to seaside and other watering-places merely for recreation."

The contra-indications to a residence (especially in the cold months) in this town are chronic pulmonary disease, progressive organic disease, irritability of mucous membranes, and a highly sensitive and irritable state of the nervous system. Dr. Oliver describes the mineral waters of Harrowgate as like those of Homberg, Kissingen, Kreusnach, etc., that is, "non-thermal," but by an artificial contrivance the sulphurs, Kissingen, and chloride of iron waters are warmed and served at any desired temperature. The chemical constitution of the Harrowgate waters is given in detailed table form. Our author presents all these, as well as the therapeutical points, most faithfully, and if we could receive similar information about other natural springs the result would prove of immense value to our profession.

These waters are classified as follows: 1st, Sulphur; 2d, saline sulphur; 3d, iron; 4th, saline chalybeates; 5th, sulphated chalybeates.

Hydrophobia. By HORATIO R. BIGELOW, M. D. Philadelphia: D. G. Brinton. 1881. 1 vol., 8vo, pp. 154.

This is a monograph intended for the profession and the public. The author's aim has been to embody in compact form the literature pertaining to the subject of hydrophobia, and he does not profess to offer any original investigations. The literature of the subject is unquestionably very extensive and widely scattered, but the author, living in Washington, has certainly had in the library of the Army Museum unusual facilities of access to it, and he has succeeded in condensing a great deal into the space at his command. The final chapter on the most recent views of the pathology and treatment might perhaps have been lengthened with advantage so as to include a fuller reference to the observations of Drs. Gowers and Coats, verified by those of Dr. R. H. Fitz in this country.

The book may be consulted with advantage by those wishing to get a general idea of what has been written upon the subject of hydrophobia.

Dyspepsia and How to Avoid It. By JOSEPH F. EDWARDS, M. D. Philadelphia: Presley Blakiston. 1881.

Starting with the premise that the majority of cases of functional derangement of digestion are due to defective rules of eating, Dr. Edwards has written another primer, which he thinks will convince those readers who follow it to the end that very few persons know how to eat; at the same time, however, he promises to counteract the effect of this depressing discovery by teaching them how they ought to eat. We do not doubt that any one both willing and able to carry out all the good rules and wise counsels given by the writer without thinking too much of his internal processes will not regret the purchase and perusal of this primer.

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EPIDEMIC CONVULSIONS.

MATERIALS for a "Medical History of Kentucky" had been collected by the late Dr. Yandell, of Louisville, and among them his son, Dr. L. P. Yandell, found some which he has put together in the form of a paper on epidemic convulsions in the last number of *Brain*. This paper recalls vividly the very peculiar religious and social phenomena which presented themselves in the then Western States and territories at the beginning of this century, and were nowhere so extravagant as in Kentucky and Tennessee. The outward and visible process of conversion or "getting religion" under strong mental excitement and emotional stimulants has exhibited itself at different epochs and in various countries, and the resulting phenomena, when divested of supernatural signification, have been shown to be susceptible of pretty accurate analysis and no-ological classification. Dr. Felix Robertson, of Nashville, Tennessee, published in Philadelphia, in 1805, an essay on chorea, devoted to a study of the same extravagances of early Methodism in the States above-mentioned. His description of the religious influences which favored these outbreaks is very graphic. "I suppose," he says, "there are but few individuals in the United States who have not at least heard of the unparalleled blaze of enthusiastic religion which burst forth in the Western country about the year 1800, but it is, perhaps, impossible to have a competent idea of its effects without personal observation. This religious enthusiasm traveled like electricity, with astonishing velocity, and was felt almost *instantaneously* in every part of the States of Tennessee and Kentucky. It often proved so powerful a stimulus that every other entirely lost its effect or was but feebly felt. Hence that general neglect of earthly things which was observed, and the almost perpetual attendance at places of public worship. . . . At these meetings many remained on the spot the whole or the greater part of four or five days worshipping their Maker almost incessantly. The outward expressions of their worship consisted chiefly in alternate crying, laughing, singing, and shouting, and at the same time performing that variety of gesticulation which the muscular system is capable of producing. It was under these circumstances that some found themselves unable by voluntary efforts to suppress the contraction of their muscles. . . . The disease no sooner appeared than it spread with rapidity through the medium of the principle of imitation. . . . It attacks

both sexes and every constitution, but evidently more readily those who are enthusiasts in religion and females; children of six years of age and adults of sixty have been known to have it, but a great majority of those affected are from fifteen to twenty-five. The muscles generally affected are those of the trunk, particularly of the neck, sometimes those of the superior extremities, but very rarely, if ever, those of the inferior. The contractions are sudden and violent, such as are denominated convulsive, being sometimes so powerful, when in the muscles of the back, that the patient is thrown on the ground, where for some time his motions more resemble those of a live fish when thrown on land than anything else to which I can compare them."

In the novel called *The Circuit Rider*, whose author, himself at one time a preacher, had traveled through these States, and the scene of which is laid in Kentucky at this period or a little earlier, the same nervous disorders are frequently referred to. On one occasion a recalcitrant young unbeliever at a meeting is thus apostrophized by the earnest evangelist: "Young man," roared the preacher, "you are hair-hung and breeze-shaken over that pit that has no bottom!" At another stage of the story a scoffing uncle is being exhorted to repentance at a meeting by a lately-converted nephew, with the following result: "He listened a minute to Kike's exhortation, and the contrary emotions of alarm at the thought of God's judgment and anger at Kike's impudence contended within him until he started for his horse, and was seized with that curious nervous affection which originated in these religious excitements and disappeared with them. He jerked violently, his jerking only adding to his excitement, which in turn increased the severity of his contortions. This nervous affection was doubtless a natural physical result of violent excitement, but the people of that day imagined that it was produced by some supernatural agency, some attributing it to God, others to the devil, and yet others to some subtle charm voluntarily exercised by the preachers. Lumsden went home jerking all the way, and cursing the Methodists more bitterly than ever."

Dr. Yandell, quoting from McFerrin's *Methodism in Tennessee*, says of Granade, a celebrated preacher of this period. He was a stormy orator who drew great crowds wherever he went; his person was commanding, and with a sounding voice and most impassioned manner, his oratory produced startling effects; so violent was his manner that he often broke down the stands erected for him in the woods. Of the results of this oratory Granade himself says that at one of his meetings the people fell as if slain by a mighty weapon, and lay in such piles and heaps that it was feared they would suffocate.

As an example of another kind of influence potent at the period, as "another feature of these excited meetings, which served still further to intensify the feelings of the people who attended them for days and nights together," Dr. Yandell refers to the part taken in them by the children, and illustrates it again from

McFerrin. Thus a boy who appeared to be about twelve years of age is described as having retired from the stand at Indian Creek, Ohio, during the sermon, and mounting a log, and raising his voice to a high pitch, soon had nearly all the congregation with him. A man on each side held the boy up and he spoke for about an hour. When quite exhausted, and language failed to give utterance to his emotions, the little orator raised his hands, and dropping his handkerchief, wet with tears and perspiration, cried out, "Thus, O sinner, shall you drop into hell unless you forsake your sins, and turn to the Lord." At that moment some fell like those who are shot in battle, and the work spread in a manner which human language cannot describe.

Influences like these acting upon a simple and self-concentrated people, which even affected the robust and vigorous, were sure to produce a variety of nervous disorders among the weaker and more superstitious portions of the community. The form which these disorders most frequently took was called by the people themselves the "jerks." It has been already referred to in the quotation from The Circuit Rider, and was evidently choreaic in character. In the paper in *Brain* they are spoken of thus: The jerks, as they were termed, presented some novel and remarkable features. The first form in which these spasmodic movements made their appearance was that of a simple jerking of the arms from the elbows downward. When they involved the entire body they are described as something terrible to behold. The head was thrown backward and forward with a celerity that alarmed spectators, causing the hair, if it was long, to crack and snap like the lash of a whip. Sometimes, says the Rev. B. W. Stone, the subject was affected in a single member of his body, but at others the spasms were universal. When the head alone was affected it would be jerked from side to side so quickly that the features could not be distinguished. When the whole system was affected, he continues, I have seen the person stand in one place and jerk backward and forward in quick succession, the head nearly touching the floor behind and before. All classes, saints and sinners, the strong as well as the weak, were thus affected. I have seen some wicked persons thus affected, and all the time cursing the jerks while they were thrown to the earth with violence.

Another writer, an eye-witness, says of the "jerking exercise:" Nothing in nature could better represent this strange and unaccountable operation than for one to goad another alternately on every side with a piece of red-hot iron.

But the "jerks," though the most frequent, were by no means the only phenomena. These disorders, Dr. Yandell tells us, assumed many other grotesque forms besides those which have been described. The subject often rolled over and over on the ground or ran violently until worn out with exertion. Hysterical laughter was another modification. Instances of laughter were only occasional at first, but it grew, until in 1830 the "holy laugh" was introduced systematically as a part of religious worship. Sometimes

half the congregation, apparently in the most devout spirit, were to be heard laughing aloud in the midst of a lively sermon. As the excitement grew the infatuated subjects took to dancing, and at last to barking like dogs. Such were called the *Barkers*, and it was supposed they wished to indicate by their outward form the degradation of their human nature.

We learn from a reliable witness that so late as 1858 he himself had seen thousands of people affected by the "Avoca jerkings," under the influence of exciting preaching in Central Illinois.

The various nervous disorders described by eye witnesses and historians of the period may be classed according to the phenomena observed as sympathetic hysteria, chorea, or imitative epilepsy, and recall similar outbreaks among other people in other countries at different periods under the influence of strong religious excitement, though it may be questioned whether the epidemic form has ever been so marked and widespread as it was in Kentucky and Tennessee, or the results quite so extravagant. The nervous phenomena coincident with the different phases of the dancing mania in Europe in the Middle Ages, with the career of the Camisards and Convulsionnaires in France, with the gloomiest period of Presbyterianism in Scotland, with the Jumpers in England, with the dancing and howling dervishes among Mohammedans, and within a few years those exhibited in outbreaks among superstitious villagers in the mountain districts of France and Italy, all these phenomena belong to the same class of affections as those accompanying the spread of early Methodism during the first years of this century and the latter half of the last in parts of this country. They present an interesting field for the cultivation of the neurologist and one which may be made more profitable to him than to the theologian, and, as we have said, nowhere were there more surprising exhibitions of these disorders than in Kentucky.

As to the nature of the phenomena, as there observed, Dr. Yandell draws the following conclusions:—

The convulsions once started in a congregation spread quickly through it, until all the fit subjects were convulsed. Repetition greatly increased the proneness to the disorder, which was invited by the masses on the supposition that it was a true religious exercise.

The everted muscular movements all come under the head of morbid reflex action. By the continued religious fervor the central portions of the brain, the immediate seat of emotion and feeling, became inordinately excited. The impression transmitted downward to the spinal cord threw the muscles of voluntary motion into convulsions. Sensibility, which has its seat in the sensory ganglia, was generally annulled. When the hemispheres became involved the subjects fell into a state of unconsciousness or coma. In this abnormal condition of the nervous centres, the bare recollection of the distressing scenes was sufficient in many cases to excite the convulsive movements. The former belong to sensori-motor actions; this last is an example of ideo-motor movement; instances of which are afforded by the act of vomiting, which may be

caused by the recollection of disgusting sights or odors. The principle of imitation accounts for the rest. The great nervous centres, in multitudes of people, being in a state of polarity, any unusual exhibition of feeling would throw the more excitable into spasms; and the affection would then spread by sympathy, as hysterical convulsions and chorea are known to spread among girls at boarding-schools. And as fear has checked these, the epidemic convulsions were checked by reason and common-sense, and finally ceased under the law which limits all violent action.

THE ARNOLD ARBORETUM. IS IT TOO CHEAP FOR A PARK?

THE timely remarks of Dr. H. W. Williams before the Medical Improvement Society remind us that among the many park schemes which have been proposed for the city of Boston during the past ten years, the Arnold arboretum is conspicuous as the only offer of assistance which has been made to the city treasury from outside parties.

It is assumed that parks make any city more healthy and attractive, the only question which seems to trouble the minds of the present city fathers is whether they can afford such desirable luxuries, and in considering this they do not seem to have given full weight to the advantages which the arboretum would offer.

Under the will of the late Benjamin Bussey Harvard College obtained a gift of some two hundred acres of land in West Roxbury, on which they were required to establish "a course of instruction in practical agriculture, in useful and ornamental gardening," etc., and a considerable endowment was made by the same will to found the Bussey Institution for this purpose.

Some years later James Arnold, of New Bedford, left a sum of money, which was given to the president and Fellows of Harvard College for the purpose of founding "the Arnold Arboretum, which shall contain as far as is practicable all the trees, shrubs, and herbaceous plants, either indigenous or exotic, which can be raised in the open air at the said West Roxbury."

Harvard University now receives an income from this fund of about eight thousand dollars a year, which is devoted to the purposes named and to the salary of a professor of arboriculture, who is also curator of the grounds, and from the two hundred acres of the Bussey estate they have set aside a tract of some one hundred and twenty acres for the arboretum.

The proposition at present is for the city to take all this one hundred and twenty acres, and to buy in addition some forty-eight acres of adjoining property which shall also be used for the purposes of the arboretum, to lay out a driveway through the property, and to supply a sufficient police force to protect it.

The college agrees on its part to allow the city to take the one hundred and twenty acres with the exception of some twenty acres reserved for nurseries, etc., without making any claim for damages; it agrees to maintain the grounds, trees, etc., without expense

to the city, and to throw the whole arboretum open to the public under such regulations as will prevent willful damage; in other words it really agrees to give the city one hundred and twenty acres of land for nothing, and to bear the larger part of the cost of developing and beautifying the property.

It is estimated that the cost of purchasing the additional forty-eight acres of land would be sixty thousand dollars; to this must be added the cost of laying out the roads, seventy-four thousand dollars, which with water pipes, sanitariums, etc., would make a total of say one hundred and fifty thousand dollars; beside this the annual cost of police and care of roads would be something like ten thousand dollars a year.

It has been objected that the arboretum will not supply the place of a true park, since there will be no place for athletic games and picnic grounds, that the expense of the driveways will be very great, and that the plan will be for the advantage of the college rather than the city.

On the contrary, twenty-two acres are to be reserved for a recreation ground, where the great public can picnic to their hearts' content. As to the cost of driveways, *this is the first estimate which has been made in any of the park schemes of the probable expense to which the city will be put in order to develop the property*; it is not in itself excessive, but if the same figuring was to be applied to the other and larger territories, which it is desired to take, it would make a bill such as even the boldest alderman would shrink from. The last objection is easily answered by the statement that the college already has the one hundred and twenty acres of land and an income of eight thousand dollars to develop it; it does not require a grant from the city in order to establish the arboretum, for that is already established; it merely says, We cannot afford with our present means to open our grounds freely to the public, for our income must be spent in developing the Arboretum and we have no money for police or for constructing roads, but if the city will assume this expense we will open our grounds freely to the public and will show them a museum of forestry such as does not exist elsewhere in the country, and which in the course of a few years will be attractive, not only on account of its natural beauty, but which will be a most instructive park in calling to public notice all the possibilities of forest culture in our changing climate.

By all means let the city have lungs, and good ones, with plenty of air space for breathing, under any circumstances, but especially when the performance of the pulmonic functions can be secured for a very moderate outlay. And when such an offer as this is made, we hope that the good sense of the city fathers will lead them to accept it.

MEDICAL NOTES.

— A woman has been fined five pounds and costs in Liverpool for letting a house which had been tenanted by a family in which there had been scarlatina, but which had not been properly disinfected afterwards.

— In the current number of *Brain*, Dr. Alexander James, Lecturer on the Institutes of Medicine in Edinburgh, states that the experiments designed to illustrate his paper on the Reflex Inhibitory Centre Theory, were, owing to legislative enactments and official obstruction in England, performed on the continent, under rather disadvantageous circumstances, at the beginning of last summer session. The experiments involved the sacrifice of a few frogs, probably not more than half a dozen, and have a direct practical bearing on our interpretation of the symptoms of disease, besides more remote relations of great significance.

— Professor Max Müller has been unanimously elected Curator of the Bodleian Library, in the vacancy occasioned by the decease of Professor Rolleston, F. R. S.

— The total number of persons in receipt of public relief in Paris last year was 385,148, of whom 137,518 were received in the hospitals, almshouses, and orphanages; while 219,500 were relieved at their own homes, and 28,000 children put out to nurse in the country.

— Dr. Foulis, of Glasgow, died on the afternoon of October 31st from a severe attack of diphtheria, contracted, it is feared, while performing the operation of tracheotomy on a patient suffering from the affection. Although a comparatively young man, Dr. Foulis had already made his mark, both in pathology and in the special branch of surgery which he had taken up, namely, affections of the throat. His successful cases of extirpation of the larynx had given him world-wide celebrity. In Glasgow, he was regarded as one of the most rising men in the profession.

— Dr. Alfred H. McClintock, of Dublin, who presided at the Section of Obstetrics at the late International Medical Congress, died last month quite suddenly of heart disease at the age of sixty.

— United States Consul Heap, at Constantinople, reporting to the department of state relative to the appearance of cholera at Aden and Mecca, refers to the adoption of sanitary measures heretofore published, and says: "The plans proposed having been deemed inadequate by the Sultan, an order was issued convening the council of health at once, and directing the issue of a decree requiring that all arrivals from infected countries shall be subjected to a long quarantine at a suitable locality outside the straits of the Mediterranean (Dardanelles). The city of Constantinople is in bad condition. Vast quantities of filth, the accumulations of years, are to be found in the heart of densely inhabited quarters. The location of the city, however, is such that, with its ample water frontage and deep and rapid current of the Bosphorus, it should be one of the best drained cities in the world. On the contrary, it is one of the worst, and it is doubtful whether the authorities will be able to place the city in such a condition as will prevent an epidemic of cholera in case the disease makes its appearance. What has been said of the condition of Constantinople is true of all the cities and towns of Turkey. Many of them, indeed, are in worse condition, and when the pestilence starts up on its march northward, there

will be no lack of food upon which it can feed and grow.

— The Forfarshire Medical Association had under consideration at a recent meeting, and for the purpose of promoting uniformity of practice amongst its members in their management of infectious fevers, the questions of period of incubation and duration of infectiveness, and they decided to adopt for practical purposes, and without going to extremes, the following periods of incubation: For small-pox, typhus, whooping-cough, measles, fourteen days; scarlet fever and diphtheria, eight days. Convalescents from these fevers should be considered as still liable to give off infection until the expiry of a period of time, counting from the beginning of the illness, ranging for each fever as follows — whooping-cough eight weeks, scarlet fever seven weeks, measles six weeks, diphtheria six weeks, typhus four weeks, small-pox fourteen days after disappearance of scabs. — *Lancet*.

Miscellany.

OBITUARY: WILLIAM FURNESS JENKS, M. D.

At the November meeting of the College of Physicians of Philadelphia, the death of Dr. William F. Jenks, on the 31st of October, 1881, was announced, and the secretary was directed to transmit the appropriate resolutions to his bereaved family.

Dr. Jenks was born May 15, 1842, and consequently was in his fortieth year when he succumbed to the disease which had been undermining his strength for the last seven years. Graduated at Harvard in 1863, and three years later (1866) at the Department of Medicine at the University of Pennsylvania, he subsequently studied abroad in Berlin, Vienna, London, and Edinburgh, paying especial attention to obstetric medicine. In 1870 he returned to Philadelphia and engaged actively and enthusiastically in medical practice and in teaching. He organized the obstetrical department of the Philadelphia Dispensary, and for several years worked very faithfully in connection with it. He associated himself with the Chant Street medical organization, situated in the rear of the old University buildings, and took great interest in lecturing and quizzing students. In the Pathological and Obstetrical Societies of Philadelphia he was an active and valued member. In 1871 he was elected a Fellow of the College of Physicians, and in 1874 was appointed to prepare a course of lectures under the Müller bequest. These lectures were never delivered. An insidious disease, against which he had been manfully struggling, now became painfully evident, and the sad fact became known to his friends that he was doomed, a victim to pulmonary consumption. The course of lectures that he had outlined on a subject connected with the pathology of the pelvic organs in the female was never more than projected; his teaching was abruptly discontinued, his literary work ceased; his main object in life now was the care of his health, living a very retired existence with his little family, and he certainly prolonged his life for several years by travel and wisely husbanding his strength. When his health finally broke down, in 1874, he gave up a position in which he had become widely known, that of editor of the *American*

Supplement to the *Obstetrical Journal* of Great Britain and Ireland, published by Mr. Lea, the duties of which he had performed with much credit for several years. He was also surgeon to the State Hospital for Women, a charity in which he was warmly interested; this position he retained up to the time of his death.

Dr. Jenks was of slight frame, nervous, and quick in his movements, and was equally quick in his mental processes. A man of culture, of charming address, a good lecturer, ever ready to explain to students, his zeal and ability were only limited by his physical strength. Rapidly rising in his profession, his superiority was acknowledged, and he had already become so prominent in 1872 that he was elected a delegate to the American Medical Association which met in Philadelphia in that year, and of which he was a permanent member at the time of his death. The Simpson forceps were introduced into this country by Dr. Jenks, and mainly through his advocacy have the profession here been led to appreciate their merits. His contributions to medical literature are principally found in the transactions of the Societies to which he belonged and in the first two volumes of the American Supplement to the *Obstetrical Journal*; they were not numerous nor pretentious, but they uniformly exhibited marked ability. He also contributed to other journals, for instance, a very able review of Schroeder's Midwifery in the *American Journal of the Medical Sciences*.

Dr. Jenks married the daughter of John H. Towne, who is widely known as the generous founder of the Towne Scientific School of the University of Pennsylvania. Two children resulted from this union, both of whom are still living at Jenkinstown, near Philadelphia, where their father died. Thus ended in seclusion and comparative inactivity a life at one time so full of promise that all the rewards and honors of the profession seemed in immediate prospect. After years of toil and faithful preparation Dr. Jenks, in the midst of success, was compelled to relinquish every hope, summoned to lay down his life-work ere it was scarcely begun. Truly says the philosopher, "All through the life of a pure-minded but feeble-bodied man his path is lined with memory's grave-stones, which mark the spots where noble enterprises perished for lack of physical vigor to embody them in deeds."

PROFESSOR BOUILLAUD.

Professor Bouillaud died in Paris October 29th, at the age of eighty-five. His father was a tile maker in a little country village, Bragette. It was through his uncle, who held a medical post in the army, that of surgeon-major, that his attention was directed to the study of medicine. He took his degree in 1823 and was a contemporary and a competitor in the *concours* of the Paris school and hospitals of Velpeau, Trousseau, Piorry, Bernard, and other medical celebrities.

In 1831 Bouillaud gained the professorship of clinical medicine attached to the Charity hospital, and it was then that he made his reputation as a writer and a teacher. His advocacy of repeated and almost universal blood-letting in disease will be recalled by those who followed his clinic. He was the author of several works, the most remarkable of which was that on diseases of the heart, in which he was the first to point out the intimate connection that existed between val-

vular disease and rheumatism; that the former was not a mere coincidence or complication, but that it was one of the most constant manifestations of the rheumatic taint. He interested himself somewhat in politics at one stage of his career, and was twice returned to the Chamber of Deputies, but he was more happy in his professional than in his political contest. Professor Bouillaud was president of the International Scientific Congress held in Paris in 1867. He was a member of the Academy of Medicine, of the Institute, and a commander of the Legion of Honor.

ABUSE OF THE VAGINAL SPECULUM.

A FEW days ago a gentleman in a highly respectable position in society in the north of England called on me for advice in the following peculiarly painful circumstances. He averred that through the use, or rather the abuse, of the vaginal speculum he had lost, as he feared forever, the affection of his wife, who is, I may say, an amiable and accomplished lady. His case interested me so much that I asked his permission to publish it in the *Lancet* [from which we extract]. This he at once agreed to; not only so, but he wrote out a history of it himself, so that I shall for the most part allow him to tell his own story.

No instrument is of more importance to a medical practitioner than the vaginal speculum; still the facts narrated below must impress us with a grave sense of the responsibility which at all times rests upon us in the use of the instrument; and how, without any intention on our part, the peace, the happiness of a household, may be broken up forever. But let the chief, not the only, "victim" speak:—

"I was married to a charming woman. Our happiness continued fifteen years. She became the mother of a family. Then some little ailment set in, which was described to me as a simple case of ulceration. The os uteri was touched with nitrate of silver very frequently during a period of three months, and then she was pronounced completely cured. For that three months I was strictly abstinent. She became warmly attached to her doctor, saying he had saved her life, though he generously enough admitted that it was only a common case, and that her life never was in danger. Then, as time wore on, there were more ulcerations, more examinations, and all the rest of it; accompanied by periods of abstinence on my part, one of them lasting about nine months. During the period of this treatment I, in some unknown way, lost my wife's love. She seemed never happy unless when from home and seeking after advice, which she had from half a dozen doctors. I put my foot down at length on one of her proposed arrangements, and then for several years there was a vacuum, which was ultimately filled by another, and non-medical, influence, that induced her to leave my roof, and resolve on final and permanent separation. Thus the social ruin of a large family—of daughters and sons—seems due to the use of the speculum, and the estrangement caused by the injunctions of 'ladies' doctors, which, I am told, they never impose upon themselves."

Such is my patient's narrative. To all appearance the lady is in the best of health, though, professionally, I have not seen her. What is my patient to do? For the sake of his family he is very unwilling to expose them in a law-court. He has tried to win back his

own and her love and affection. He ascribes the origin of all his trouble, rightly or wrongly, to the speculum and abstinences. We know from experience that when the use of it, or the catheter, is continued for some time to nervous, hysterical ladies a morbid craving for its continued use is created; and therefore we cannot be too discreet in the use of these instruments.

My friend concludes his letter with some practical advice, under four heads, which are indicative of the points on which he makes complaint. To the credit of the profession, I think I may say, the great majority of medical men already act up to them:—

"The instrument may, or may not, be useful, for aught I know; but I maintain: (1) That when it is employed another lady ought to be in the room; (2) that its employment ought not to be continued against the doctor's own opinion merely to gratify a craving, or solicitude, for examinations, which its use has seemed to me to create on an apprehensive, highly-strung woman; (3) that doctors are not at liberty to augment their influence by creating the fear of insanity in such natures by expositions of a near connection between uterine ulceration and the nervous system; and (4) that when a husband's abstinence is imposed its extent should be stated direct to himself, and not merely transmitted through the wife."

These suggestions, especially the first and fourth, will, I think, commend themselves to every member of the profession. By attention to them we avoid even the "appearance of evil."

Perhaps some of your numerous readers would give their advice in reference to the above case in its moral and social, as well as its professional, aspects; and especially as to right professional practice in cases where the speculum is used and abstinence imposed, with the risk, it would seem, of destroying conjugal affection.

Yours truly, M. D.

DR. WILLIAM HUNT ON PRESIDENT GARFIELD'S CASE.

IN a letter to the *Medical News and Abstract* Dr. William Hunt, senior surgeon to the Pennsylvania Hospital, comments upon the case of the late President Garfield as follows:—

"From Dr. Frank H. Hamilton's *Military Surgery*, New York, 1865, page 338, I make the following extract:—

"In a few cases a ball has been known to pass through the side of the body of one of the vertebra, leaving a round hole or a lateral furrow, *without coming in contact with the spinal marrow or the blood-vessels. It is not probable that we shall be able to diagnose such a case clearly during the life of a patient, and if we were able to do so, we do not see what benefit could be derived from any surgical operation.*

"In case, however, one of the transverse processes has been broken and sent inwards, although it is not likely to have penetrated the cavity of the abdomen, it may yet give rise to serious results by the *formation of an abscess in the bellies of the psoas muscles, which abscess may eventually make its way along between the fibres towards the groin, or may empty itself into the loose areolar tissue outside of the peritonæum.*

"The italics are mine. Could there possibly have been a more wonderful foreshadowing of the Pres-

ident's case? The fracture of the transverse process is replaced in the case in hand by the fracture of the body, which produced the abscess or channel along the psoas in precisely the same way as described by Dr. Hamilton. The description is perfect. The sinus or channel which was, in the words of the official report, supposed during life to be the track of the bullet, was practically an abscess and sinus caused by the disintegration of a vertebral body through gun-shot, precisely as a chronic lumbar and psoas abscess is caused by the chronic disintegration of a vertebral body through disease. How truly Dr. Hamilton sets forth the difficulties of diagnosis, and how absolutely true he is as to surgical interference by operation, having for its object the getting of the missile, which, as the autopsy shows, was lying harmless, compared to the injuries it had inflicted. The diagnosis then was hard; but does it not seem, in the light of our present knowledge, that the deep significance of the nervous symptoms of the President immediately after the shooting was lost sight of too early in the case? This, if so, was probably the result of the exciting surroundings, and of the fact that the doctors were more occupied in practical efforts to relieve these symptoms than in speculations as to their cause. They were attributed to injuries or impressions upon nerves of the lumbar plexus, instead of to direct shock to the cord itself. This view seemed to be confirmed by the fact that they promptly subsided under rest and other treatment. That temporary spinal shock does sometimes occur at once after an accident to the column, I will show further on by an actual recent case.

"But those pains in the legs, those 'tigers' claws,' affected *both* sides; what would account for them so well as sudden injury of some kind to the spine? From their bilateral suddenness it is more reasonable to attribute them to direct action upon the centre than to reflex transfer from the right to the left. The right side, I assume, exhibited them to a greater degree than the left, but the full force of the impact was received upon the right and was weakened upon the left. If I am not right, and the pains were equal on both sides, then there is still stronger reason to refer the phenomena to a central origin.

"I have read, also, that at first there was hyperæsthesia of the genitals. If so, this, together with the 'tigers' claws,' pointed strongly to the spine. Some surgeons are skeptical about spinal shock. This summer, in July, Dr. Agnew assisted me in a case that confirms its occurrence.

"A boy was shot in the back to the right of the third or fourth dorsal vertebra. He at once had characteristic symptoms in the legs of being wounded in the spine. These soon disappeared. The course of the bullet was not readily made out at first, but the diagnosis was that the column was wounded without injury to the cord, as the symptoms were not continuous. After suppuration set in, the course of the ball was readily traced with a probe, and broken fragments of the vertebral processes were felt. The ball was not felt with a Nélaton or other probe. The patient was etherized. I made a large and deep incision through the muscles in the line of the wound, and removed some clothing and fragments of bone, and finally a large bullet, which was lying immediately against the bony bridge of a vertebra. The boy recovered. Whether he will suffer from caries in the future remains to be seen. The boy certainly had spinal shock, with-

out injury to the cord, for there was no remnant of paralysis when he was discharged from the hospital.

"But this case is very different from the President's in this, that it was amenable to operation, and we knew about where the ball was. Also here, the ball would have produced great future mischief. In the President's case it did its damage and then hid. If such difficulty occurred in the hunt for it as is stated at the autopsy, imagine the horror of a like attempt on a live man. How long would he have lived? He had better have been killed at a blow.

"The question of the duty of the consulting surgeons when they first went to Washington has been freely discussed. Should they have reopened and re-examined the wound with probes and fingers? I am assuming that they did not do so, and they were right. A hospital chief, if he has confidence in his residents or assistants, and knows them to be experienced and ready, takes what they say about serious cases which will not tolerate officious disturbance. For example, the chief visits the hospital on his regular rounds. The resident says, 'Doctor, here 's a man who was brought in last night shot in the abdomen. He was greatly shocked; I examined him and passed my finger directly into the cavity; I removed some pieces of clothing; I can feel the bullet nowhere under the skin about the whole body; I searched carefully; I have dressed the wound and given some opium; he is now quiet and free from pain.' The surgeon looks at the patient, sees that his general symptoms confirm the diagnosis, and that his wounds are carefully dressed. He probably re-examines the body externally, but if he is a wise man he says practically, 'hands off, we will await results and act accordingly.'

"Many a life has been saved by this course; many a one has been lost by deviating from it. I question if one has ever been saved, in the kind of case now under notice, by deviating from it. Now if a surgeon can so treat those who are *under* him, how much more is he bound (unless he sees something positively and absolutely wrong) to receive the statements of his peers, especially when outward appearances seem to confirm them. I question, moreover, whether any more light whatever would have been thrown on the President's case by further exploration at the time when the consulting surgeons made their first visit? By that time the spinal symptoms had disappeared, or were very much alleviated. Inflammation through swelling of the denser tissues, muscular and fibrous, of the true track of the ball had doubtless closed it. The finger or probes would have passed easily where other fingers and probes had already been, and there would have been almost certainly a positive confirmation of the results of the first examination. When I study the autopsy more closely, I think that this would almost to a certainty have been the case. If I understand the description and the drawing, the ball entered at a place which, if it had had consciousness and an intent to deceive, could not have been better selected in the whole body. It entered 'three and a half inches to the right of the vertebral spines,' therefore its course began to the right of the psoas mass. Instead of going forward, it traversed the circle of the body transversely, after fracturing the eleventh rib, and went directly on in the direction of a chord of an arc of that circle. It entered the post-peritoneal space and thus penetrated the posterior wall of the abdomen without opening the peritoneum. It then continued

on into the muscular mass, separating the longitudinal fibres, which may have closed behind it. The finger was passed into the wound and also probes. These went readily on in the space mentioned, and the true course was missed. I have no doubt the depending liver, or it may be the kidney, was felt. The wound was one to deceive the very elect. The influence of the inner loin muscles in concealing injuries and diseases of the lumbar vertebra is well recognized. The post-mortem report speaks of the dilated track of the ball, but this dilatation was owing to subsequent changes. I am ignorant of any other explanation of the position taken by fingers and probes than that I have given.

"It is a mistake to suppose the spine escaped attention in the case. Dr. Agnew assures me that when he operated for the relief of the lumbar abscess he carefully searched the transverse processes and all of the spine he could feel, and felt nothing wrong. The injury to it was beyond his fingers, and a wise caution here forbade the use of instruments. How truly Dr. Hamilton's remarks are illustrated by this experience. Moreover, by the incisions Dr. Agnew made, which he tells me were carefully planned for drainage, the whole line of the true wound, as well as the mistaken sinns, had full outlet.

"The abscess which was found after death, bounded by the liver, the transverse colon, and the transverse meso-colon, for anatomical reasons, was shut off from communication with the wound, and of course was not drained. In the words of the official report, 'no communication could be detected between it and the wound.' No method of diagnosis occurs to me by which its existence could have been determined during life, unless it had got far enough to cause posterior or anterior bulging. It was an abscess, arising either from peritoneal inflammation through contiguity or it was a septic deposit.

"The case really was one to diagnosticate more by the application of anatomy and physiological and pathological knowledge, than by direct methods. In the light of the autopsy everything is explained. By the theory of the wound during life, almost nothing.

"There were the pains in the limbs and the 'tigers' claws.' There was most profound depression and a pulse and temperature record which, after the liver theory, was abandoned, the accepted wound, at most a severe flesh one, was insufficient to account for. There was the origin of the thoracic duct with its receptaculum chyli right in the line of the wound; hence the rapid emaciation and the other nutritive disabilities, further explained by disturbance of the sympathetic trunks and ganglia. There were the radicles of the vena azygos, bared in the corruption of rotting vertebra, and hence the septicæmia, and there were the abscess and sinus, running toward the groin, a result of the rotting vertebra and not of the ball. What good could it have done to have cut for the bullet after its first mischief? It was then but a small factor in the troubles.

"As to the treatment of the President's case, it was, in the light of the autopsy, most fortunate. A very valuable life was prolonged beyond all reasonable hope. From a letter I had from Dr. Agnew, dated the 23d of August, 1881, which was confidential then but open now, I know how fully he appreciated the profound gravity of the case, and took an almost hopeless view of it, but still he with his colleagues fought it out nobly.

When we come to think of it, it may be a mercy that an exact diagnosis was not made. The temptation to do something more than was done, if it had been made, would have been very great. Outside and inconsiderate pressure would have been clamorous. Whether it would have moved the steady heads in charge, I do not know; but if it had, I am confident the President would have been ready for his grave on the day of the operation. Who can picture the political results that might have followed? Now the perturbing elements have been calmed, and all is peace.

"Much has been said about antiseptic treatment in the case. It was practiced, I believe, to a very great extent. Its *practice* is grand, except the spray; I heartily agree with the German surgeon who said 'fort mit dem spray.' Could there be a better commentary on the *unproved theory* of antiseptic surgery than the President's case? Against its theory, or at least the effect of it on many minds, namely, that all sources

of contamination which produce septic poisoning come from without, I earnestly protest. I have too much respect for Mr. Lister to think that he believes what the extremists among his disciples teach.

"The influence of such teaching on the rising generation of physicians and surgeons is bad, in this, that it leads to narrow views and interferes with clear diagnosis. It leads outwardly too much, for contamination comes from within, I believe, more frequently than from without. Was not the decaying vertebra in the President's case enough to account for the septicæmia?

"To get all the rats out and then stop the hole with poison and stuffing is a good thing, but to poison and plug the hole and leave the rats in, is a very bad thing. They only undermine and make other holes. A narrow antiseptic looks around the room instead of at the patient, whereas he should look at both and give due weight to all septic possibilities."

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 12, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Diphtheria and Croup.	Lung Diseases.	Diarrhoeal Diseases.	Typhoid Fever.
New York.....	1,206,590	617	232	26.58	10.70	11.51	6.16	1.78
Philadelphia.....	846,984	359	130	23.68	8.36	5.01	1.95	5.01
Brooklyn.....	566,689	256	104	31.64	11.33	12.89	6.25	1.95
Chicago.....	503,304	197	85	41.62	12.69	8.63	3.05	6.60
Boston.....	362,535	161	40	16.15	6.83	17.39	3.11	3.73
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	165	60	33.33	17.58	5.45	6.06	2.42
Cincinnati.....	255,708	94	36	24.47	6.38	10.64	6.38	6.38
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	84	33	29.76	8.33	3.57	4.77	4.77
Pittsburgh.....	156,381	88	40	53.41	12.50	7.95	2.27	6.82
Buffalo.....	155,137	71	28	38.03	16.90	7.04	1.41	—
Milwaukee.....	115,578	39	19	25.64	15.38	5.13	5.13	—
Providence.....	104,857	42	15	33.33	19.05	9.52	11.90	—
New Haven.....	62,882	18	8	16.67	—	—	—	5.56
Charleston.....	49,999	26	5	11.54	3.84	7.69	—	7.69
Nashville.....	43,461	25	9	36.00	4.00	8.00	8.00	4.00
Lowell.....	39,485	23	7	13.04	4.35	8.70	—	—
Worcester.....	58,295	17	5	5.88	—	11.76	—	5.88
Cambridge.....	52,740	21	6	23.81	14.29	14.29	—	4.76
Fall River.....	49,006	14	4	35.71	14.29	—	—	14.29
Lawrence.....	39,178	12	6	8.33	—	—	8.33	—
Lynn.....	38,284	15	4	6.67	—	—	—	6.67
Springfield.....	33,340	9	3	—	—	11.11	—	—
Salem.....	27,598	6	2	16.67	16.67	—	—	—
New Bedford.....	26,875	10	5	20.00	—	—	10.00	—
Somerville.....	24,985	14	8	14.29	14.29	28.56	—	—
Holyoke.....	21,851	9	2	44.44	—	—	—	22.22
Chelsea.....	21,785	4	2	—	—	—	—	—
Taunton.....	21,213	3	1	66.67	33.33	—	—	33.33
Gloucester.....	19,329	10	5	30.00	30.00	—	—	—
Haverhill.....	18,475	5	—	40.00	—	20.00	20.00	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	3	0	33.33	—	—	—	—
Fitchburg.....	12,405	2	0	50.00	—	—	—	—
Twenty-four Massachusetts towns..	191,137	54	17	29.63	7.41	7.41	11.11	11.11

Deaths reported 2473 (no report from St. Louis or New Orleans): 921 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 704, consumption 379, diphtheria and croup 259, lung diseases 228, diarrhoeal diseases 113, typhoid fever 91, scarlet fever 67, small-pox 64, malarial fevers 46, whooping-cough 19, cerebro-spinal meningitis 17, erysipelas 14, puerperal fever nine, measles five. From *scarlet fever*, New York 25, Brooklyn 14, Philadelphia eight, Buffalo six, Chicago, Baltimore, and Pittsburgh three, Cincinnati,

District of Columbia, Providence, New Haven, and Lowell one. From *small-pox*, Chicago 25, Pittsburgh 22, Philadelphia 11, New York and Boston two, Baltimore and Cincinnati one. From *malarial fevers*, Brooklyn 13, New York nine, District of Columbia seven, Baltimore five, Chicago and Nashville four, Philadelphia and Buffalo two. From *whooping-cough*, New York seven, Brooklyn three, Philadelphia and Baltimore two, Chicago, Boston, Buffalo, Holyoke, and Haverhill one. From *cerebro-spinal meningitis*, Chicago three, New York, Philadelphia, Cincinnati, Pittsburgh, and Buffalo two, New Haven,

Nashville, Lowell, and Newburyport one. From *crisipelas*, Philadelphia three, New York and Buffalo two, Brooklyn, Chicago, Baltimore, Pittsburgh, Milwaukee, Cambridge, and Fall River one. From *puerperal fever*, District of Columbia two, New York, Philadelphia, Chicago, Boston, Cincinnati, Milwaukee, and Holyoke one. From *measles*, New York, Philadelphia, Buffalo, New Bedford, and Fitchburg one.

Ten cases of small-pox were reported in Brooklyn, two in Boston, three in Baltimore, 15 in Cincinnati, 53 in Pittsburgh, one in Buffalo, one in Springfield; diphtheria 25, typhoid fever 22, scarlet fever eight, in Boston; diphtheria 14, scarlet fever four, in Milwaukee.

In 42 cities and towns of Massachusetts, with a population of 1,092,053 (population of the State 1,783,086), the total death-rate for the week was 18.72 against 20.16 and 19.64 for the previous two weeks.

For the week ending October 22d in 149 German cities and towns, with an estimated population of 7,893,486, the death-rate was 22.9. Deaths reported 3746; under five 1608: pulmonary consumption 457, acute diseases of the respiratory organs 285, diphtheria and croup 173, scarlet fever 148, diarrheal diseases 115, whooping-cough 77, typhoid fever 54, puerperal fever 19, measles and röteln 11, small-pox (Aachen) two, typhus

fever (Posen) one. The death-rates ranged from 9.3 in Wiesbaden to 39 in Erfurt; Königsberg 24.7; Breslau 26.5; Munich 23.3; Dresden 20.5; Leipzig 20.9; Hamburg 22.3; Hannover 12.7; Bremen 16.4; Cologne 24.1; Frankfurt 14.5; Strasburg 20.7.

For the week ending October 29th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 22. Deaths reported 3202: acute diseases of the respiratory organs (London) 376, scarlet fever 155, fever 82, measles 66, diarrhoea 54, whooping-cough 53, diphtheria 35, small-pox (London 21) 26. The death-rates ranged from 13.2 in Plymouth to 33.3 in Hull; Sheffield 16.8; Birmingham and Leeds 19.2; Bristol 20.7; Manchester 23.4; Liverpool 27.3. In Edinburgh 18.9, Glasgow 24; Dublin 23.

For the week ending October 22d in the 21 chief towns of Switzerland, population 479,934, there were 25 deaths from pulmonary consumption, acute diseases of respiratory organs and diarrheal diseases each 16, diphtheria and croup eight, typhoid fever six, whooping-cough three, puerperal fever and scarlet fever each one. The death-rates were, Geneva 20.5; Zurich 17.6; Basle 16.7; Berne 23.4; Solothurn 54.2.

The meteorological record for the week ending November 12th, in Boston, was as follows:—

Date.	Barometer.		Thermometer.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Mean.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Duration. Hrs. & Min.	Amount in inches.
November, 1881.																			
Sun., 6	30.279	51	65	41	86	54	73	71	S	W	W	10	13	10	C	C	C	—	—
Mon., 7	30.535	44	48	37	89	77	87	84	N	NE	E	7	8	12	F	O	O	—	—
Tues., 8	30.363	50	53	45	93	96	100	96	E	NE	W	11	4	4	O	G	R	—	.07
Wed., 9	30.057	59	71	49	100	84	93	92	SW	SW	W	7	21	12	G	O	F	—	—
Thurs., 10	30.246	44	55	39	69	56	57	61	SW	W	NW	12	24	14	F	F	F	—	—
Fri., 11	30.397	35	44	31	63	41	60	55	W	NW	W	15	15	8	F	C	C	—	—
Sat., 12	29.997	38	48	30	80	73	100	84	N	E	W	7	13	14	O	R	R	—	—
Week.	30.268	46																23.25	.47

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 12, 1881, TO NOVEMBER 18, 1881.

MCCLELLAN, ELY, major and surgeon. Having reported in person at these headquarters, will proceed to Fort McHenry, Md., and report to the commanding officer for duty. S. O. 204, Department of the East, November 17, 1881.

CARVALLO, C., captain and assistant surgeon. The leave of absence on surgeon's certificate of disability granted him in S. O. 108, October 24, 1881, Department of the Platte, is extended five months on surgeon's certificate of disability. S. O. 256, A. G. O., November 12, 1881.

LAUDERDALE, J. V., captain and assistant surgeon. On discontinuance of McPherson Barracks, Atlanta, Ga., assigned to duty at Jackson Barracks, La., to remain at McPherson Barracks until medical property, for which he is responsible, is disposed of. S. O. 124, Department of the South, November 10, 1881.

CRESSINGHAM, T. A., captain and assistant surgeon. Relieved from duty at Jackson Barracks, and assigned to duty at Mt. Vernon Barracks, Ala. S. O. 124, C. S., Department of the South.

BYRNE, C. B., captain and assistant surgeon. Temporarily at McPherson Barracks assigned to duty at Fort Barrancas, La. S. O. 124, C. S., Department of the South.

CANTER, J. C., first lieutenant and assistant surgeon. To accompany from Fort Adams, R. I., to the Military Division of the Pacific, the headquarters, band, Battery F, and detachment Light Battery K, First Artillery, ordered to start on 10th inst. S. O. 66, Military Division of the Atlantic, November 8, 1881.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, 19 Boylston Place, on the first Thursday of December, at 10 30 A. M. L. F. Warner, M. D., will read a paper on Periodical Headaches of Women. Profession invited.

HENRY M. FIELD, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED. — A Manual of Practical Normal Histology. By T. Mitchell Prudden, M. D., Director of the Physiological and Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York. New York: G. P. Putnam's Sons. 1881.

Transactions of the American Otological Society. Fourteenth Annual Meeting, Newport, R. I., July 26, 1881. Vol. II. Part 5. Boston: A. Williams & Co. 1881.

The Physician's Hand-Book for 1882. By William Elmer, M. D., and Albert D. Elmer, M. D. New York: W. A. Townsend, 1882.

The Anatomist, being a Complete Description of the Anatomy of the Human Body, intended for the Use of Students preparing for Examination at the Royal Colleges of Surgeons and other Medical Bodies. Second Edition, improved and enlarged by the addition of one hundred and seventy-one Wood Engravings. By M. H. Hilses, formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, etc. New York: G. P. Putnam's Sons. 1881.

Observations on the Origin, Character, and Treatment of Onomania. By T. L. Wright, M. D. (Reprint.)

Atresia of the Vagina and Uterus. By A. F. Erich, M. D. (Reprint.)

How to Use the Bromides. By George M. Beard, M. D. (Reprint.)

Lectures.

CLINICAL LECTURES ON THE DISTINCTIONS BETWEEN THE INFLAMMATORY DISEASES OF JOINTS.

DELIVERED AT BELLEVUE HOSPITAL.

BY W. H. THOMSON, M. D.,

Professor Materia Medica and Therapeutics, University of New York.

I.

GENTLEMEN,—Inflammatory diseases of joints are necessarily much alike in their symptoms, owing to the nature of the parts affected. The functions of joints are so simple and mechanical that they do not admit of a great variety of signs in their derangements, no matter how these may differ in kind or origin. A swollen and painful knee, for example, may look to you and feel to the patient very much the same, whether it was due to a fall on the ice, or to an attack of gout, or to rheumatism, or to pyæmia, or to scarlet fever, or to gonorrhœa. These are each very different morbid conditions, so distinct, indeed, that there can be no crossing between them. Thus there is no such hybrid as a rheumatic gout any more than a fall on the ice can cause an attack of clap, but so similar are the mere symptomatic characters of all arthritic inflammations that they are readily confounded, and are likely to occasion more errors in diagnosis than any other common affections of the body. The most serious inconvenience from this fact, however, is that it leads to worse confusion in treatment, because it is only after correct diagnosis that we can choose the most proper procedure to adopt in each case, and hence it has appeared to me as a profitable subject for us to learn how we can discriminate between the various inflammatory affections to which joints are liable.

We will begin, therefore, with the contrasts between those of them which you will oftenest meet in practice, namely, rheumatism and gout. When called to a case with the first attack of either of these maladies, the differential diagnosis is often easily made, but not so after the patient has had so many returns of his trouble that most of the joints of both upper and lower extremities have suffered, perhaps repeatedly or for prolonged periods. Your ultimate decision, however, need never be very uncertain, to show which we will proceed at once to point out in these patients which we have before us now those features which will serve to distinguish the one from the other, no matter how much they may come in time to resemble each other.

The first is a young man, twenty-six years of age, by occupation a hotel porter, who gives the following history: In his work he was frequently exposed to cold draughts, and often had to step out in his shirt sleeves on cold winter days while in a state of perspiration. He enjoyed excellent health, however, until nine weeks ago, when he says that he caught cold while at work, and without any preliminary period of malaise he began to suffer in his left foot, which became very painful and swollen about the instep. In three or four days he was unable to wear a shoe on it, and shortly afterwards he was attacked with pains all over his body, affecting successively the knees, shoulders, elbows, and wrists, accompanied with high fever and much perspiration, when he was removed to this hospital, where he has been slowly improving for six weeks with the usual course of varying returns of in-

flamations in different joints. Our second patient is also a young man with a similar history, this also being his first attack, but definitely dating from a prolonged wetting while at work. The third patient, however, presents wholly different features. He is not only an elderly man, but a veteran in "rheumatism," as he says. His first experience of it was nineteen years ago. It began in the left foot and it remained there alone during that attack. His second attack was about a year afterwards, and in the same foot, but this time especially in the great toe. His next attack was in the ankle of the same foot, then, about two years afterwards, in the right foot; shortly afterwards in the right knee, then the left knee, and then, some years afterwards, his fingers, wrists, and elbows were successively affected, until now his relapses are about equally divided between the two extremities.

Here, therefore, we have polyarthritic inflammations in all three of these patients, and yet, from the facts already elicited, without entering upon many other contrasts between them, we can hardly be mistaken in diagnosing the first two as rheumatism and the third as gout, for these reasons:—

The ages of the first two almost as surely exclude gout as they afford a presumption of rheumatism. A first attack of articular rheumatism after forty is rare, a first attack after thirty is also uncommon. Acute articular rheumatism is a disease of early youth and early adult life. It may occur in children, but its first invasion is oftenest between fifteen and twenty-one years of age. After it has once made its ill-omened visit, however, it is almost sure to recur again and again up to middle life or even a little longer, but the liability to it progressively diminishes with each year after thirty, even with those who have suffered severely from it in early life. Chronic muscular rheumatism, on the other hand, is a very different disease. In contrast to articular rheumatism it is the torment of post-middle and advanced life, and often occurs in persons who never had acute articular rheumatism at all, as we will show further on.

Gout, on the contrary, is almost exclusively a disease of adult or advancing age. The liability to it increases with every year after thirty up to fifty. With this man it commenced when he was about forty years old, and began in a way so characteristic that it should be noted as a distinguishing mark from rheumatism. It began in the left foot. But so also did the rheumatism in the first young man. There was this important difference, however, the rheumatic foot did not remain the only suffering part in the first attack, instead of that in a few days it spread to the whole body. Gout almost never does this. In the great majority of cases its first attack is local and solitary. Not only so, but it continues for a long time, for years in most cases, to return only to the lower extremities. When once, however, it gets above the knees it becomes quite indiscriminate in its selections, as our present patient illustrates.

We now proceed to another contrast to be found in the pulse. Very often it is practicable to be tolerably sure which of the two we have to deal with from a few qualities of the pulse alone. To demonstrate this fact, however, a few words about pulse examination are needful in explanation.

The commonest elements in any given pulse are six, namely, three cardiac and three vascular. Those elements in the pulse which depend exclusively upon the

action and state of the heart, are first, its frequency, second, its strength, and third, its rhythm, while those which depend upon the state of the arteries are first, its size, that is, whether it be large or small, second, its length, that is, whether it pass rapidly or slowly under the finger, and third, its tension, that is, whether it be incompressible or hard, or whether it be compressible or soft. Now it is in these latter two respects that a striking difference is to be detected between rheumatism and gout. The pulse of rheumatism is at all times remarkably short and compressible, much like the pulse of phthisis, and of the fevers and inflammations generally, except scarlet fever, peritonitis, and the earliest stage of pleurisy. The pulse of gout, on the other hand, is as characteristically long and incompressible; resembling closely in these respects the pulse of Bright's disease and of scarlet fever.

What is the cause of this difference in the pulse between rheumatism and gout? An incompressible pulse always means that the arteries are *overfull*, owing to obstruction in the arterioles and in the capillaries. This may be due to nervous irritation leading to narrowing spasm of these vessels, as in peritonitis and the first stage of pleurisy from shock, or to a permanent lessening of their calibre from chronic endarteritis, as in Bright's disease, or to both causes combined. Let obstruction to the exit of the blood from the arteries, therefore, obtain from either of these conditions, and the vessel becomes more and more like a hose filled with water with the stop cock shut off. You have to use greater pressure to obliterate the radial under your finger, and the pulse, therefore, feels hard, or, as it is technically termed, incompressible. Moreover, the vibration of the onward moving blood in such a vessel necessarily becomes more prolonged in proportion to the overfilling of the vessel, and hence gives you the other character, namely, the long pulse. On the contrary let the arterioles and the capillaries be widely relaxed or open, and the arteries must necessarily be easily and quickly emptied, and hence, also, the pulse be easily compressed on the one hand, while the pulse wave on the other will be correspondingly short, because it flows so quickly under your finger.

The indications, therefore, which these contrasts show as to the different nature of these two diseases are plain. In gout we have a well-known, insoluble poison, uric acid, circulating in the blood, which acts as an irritant to the walls of the arterioles and capillaries, and thus leads to their contraction. In rheumatism, on the other hand, if we have any blood-poison at all, it is evidently a perfectly soluble one, like the poison from decomposed pus in hectic from any cause, as phthisis, from abscess, etc., and which always acts as an arterial paralyser instead of as an irritant, and hence dilates the arterioles instead of contracting them, thus producing the characteristic compressible short pulse. What an important bearing this fact has, not only as indicating the essentially different nature of these two diseases, but also what different consequences to the bodily textures result from this difference, we will soon discuss. You need only examine the radials of these patients before you can appreciate readily this distinction. In the case of these young men you cannot feel their arteries either at or above their wrists, you can only tell that they have these blood-vessels by feeling the throb of the pulse. In the gouty patient, on the other hand, you can feel his radial half way up his arm, as if it were a hard cord lying among the tendons, and it rolls under your finger

almost like a wire. In the rheumatics, also, you can readily obliterate the pulse by slight pressure with one finger; in the gouty patient, on the other hand, you may place three of your fingers on the vessel and find that the pulse remains distinct under all three fingers, even though you use much more pressure with them than you did with one finger in the others. Now it is true that the arteries naturally harden with age, and yet it is not usual to find them so rigid and incompressible as in this case unless caused by toxic endarteritis, either from deficient action of the kidneys or from the prolonged irritation of the gouty poison.

We now come to the anatomical differences characteristic of the operation of these two affections. Rheumatism is remarkable for the insignificant traces which it leaves behind it in the textures which it attacks. When you see a knee, for instance, acutely inflamed by rheumatism, and note the great redness, heat, and swelling, and find also that it is exquisitely tender, you very naturally conclude that such a high inflammation must be very injurious to the joints. Indeed, if symptoms of the same degree of severity were caused in a joint by anything else than rheumatism, by a railway accident, for example, you would have much cause to fear that the joint would be irretrievably ruined. But should your rheumatic patient die in only forty-eight hours thereafter, it is very likely that you would find strangely few indications that his knee had been seriously inflamed at all. Great cry and little wool, as the man remarked when he sheared the sow, no pus, no ulceration, and perhaps not even effusion of any kind. Moreover, without death, you will often find that a seemingly violent inflammation of some joint, present one day, has apparently been all transferred to a distant joint the next day, and then to another the next.

It is unfortunately true, however, that some very serious anatomical changes accompany certain rheumatic inflammations, namely, when the heart or its appendages are involved, but there is a special reason for this, quite independent of the natural action of the rheumatic process itself. Thus if you should seize a badly inflamed rheumatic knee and move it briskly one hundred times a minute it is hard to say what would become of the joint. The patient, at least, takes good care not to move it at all; but he cannot keep his heart quiet, no matter how badly it is inflamed, and it is probably due to this fact alone that rheumatic carditis is so apt to be followed by textural changes. This inference is also borne out by the similar, though much rarer, changes caused in rheumatic pleurisy, for here we have also an unresting texture, though proportionately less liable than the heart to structural lesions of rheumatic origin as its movements are the fewer.

In complete contrast to the insignificant and transient damage done by rheumatism, gout never fails to leave its mark wherever it has made a visit. A man will show a white spot in the articular cartilage of the great toe made by a solitary attack of the disease in him twenty years before, and each time it returns it adds to its previous mementoes. Sooner or later it distorts one articulation after another with its deposits and its thickenings, for which there is no cure. Not so with true rheumatism. The prognosis for a rheumatic joint is good no matter how long the disease has lasted or how old the patient may be, as we will show when we come to the subject of treatment.

(To be continued.)

Original Articles.

A CASE OF CYSTICERCUS IN THE SUBSTANCE OF THE SPINAL CORD.

BY GEORGE L. WALTON, M. D.

THIS parasite, though by no means of rare occurrence in the brain,¹ is not often found in the spinal canal, and when found there lies generally, like the echinococcus, between the membranes. Rokitsky states² that it may also occur in the substance of the cord, though I find no record of cases in Heller, Küchenmeister, or Leuckart, the latest authorities on parasites. Devaine I have not been able to consult.

Perhaps the rarity with which the cysticercus is found in the cord may be largely due to the rarity with which the cord is examined.

The case under the care of Prof. E. Wagner, in the Leipzig Hospital, was one of *tubercles dorsalis*, so diagnosed before death. The cysticercus I found while making preparations of the cord, kindly given me to examine by Dr. Strümpel, his first assistant.

Unfortunately the clinical history of the case is very meagre, the patient having been brought to the hospital in the last stages of the disease, and unable to answer questions. The following is the history as found in the hospital records:—

P. F., a butcher's widow, fifty-six years old, was brought to the hospital in a very dirty and neglected condition. Makes almost no reply to questions. Says she has been unwell only sixteen weeks, and that during that time her legs have been paralyzed. On being closely questioned as to pain in the limbs she gives no answer. Patient is a marasmic old woman, covered with dirt. Over the sacrum is a deep and sloughing decubitus the size of the hand. On the legs are found in places inflamed spots on the skin, in places deep ulceration; the legs lay stretched in bed quite lax; remarkably loose condition of the knee and ankle-joints (*schlotterbeweglichkeit*); active motion in legs not entirely absent, slight movements are carried out; pricks of a pin up to the head in the flesh call out absolutely no reaction, the same loss of sensation being found in face, arms, and legs; tendon reflex in legs wanting; on the vertebrae a senile hyphoseoliosis not at all sensitive to pressure; no protrusion of separate spinous processes; pupils alike, rather under middle size, and do not react to light; has quite high fever; seems often to feel cold, but no chills; mutters continually in a low tone; eyes always half open; swallows hardly at all; arms not paralyzed, are held continually to the side in a state of contraction; urine and faeces passed almost hourly in bed. An exact examination is absolutely impossible.

Fourth day. Delirium has ceased; patient looks better; answers only the simplest questions, and is still very stupid; the deepest insertion of the pin into legs, arms, and face calls out no reaction.

Twenty-first day. General condition has become gradually worse; examination of the nervous system absolutely impossible; legs not completely paralyzed; movements of foot quite good, in knee less so; pupils rather narrow, but do not react to light.

Twenty-second day. Died without further symptoms.

¹ Birsch-Hirschfeld quotes Virchow as saying that two per cent. of brains examined by him contained cysticercus.

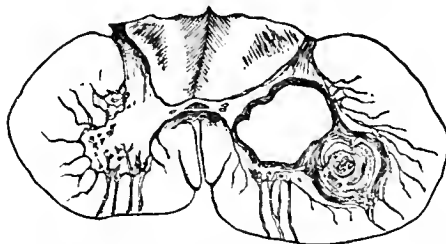
² Lehrbuch der Pathologischen Anatomie, Band II., 1856.

The clinical chart shows a very irregular fever curve, ranging from 37° to 41° C., with pulse and respiration proportionally high.

The autopsy, made by Dr. Huber, showed slight oedema and emphysema of lungs, calcification of arteries, indurated kidneys, slight fatty degeneration of heart muscles, slight uterine infarction, slight hæmorrhagic endometritis, and cysticercus cerebri.

The description of the brain was as follows: membranes on base and convexity soft, thickened, and exhibiting a milky opacity. In four places on the surface, and in the anterior part of the right corpus striatum were found round cysts of about bean-size, with sharply-bounded and, in parts, thickened walls; contents clear fluid; each cyst contained a small, round body on its inner surface (*cysticercus*). Brain substance poor in blood, consistent. The seats of the cysts at the surface of the brain were the middle of Broca's convolution on the right, the occipital convolutions on the left, the middle temporal convolution on the right.

The cord showed typical appearances of *tubercles*. Pia mater rather adherent, especially over the posterior columns. Posterior columns soft, gray, and degenerated. Axis cylinders atrophied, and nerve fibres replaced in great measure by solid connective tissue, in the columns of Goll almost completely so. Corpora amylacea abundant. The gray substance was involved, the nerve fibres in the median and posterior portions being indistinct, the sections presenting in this region a hazy, transparent look, quite unlike normal gray substance. The anterior horns were normal. No atrophy of the motor ganglia except at the location of the cyst. These abnormal appearances extended the whole length of the cord, and were equally marked on both sides. The cyst was situated in the upper cervical region, at the level of the third to the fourth spinal nerves. There was nothing on the outside of the cord to indicate its presence excepting that the left side was slightly larger than the right. The cyst was oval, about six mm. by five mm. at its greatest diameters, and occupied the situation of the gray matter on the left side. At the point of greatest breadth of the cyst only a narrow strip of gray matter remained, with atrophied ganglion cells, as shown in the cut below.



This cut represents a section through the middle of the cyst, and shows two cavities separated by a septum of connective tissue. To explain this septum I need only state that the animal with its sack was bent upon itself. A section through the head with its four suckers may still be seen on one side of the septum. A section taken higher up (not shown) displays the characteristic crown of hooklets, the largest measuring 0.12 m. A capsule of firm connective tissue separated the cyst from the surrounding nerve tissue, which was of normal consistency, and microscopically unaltered excepting that the motor ganglia were atrophied.

The case admits of little or no discussion physiolog-

ically or pathologically as far as the cyst in the cord is concerned, as there is no record of symptoms referable to it.

The picture was one of the last stage of tabes. Extreme emaciation, decubitus, paralysis of bladder and rectum, loss of power and sensation, absence of tendon reflexes, pupils not reacting to light. To what extent the cysticerci in the brain and cord contributed to or modified the symptoms is not easy to determine from the data before us.

There is no note of any unilateral disturbance or of any local atrophy. Total absence of symptoms referable to the cyst in the cord would not be surprising, for in the disease called syringomyelitis quite large cysts are found in the cord, which during life have caused no symptoms.

To show the comparative frequency with which the cysticercus has been found in other parts of the body I quote from Küchenmeister and Zürn.¹

In three thousand reported by Delore and Bonhomme, two thousand were found in the cellular and connective tissue under the skin, nine hundred in the muscles, eighty-four in brain, twenty-two in the meninges, sixteen in the lungs, "several" in the carotids, four in cerebellum, and one in each heart, pancreas, and medulla. None in liver, spleen, or kidneys. In eighty-seven cases by Dressel, seventy-two were found in the brain, thirteen in the voluntary muscles, six in the heart, three in the lungs, and three in the subcutaneous cellular tissue. That no mention of the spinal cord is made in these statistics may be due to the fact that it was not examined.

The eye is not an infrequent seat for the cysticercus, its discovery here being facilitated by the use of the ophthalmoscope. Von Gräfe determined in this way the time required for the attainment of its full size, which he states to be about two and one half months.

In the brain the cysticercus is much oftener found than the echinococcus, but in the spinal canal the case is reversed, though all echinococci reported have been found in the membranes, and none in the substance of the cord. Devaine² has collected reports of thirteen cases of echinococcus in the membranes.

Birch-Hirschfeld says in this connection, "Im Betreff der im Rückenmark beobachteten Parasiten, ist das sehr seltene Vorkommen des Cysticercus Cellulosæ zu erwähnen (Devaine, Rokitsky) Echinococcus wurde zwar im Sack der Dura Spinalis gefunden, nicht aber bis jetzt in der Substanz des Rückenmarks selbst."

The cysticercus is found most often between the ages of twenty and sixty, and more often in men than in women (Küchenmeister).

The geographical distribution of the cysticercus agrees with that of the *trinia solium*, and since the spread of the latter among men is due to the eating of swine flesh infected with cysticercus, it follows that those people who refrain from pork are free from both *trinia solium* and *cysticercus cellulosæ*.³

An individual with a tapeworm may infect himself with cysticercus, the ova penetrating his intestine, and being carried in the circulation to the seat in which it later becomes encysted.

An interesting fact in this connection is that the patient was the widow of a butcher, a class among whom the cysticercus is quite common.

CASE OF RHEUMATIC CHOREA. RECOVERY IN FIFTEEN DAYS UNDER SALICYLIC TREATMENT.⁴

BY S. L. ABBOT, M. D.

THE patient, M. A. N., housemaid, twenty-four years old, entered the Massachusetts General Hospital June 7, 1881, suffering from severe chorea. She had been an inmate of the hospital during the early spring, while suffering from acute rheumatism, and had been discharged well five weeks before. She had had slight pain in her left hand after leaving the hospital, and this had increased somewhat during the previous week. She thought that for two or three years past she had been gradually losing control over movements of hands and feet. During the three weeks before her present admission to the hospital symptoms of chorea had appeared, and were now very severe. The face was constantly twitching, the hands were in constant motion; there was great difficulty in articulation and deglutition, and the patient incessantly changed her position in bed; her appetite was good, but she was unable to feed herself; functions of bowels, bladder, and uterus normal; examination showed no abnormal heart sounds; pulse 78, regular, of good strength.

The patient was put on full house diet, and liquor. Potass. arsenitis, three minims, was prescribed, to be taken after each meal.

On the 9th, on account of the restlessness of the previous night, extract of *cannabis indica*, one half grain, was ordered to be given before each meal. This was followed by good nights until the 12th, the dose of arsenic having been increased to five minims *ter in die*. On this day complaint was made of pain in the right popliteal region, and the choreic movements were not diminished. The arsenic and Indian hemp were accordingly omitted, and salicylate of soda was prescribed, to be taken in ten-grain doses every two hours.

On the next day the pain was less, but the choreic movements continued.

June 14th. Patient reported to have slept well all night and most of yesterday; movements less marked; some tinnitus last evening; pain relieved. It was determined to continue the remedy, however, to decide whether it had any positive influence on the chorea, but the dose was reduced to six grains every two hours.

June 15th. Movements very much less.

June 16th, the fourth day of the salicylate treatment. Patient is able to feed herself. The dose of salicylate was increased to eight grains, and on the 18th to ten grains, the patient steadily improving; on the 22d, on account of discomfort in the head, apparently caused by the medicine, its use was discontinued.

On the 25th the patient reported some increase of stiffness with soreness of the right hand, and the choreic movements had perceptibly increased. The salicylate of soda was accordingly resumed in the dose of ten grains every two hours.

June 26th. Patient comfortable; scarcely any chorea; salicylate to be given every three hours; it was discontinued on the following night, however, on account of pain in the stomach; salicin was now substituted for it, ten grains to be taken every three hours.

June 27th. Scarcely a trace of chorea; articulation

¹ Die Parasiten des Menschen, 1880, page 112.

² Traité des Entozoaires, etc., Paris.

³ Hecox in Ziemssen's Pathologie and Therapie, vol. viii, 2, p. 336.

⁴ Read before the medical section of the Suffolk District Medical Society, October 22, 1881.

more distinct, and patient generally better than since entrance.

On the 30th the patient wrote her name in a perfectly legible, almost a handsome hand, as may be seen in the Hospital Record Book.¹ At the time of entrance she could hardly hold a pen in her hand. As the treatment by salicylate of soda was begun on the 12th, and was omitted on one occasion for three days, during which the chorea increased, it will be seen that this fortunate result followed its employment for only fifteen days. The temperature throughout was about normal, once only rising to 99.6° F., and once falling to 97° F. after the chorea had ceased.

The patient was discharged well on the 19th of July, having had no choreic movements for two weeks previous, during which interval the doses of salicin had been gradually diminished.

A case of rheumatic chorea reported by Dr. B. F. Gary has been recently published in the Transactions of the South Carolina Medical Association, and copied into the *Medical Record* of October 8, 1881. In that case chorea was developed during convalescence from acute rheumatism, and was most vigorously treated by a great variety of remedies, except those containing salicylic acid, without benefit. The symptoms were increasing and very grave in character. At last the tincture of veratrum viride was given in a ten-drop dose, to be repeated in two hours, with an increase of two drops to every dose until nausea or a great reduction of the pulse should be produced. Emesis followed the dose of eighteen drops, and the pulse fell to 50, with great general prostration. This was relieved by stimulants, and there was a diminution of the choreic movements. The remedy was resumed in smaller doses, graduated to the movements. Daily improvement followed, and recovery was complete at the end of two months.

So far as the experience of the writer is concerned, rheumatic chorea is a very rare disease. Among a very large number of cases of chorea seen by him in former years in the out-patient department of the Massachusetts General Hospital he got a history of rheumatism in scarcely a single instance; he has seen but two cases of rheumatic chorea since, one of which is the present case. It has been claimed by some writers, especially by M. Sée, that chorea is essentially a rheumatic disease, but he believes that the general experience of the medical profession is quite at variance with this opinion. The success in the present instance of the remedies now generally used for acute rheumatism suggests the expediency of trying them in cases of pure chorea without rheumatic history. As it is well known they are efficient in some forms of pure neuralgia without rheumatic history, it may possibly prove that the affection of the motor nerves known as chorea may yield to the same treatment, thus showing in both a probable relation to rheumatism not so apparent before. He has been very anxious to try the experiment in an ordinary case of chorea, but as yet no opportunity has offered. It is hoped that some member of the profession may be led to try it, and report the result.

—Walsh's Physicians' Handy Ledger and his combined Call-Book and Tablets for 1882, have made their appearance and evidently meet with favor among members of the profession.

¹ The signature was exhibited to the gentlemen present.

THE TREATMENT OF DIPHTHERIA.²

BY JAMES B. AYER, M. D.

SINCE 1857, when Watson, in his Principles and Practice of Medicine, stated that he had seen only two or three cases of diphtheria, and the disease was not even mentioned in the mortality reports of this Commonwealth, diphtheria has increased with alarming rapidity, and is now the third most frequent cause of death in Massachusetts.

The treatment of the disease has been thoroughly discussed during the past few years; it was brought prominently before the International Medical Congress and the American Medical Association at their recent meetings.

My belief that the interest in the subject is undiminished, and that the views of the profession are not united, are my apologies for again introducing it.

While nothing can be more unreliable than statistics of recovery from diphtheria, on account of the difference in severity of epidemics, yet from a fair experience with the disease I feel convinced that the *early and thorough use* of remedies already known yields a satisfactory proportion of recoveries, saving many of the worst cases.

It is now generally admitted that diphtheria is both a local and constitutional disease.

In some cases the constitutional symptoms are noticed after the appearance of diphtheritic deposit in the fauces. In others the constitutional symptoms occur at the same time with or precede the local symptoms.

In *all* cases the treatment from the outset must be local and constitutional.

LOCAL TREATMENT.

According to the best investigators, and asserted by Klebs at the International Medical Congress last August, the blood can be rendered septic by absorption of the spherical collections of micrococci which exist in diphtheritic membrane.

Those who have seen the irregularly ragged patches of diphtheritic deposit closely attached to the underlying congested tissue can easily believe that infection occurs in this manner.

Hueter, Tommasi, and Oertel in their experiments upon animals found that they died, on the second day after inoculation with diphtheritic virus, of general blood poisoning. In some cases a diphtheritic membrane appeared on the edges of the wound; in other cases the symptoms were simply those of septicæmia produced by any virulent decomposing animal matter.

I can speak from experience regarding the violence of septic symptoms from diphtheritic inoculation.

Last January, while examining a diphtheritic case which proved to be mild, in a three-year old girl, previously in perfect health, I unguardedly allowed myself to be bitten at the last joint of the index finger of the right hand. The slight abrasion seemed unimportant until, a few days later, the lymphatics became swollen and tender and the axillary glands enlarged and hardened. In a month the axillary glandular region had formed a large mass and began to suppurate, and was lanced by Dr. James Ayer. There was only a moderate amount of discharge until three weeks later, when it became very copious, continuing so a fortnight, and then gradually lessened from week to

² Read before the Medical Section of the Suffolk District Medical Society, October 22, 1881.

week. The finger had a boggy, oedematous appearance, with deep purulent infiltration. Dr. J. C. Warren made a slight incision at the seat of the original wound, to allow free exit of deep matter. All the physicians who saw me agreed that I was suffering from septicæmia caused by the inoculation of decomposing diphtheritic matter. The finger later became eczematous; for months resisted, and then very slowly yielded to treatment.

The constitutional symptoms were characterized by great debility, occasional fever, and profuse sweating.

I faithfully took pints of iron, quinine, and strychnia preparations and stimulants, — principally in the form of egg-noggs, — also most nourishing diet; but over six months elapsed before the local symptoms had subsided and the general health was restored.

Believing in the importance of local treatment to destroy, if possible, the disease before it can be absorbed, I would mention the formula so much used, and which has done excellent service in the practice of Dr. James Ayer and myself: —

℞ Liq. ferri subsulph. 5ij
Acid. carbolic. (fort.) Mijj.
Glycerin ad 5i. M.

"Use every four hours, at first diluting with an equal amount of water, and gradually increasing until full strength is used."

I prefer a camel's-hair brush with short hairs, and try to pass the brush underneath the diphtheritic deposit and to force out all that I can.

I know that Tobold says "such treatment should be absolutely repudiated," and that MacKenzie advocates a varnish of tain and ether instead of a styptic thoroughly applied, but I believe with the best of our American authorities that vigorous means are necessary from the beginning in such a desperate disease as diphtheria. I do not remember to have seen the disease carried to healthy membrane by the use of the brush, but on the contrary know that this treatment hastens the disappearance of the membrane from the throat in the great majority of cases.

Where the nares are affected, the following, recommended by Flint for disinfecting the nostrils, can be advised: —

℞ Acid. carbolic. gr. xxiv.
Glycerin 5ij.
Aque 5i. M.

S. "Repeat injection every third or fourth hour."

Steam inhalations are of great importance in the treatment of diphtheria. The following mixture, equal parts of two per cent. solution of carbolic acid, saturated solution of chlorate of potash, and liq. calcis should be employed five to ten minutes out of each hour, day and night, when the case is desperate.

As a substitute a weak solution of alcohol can be frequently used with the steam. I have seen decided benefit from the use of alcohol in this manner, the membranes shrivelling quite rapidly. Many of the best observers have mentioned the efficacy of alcohol in destroying the germs of diphtheria.

The patient's head should be surrounded by warm, moist air in the interval between the inhalations. This can be easily carried out by keeping the inhaler in use near the head of the bed without feeding the cup with medicated fluid.

To the objections raised against this thorough and constant treatment Jacobi (?) well replies: "There is no objection to this activity in treatment on the ground

of keeping the patient disturbed the whole time, for the local applications and steaming keep the throat clean and get rid of the septic matter which forms before it is taken into the system."

This treatment cannot be carried out without the assistance of an experienced nurse who will follow implicitly the physician's directions. In a few hours the child will cease to struggle against the local applications and inhalations.

In regard to the use of carbolic acid it will be well to watch the urine, though I have never seen symptoms in any diphtheritic case of carbolic poisoning.

Gargles need not be used when steam inhalations are employed.

Liniments are indicated when there is glandular enlargement, flaxseed poultices or hot-water compresses when the swelling is prominent and painful.

As alternating hot and cold applications are soothing to an inflamed throat, small bits of ice and ice-cream should be occasionally given.

General treatment is not less important than local. With my experience of debility attending septic poisoning I am a strong advocate of iron and quinine from the outset of the disease. To a child six years old I would give ten to fifteen drops of tincture of chloride of iron and a half grain of quinine every four hours. When the pulse is frequent and weak the dose should be much increased.

The treatment should be stimulating, and depleting measures should not be thought of. There is danger of not giving spirits in sufficient amount when the heart is weakened. Charles West gave in one day to a child four years old four ounces of brandy and four ounces of port wine with good results. To a child of that age I give a teaspoonful of brandy every two, three, or four hours. Of course, strong liquid nourishment should be given at frequent intervals.

There are other good remedies which have not been mentioned, I have only referred to those which seemed to me the most important. Pilocarpin and other debilitating remedies should not be employed.

The physician should arrest diarrhoea or any debilitating complication. The patient should be kept in bed in a well-aired room, in an even temperature, and the rules regarding infection insisted upon by boards of health rigidly carried out.

In most severe cases of diphtheria the physician is constantly watching indications for tracheotomy. Most authors agree that the operation is not advisable unless there is danger of suffocation through stenosis of the larynx.

In the following case life could probably have been saved if surgical assistance had been at hand: —

Edwin C., six years of age, November 8, 1875, after a hearty breakfast, went to school, but remained at home in the afternoon, complaining of sore throat. On the 9th there was high fever and a large amount of foul exudation in the throat. On the 10th fever had disappeared and there was less odor to the diphtheritic membrane. At 11.30 A. M. of the following day the respiration was harsh and more labored, but there was no dyspnoea nor lividity. There was no appearance of imminent danger at this visit, but I left word to be called if there should be any change for the worse. There was no change during the three hours following, the patient remaining comfortable, but at 2.15 P. M. he suddenly became blue in the face, and gasped for breath. He caught his breath a few times,

and showed no further sign of life. I believed that an autopsy would have shown that the larynx was obstructed by false membrane.

In cases of diphtheritic laryngo-tracheitis (formerly called sporadic membranous croup) we have the most difficulty in deciding as to the advisability of operating, since paroxysms of dyspnoea are present and sometimes lividity. In four cases (one of which recovered) the operation seemed inadvisable on the ground that the disease was not confined to the larynx. The following is the history of one of the cases:—

Leroy T., two years old, entered the nursery of the Home for Little Wanderers March 2, 1880, suffering with a slight cold. Nothing of special importance was noticed until March 10th, when he became hoarse. On the 11th a small white patch was visible in the fauces, and the respiration became rapid; he suffered somewhat from dyspnoea, but not in croup-like exacerbations; temperature 101.8° F.; he took nourishment well. On the following day there was only a small patch visible in the throat, but the general symptoms were aggravated; respiration 50 to 75, and the little patient appeared much weaker. At 12.30 p. m. of the same day Dr. J. C. Warren saw him in consultation. We decided that the dyspnoea was not caused alone by exudation in the larynx, and would be little benefited by an operation. At 4.30 p. m. the child died in a suffocative paroxysm, within sixty hours of the appearance of the first important symptom of the disease.

At the autopsy I found a delicate membrane lining the larynx (not apparently attached to the cords) and extending half way down the trachea. There was a semi-purulent exudation in the lower part of the trachea and in the large and small bronchial tubes. Near the bifurcation there was found a small patch of delicate membrane.

When diphtheria occurs as a sequela or in connection with other diseases, notably scarlatina, measles, and typhoid fever, it should receive thorough treatment.

After the throat and nasal passages the pudenda and vaginal mucous membrane are the most frequent seats of diphtheritic deposit, although very rare in these locations.

The following case in illustration shows the success of simple treatment:—

Miss H., nine years of age, October 11, 1880, had white patches upon the tonsils, but without severe constitutional symptoms. During the following thirty-six hours the patches rapidly extended in spite of treatment; distinct diphtheritic membrane, one cm. by one and one fourth cm., came from the nasal passages. On the 13th the diphtheritic trouble in the fauces and nares seemed well under control, and the constitutional symptoms were not severe. She complained, however, of pain when she passed water. On the following day, as dysuria continued, an examination was made. The vulva was found oedematous and superficially gangrenous; there was an ichorous discharge.

Cloths wet with carbolic acid, one to eighty, were applied. Several times daily the labia were separated, and the whole gangrenous region was thoroughly bathed with the same lotion.

On the 15th, the patient having failed to pass water for thirty hours, I attempted to pass a catheter, but after exposing the patient with the advantage of noon-day sunlight, I had great difficulty in finding the meatus. During the examination the clitoris came away in my hand. There was no further sloughing of the parts,

oedema and gangrene rapidly disappeared, and dysuria disappeared. In a few days convalescent, she gradually regained strength without further complications.

In regard to subsequent paralysis. Most of the cases which I have seen have been mild, yielding rapidly to tonic treatment and to kneading. The most obstinate symptoms were shown in a case of Dr. James Ayer's, a lady fifty-five years of age, in whom, four weeks after recovery from a severe attack of diphtheria, partial paralysis of the extremities appeared, more marked upon the right side. She was able to walk about, but in a very clumsy manner. She could not cut her food nor raise a cup to her lips, but could feed herself slowly and awkwardly by using a spoon.

In addition to iron, quinine, strychnia, and kneading, faradization was thoroughly tried. For six weeks there was little benefit under treatment, then improvement became rapid, and in two months she had regained the use of her limbs.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

THE ETIOLOGY OF TUMORS.

LEOPOLD¹ has undertaken a series of experiments with a view of supporting the theory advanced by Cohnheim, that the true course of a tumor, occurring in later life, is to be sought in a fault or irregularity of the embryonic layers; and that a tumor is therefore to be defined as "an atypical new formation of tissue of embryonic foundation."

His experiments consisted in transplanting portions of fetal animals upon and into adult animals. A method which had already succeeded in the hands of Zohn² and who interprets the positive results which have been previously obtained after using the deeper layers of the epithelium and periosteum of the adult by supposing that these cells more nearly approach a fetal condition.

Leopold first brought bits of cartilage of rabbit embryos, which measured from two and one half to six centimetres in length, into the anterior chamber of the eye, and found that they grew there to eighty and even three hundred times the size of the original implanted piece. In one case, where bits of cartilage were used in the peritoneum, they not only increased in size but even went on to the production of true bone. On the other hand, when bits of a larger fetus were used or from an adult animal, the piece was simply absorbed in the course of time.

These facts he considers as giving a strong basis to the theory of Cohnheim, and the part which traumatic irritation plays in the production of tumors is to be considered merely as secondary, and would fail, as a cause, if it did not have this atypical arrangement of fetal tissue to work upon.

THE ORIGIN OF RANULA, THE CYSTS OF BARTHOLINI'S GLANDS, AND THE CILIATED CYSTS OF THE LIVER

is the subject of an exhaustive article by Von Recklinghausen.³ The fortunate discovery of a ranula, which had never been operated upon, in the body of a

¹ Virchow's Archiv, vol. lxxxv. p. 283.

² Congres medical international de Genève. 1878.

³ Virchow's Archiv, vol. lxxxiv. p. 483.

woman, who died from tuberculosis, led to a careful investigation of it with the hope of settling the question as to its true origin. On the one side, it is contended that the ranula is caused by a dilatation of the duct of the submaxillary gland (Wharton's duct); on the other, that it is essentially a mucous retention cyst and has nothing to do with the saliva. The subject is further confused by the fact that all sublingual cysts have received the name of ranula.

The cyst in Von Recklinghausen's case occupied the seat of the classical ranula, beneath the tongue and slightly to one side of the median line, close to the frænum. The cyst contained a slightly yellow, almost transparent, slimy fluid, which was found by Hoppe-Seyler to contain mucin, and gave none of the reactions of saliva. The anatomical examination further showed that the ducts of the sublingual and submaxillary glands were in no way connected with the cyst. Upon opening this, two small accessory cysts were found in the wall, and from the anterior part of its lingual floor projected a small papilla having in it two openings pervious to the extent of a few millimetres. This papilla was the direct continuance of a small conical shaped mass of firm tissue directed towards the tip of the tongue and imbedded in its muscular substance. The microscopic examination of the cyst walls showed that there were to be distinguished: (1) an internal layer of large, cylinder epithelium, having a sharply defined ciliated border; (2) beneath this a layer of smaller, more angular, cells, with large nuclei (germinal cells), between which the sharp ends of the outer cells penetrated. Further, the walls were composed of connective tissue arranged in parallel bundles. The little core of hard tissue proved to be the remains of the proper lingual gland (first described by Blandin in 1823, and afterwards in 1845 by Nuhn) of which the outlets were dilated. The ranula is therefore to be considered as a colossal dilatation of one of the principal ducts of this gland, and originally situated in its midst.

From a most thorough analysis of the published cases the author concludes that there are to be distinguished: (1) the true ranula, as described above; (2) a dilatation of Wharton's duct, a sialoceles or ptyalocoele, to be distinguished by its cylindrical rather than spherical form; and (3) a hygroma of the sublingual bursa described by Fleischman, from which the true ranula is to be recognized by the character of its lining membrane, that of the hygroma being very delicate, and not as yet isolated.

The mucous cysts of Bartholini's glands of the vulva, and one which was found lying beneath the serous covering of the liver, were found to be essentially formed in the same manner as the ranula. Minute openings were to be seen in the walls of these cysts, and their direct continuance into the less altered gland substance could be made out. From these observations, Von Recklinghausen concludes that there is primarily a closure of one of the ducts, the secretion of mucus goes on, not from the duct wall, however, as is generally supposed, but from the gland proper, gradually dilates this duct, just as the ureters and pelvis are dilated in hydronephrosis of the kidney. Then follow changes due to chronic inflammation, the surrounding connective tissue is thickened, and the cells become transformed into a double layer, the outer of which become ciliated, these being particularly abundant in those parts of the wall richer in blood-vessels.

For the formation of such growths it is not necessary to imagine a perversion of the embryonic layer of cells,

which develop in this irregular way late in life. Mechanical irritation, to which the parts may be subjected, is sufficient to cause an inflammation which closes the outlets, and then follow the changes above described.

PRODUCTION OF CANCER BY LOCAL IRRITATION.

As illustrative of the theory that local irritation alone is sufficient for the production of cancer (epithelioma?) should be mentioned a case reported by Tillmanns.¹ It was that of a worker in paraffine, who besides a typical cancerous affection of the scrotum (similar to that occurring in chimney-sweeps) presented the appearance of a tar dermatitis on those parts of the body which came in contact with the paraffine. The scrotal tumor was removed, not to recur, but it was followed by a secondary nodule in the left arm and death after two years. The author shows that as in the case of chimney-sweep's cancer, where not all soot but that from anthracite coal seems to be the special exciting cause, so it is the workers in the brown coal tar manufactories who are especially subject to affections of the skin, varying from a simple irritation to a malignant trouble. The analogy which lies between the action of tar, soot, paraffine, and the like, upon the skin, and that of tobacco upon the mouth and lips is to be sought in the ammoniacal, empyreumatic substances which are present in all of them.

METASTATIC CANCER IN THE STOMACH.

Grawitz² calls attention to the extreme rarity of secondary cancer of the stomach, especially when its frequent occurrence as a primary disease is remembered. In a collection of fourteen hundred and seventy-six cases of cancer occurring in all parts of the body there were six hundred and nine cases of primary cancer of the stomach, or about forty-one per cent. On the other hand, he has been able to find but four undoubted cases of secondary cancer, and to these he has been able to add four more during the last two years. Joining these eight cases together he finds: (1) in four cases that it was secondary to cancer of the œsophagus; in two cases to cancer of the breast, and to cancer of the testicle and of the leg once each; (2) that in two cases the stomach contained one, in the remaining six cases, two or more nodules; and that ulcerative changes can take place in them contrary to the opinion of Forster; and finally in all eight cases the new formation was circumscribed in character. This last peculiarity may be of importance in doubtful cases in determining the secondary nature of the nodules.

FOR THE DIRECT IMPLANTATION OF CANCER

from one part of an animal to another part of the same animal, Schottelius³ gives an experiment with negative result. A bit of carcinomatous tissue was transplanted from the affected breast of a pregnant bitch to an unaffected breast, and after twenty-three days there was only found a cicatrix at the seat of inoculation without the slightest trace of the foreign substance or any product of it.

In order to find

THE RELATIONS OF THE LYMPH CANALS TO A CARCINOMATOUS GROWTH

Schottelius³ injected thirty centimetres of a watery fluid containing cinnabar into the peritoneum of a cat,

¹ *Über Teer, Russ, und Tabakkrebs*. Deutsch. Zeitsch. f. Chir. u. Gyn., 8, 549. *Centralblatt f. d. Med. Wiss.*, 1881, page 368.

² *Virchow's Archiv*, vol. lxxxvi, p. 159.

³ *Casuarische Mittheilungen aus d. Patholog. Anatom. Institut zu Warburg*. *Centralblatt f. d. Med. Wiss.*, 1881, p. 597.

whose left upper breast was changed into a hard, cancerous mass, still covered with normal skin. Peritonitis followed and the animal was killed at the end of four days. In the affected breast cinnabar could not be found, while cells filled with cinnabar were seen in two secondarily diseased lymph glands of the posterior mediastinum, both in the physiological lymph paths of the gland and in those of the cancerous nodules themselves. These particles were, however, restricted to the cells of the connective tissue and were never found in the cancerous cells proper.

Supported by observations made upon five cases, Stilling¹ is led to believe that

PRIMARY CANCER OF THE LUNG

does not start from the epithelial elements (Thiersch-Waldeyer theory) but originates in the connective tissue in or about the bronchus, as Virchow at first thought. He is forced to this conclusion rather through exclusion than by direct anatomical evidence, since the type of cancer cells which were found did not correspond either with the epithelium lining the bronchi, or with that of the mucous glands of the same; and, moreover, as their epithelium was found lying in the closest proximity to the diseased masses without showing any evidence of change. The disease could be followed in the lymph spaces of the bronchial mucous membrane, and it was chiefly through this channel that the alveoli were affected, the disease never having its origin in them. Figures are also given of the way the cancer is propagated in the lymph spaces in the intima of the arteries, and finally, how the same spaces in the sheaths of the nerves afford another means for its dissemination, while the nerve tissue itself is apparently untouched.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

S. W. LANGMAID, SECRETARY.

SURGICAL SECTION.

OCTOBER 15, 1881. Dr. R. M. HODGES in the chair.

Dr. Hodges hoped that the interest shown at the last meeting of the section, when many important subjects were discussed, would continue.

Dr. BRADFORD showed an appliance described by Dr. Morton, of Philadelphia, for

THE CORRECTION OF AGGRAVATED CLUB-FOOT,

called by him a club-foot stretcher.² This was designed as a help in the correction of the distortion after tenotomy. The immediate employment of a certain amount of force in severe cases after dividing the tendons is a procedure of no recent date. It is formally advised by Langenbeck, and Hueter, and König,³ and has probably been used by a number of surgeons, but, owing to the difficulty of fixing by the hands the os calcis and astragalus, the method has not met with much favor. Dr. Lee, of Philadelphia, succeeded by repeated attempts at *brisement forcé* (using the hands alone) in curing a severe case; little mention, however, is made in the literature of the subject of this mode of surgical interference.

In cases of aggravated club-foot the deformity is

maintained not by shortened tendons alone, but also by a contracted state of all the soft tissues. Tenotomy can divide some of these, but the ligamentous and fibrous bands which firmly unite the tarsal and metatarsal bones cannot be divided, but must be stretched or torn.

The defects of Dr. Morton's appliance are that the force applied to the foot is that of a pull through straps, which necessarily yield to a degree, and are liable to slip. The power is not absolutely under the surgeon's hand, and the machine is clumsy.

As a modification of this Dr. Bradford showed an apparatus where the power was that of a long screw similar to that in the osteoclast. The force bore upon the inner side of the foot; the os calcis and astragalus were fixed by being bandaged to a plate connected with that on which the screw worked, and also by means of a strap wound round the foot about the head of the astragalus and held by an assistant. The appliance was so arranged that besides the forcible abduction of the foot it could be twisted and flexed.

In three cases where the method had been tried it had been found that a great amount of force could be used without injury to the skin. Fibrous adhesions were felt to give way which had been firm enough to resist the force of the hands, even when the patient was etherized and after tenotomy had been freely employed.

The foot in the corrected position should be done up in a plaster-of-Paris bandage and left. The pain for the first few hours is usually severe, but after that no trouble follows from swelling of the foot. In two of the three cases where this method was used a second sitting was required.

Where a deformity of the articular facets of the astragalus exists—as has been shown by dissection to occur in a certain number of cases—perfect correction could not be brought about, but more thorough correction than is possible by tenotomy alone can without doubt be brought about by the aid of force.

Dr. CUSHING said he had somewhere seen it proposed to cut down boldly upon the contracted tissues, making an open wound.

Dr. BRADFORD said this had been done by several surgeons. He could not see the advantage of an open wound over a closed one.

Dr. CUSHING replied that it would afford an opportunity for tying several arteries.

Dr. BRADFORD said he had frequently cut arteries in the preliminary subcutaneous operations.

Dr. CUSHING spoke of the general fear of swelling of limbs to which plaster-of-Paris bandages had been applied. Dr. Bradford's experience would serve to give confidence in the application of plaster bandages.

Dr. MARCY asked why Dr. Bradford removed the bandage on the third day. He referred to Mr. Erichsen's remark that the limb never swelled if permanently incased in plaster.

Dr. BRADFORD replied that it was exceptional to remove the plaster. He did it in one case on the third day on account of pain and apprehension of sloughing.

The CHAIRMAN said it seemed to him that the rapid restoration of the deformed foot was a step in the right direction, if indeed it did not prove to be the operation of the future. The fault of the usual club-foot operation was the tedious and exacting after-treatment demanded, of which the patient and surgeon tired. An operation was certainly desirable, which would quickly and permanently bring the foot into the required position.

¹ Virchow's Archiv, vol. lxxxiii., p. 77.

² Vide Philadelphia Medical Times, October 9, 1880.

³ Lehrbuch der Speziellen Chirurgie.

DR. DE BLOIS showed a modification or improvement in the construction of laryngeal forceps for the removal of foreign bodies, also a laryngeal lancet, which will be described in some future number of the JOURNAL.

DR. ARTHUR CAROT showed a

WIRE SPLINT FOR THE TREATMENT OF HIP DISEASE, such as is used in the Children's Hospital. The advantages claimed for it are absolute immobility and extension, and yet the child can be moved. Children wearing it, even in cases of fracture, could be treated as out-patients of a hospital, or transported long distances.

One defect in hip splints, the long Dessault for instance, is that the hip drops back in them.

DR. BRADFORD said that he had seen these splints used as modifications of Thomas's splint. They were more easily made, were simple in adjustment, extension could be accomplished, and they allowed of complete immobilization of the hip-joint. It was the most simple apparatus for hip disease, the least expensive, and quite as good as Sayer's wire cuirass or Thomas's splint.

DR. MARCY exhibited and explained the principle of the "Evans mercury-sealed trap" for water-closets.

He also showed some specimens of the material used by him for antiseptic dressings. He said that most cotton cloth was clean and devoid of dressing or filling of earthy or other matter at some stage of its manufacture, and it was cloth in this stage of manufacture which he used. Dr. Marcy also showed some ligatures made of carbon tendon.

DR. GAY spoke of the use of cosmoline in place of paraffine in antiseptic dressings, whereby the gauze was rendered less stiff.

It was voted that the section should meet every six weeks, alternating on the first and third Saturdays of the month. Adjourned.

PROCEEDINGS OF THE GENERAL CENSORS' MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

NOVEMBER 17, 1881. Meeting called to order at two p. m., and call read as follows:—

"At a meeting of the Councilors of the Massachusetts Medical Society, held June 7, 1881, it was voted:—

"That the Secretary of the Suffolk Board of Censors, acting for the parent society, invite all the censors of the several districts to meet either with full boards or by delegates, for the purpose of considering the advisability of effecting a permanent arrangement, under which there shall be held at stated intervals, a conference at which delegate censors, one from each district of the State, shall discuss those questions in which they have a common official interest, and thereby secure, as far as is practicable and necessary, a uniform standard of examination for the whole State."

Dr. Thomas Dwight was elected chairman, and Dr. H. C. Haven clerk of the meeting.

DR. W. S. BROWN, of Stoneham, thought the first question to be considered was: "Is *any* examination desirable?" the only object of it is to keep candidates from gaining admission in any underhand way. A dozen years ago nothing but a diploma from a recognized medical school was required; now some boards

require no more, some much more; Dr. Brown expressed himself strongly in favor of a practical examination, as nearly uniform as possible, and only raised the question for the purpose of eliciting discussion.

DR. E. P. HURD, of Newburyport, thought it desirable that some uniformity should be maintained, even if it were not absolute. That some examination should be required he thought a foregone conclusion. Dr. Hurd stated that in Essex North District an examination had, for the last year, been insisted on; and the censors had been subjected to much criticism on account of their having rejected certain applicants who did not seem to them to possess the requisite qualifications.

DR. NICHOLS thought the only object of the meeting was to find out if we should insist on a uniform examination. If this were desirable the question of the means best adapted to secure it could be better decided by some permanent organization.

DR. G. K. SABINE, of Brookline, said that he was present as an individual member of the Norfolk board, and, therefore, could not vouch for opinions of his colleagues, but that he personally was strongly in favor of there being at least some guide to the different boards in their interpretation of the By-Laws.

DR. F. C. SHATTUCK, of Boston, thought that a great deal of good would arise from a yearly interchange of opinion between the several boards, even if no absolute uniformity was attained. He thought it essential that the censors of different districts should know the general methods of other boards; and that a yearly meeting would do much to bring all the boards into practical harmony.

DR. DUDLEY, of Plymouth, asked for the reading of the By-Laws relating to the necessary qualifications of candidates, and the method of admission. These are as follows:—

"FELLOWSHIP.

"1. Every candidate for admission into the Massachusetts Medical Society must, by proper credentials and examination, satisfy the censors of said Society that he possesses the following qualifications for fellowship:—

"That he is not less than twenty-one years of age; that he is of sound mind and good moral character; that he has a good general English education; that he has a knowledge of the principles of experimental philosophy; that he has such an acquaintance with the Latin language as is necessary for a good medical and surgical education; that he has studied medicine and surgery three full years under the direction, and attended the practice, of some reputable, regularly educated physician or physicians; that he has attended two terms of study, or two full courses of lectures in separate years, at an authorized medical school, recognized by the Councilors of said Society, and possesses a diploma or its equivalent from such school; that he does not profess to cure diseases by, nor intend to practice, spiritualism, homeopathy, allopathy, Thompsonianism, eclecticism, or any other irregular or exclusive system, generally recognized as such by the profession or declared so by the Councilors of said Society: and, by a further examination, a part of which shall be in writing, that he has an adequate knowledge of anatomy, pathological anatomy, physiology, general and medical chemistry, materia medica, therapeutics, midwifery, the theory and practice of medicine, clinical medicine, surgery, clinical surgery, hygiene, and public hygiene."

DR. DUDLEY then said that it would seem that the

several boards had not been justified in admitting a candidate on his diploma alone, and that, instead of those boards who had instituted a reform deserving praise for so doing, they should be censured for not having done it before.

The following resolution was proposed by Dr. SHATTUCK, seconded by Dr. SABINE, and unanimously adopted:—

Voted, That in the opinion of this meeting it is expedient that the requirements of the By-Laws with regard to the examination of candidates for admission to the Massachusetts Medical Society be universally observed in the various district societies.

Also voted, That the secretary of this meeting be instructed to request the Board of Censors of each district to appoint two delegates to attend an annual meeting for conference to be held in Boston on the second day of the annual meeting of the parent society.

Dr. NICHOLS moved "that the chairman and secretary of this meeting be authorized to request the council to initiate such a change in the By-Laws as may make this annual meeting of the delegate censors obligatory. The motion was duly seconded and carried.

Dr. HAVEN thought that one reason for the great discrepancy in the interpretation of the By-Laws regarding membership was that so much of it is obsolete it is impossible to accept it literally, and this opens the door for individual differences of opinion as to what portions of the law should be regarded; an unenforced law is demoralizing, and this By-Law if enforced would result in the rejection of almost every candidate. If the censors had a law they could literally follow in every respect but that of the severity of examination there would be little difficulty in obtaining a practically uniform standard by means of the annual meeting. He therefore moved "that this meeting do petition the councilors of the Massachusetts Medical Society to consider the question as to whether By-Law I. does not require revision in order that it may be accepted as a literal guide for the several censors' boards." After being duly seconded the motion was carried.

Adjourned *sine die*.

BIOGRAPHICAL SKETCHES OF DECEASED MEMBERS OF THE OBSTETRICAL SOCIETY OF BOSTON, WITH AN OUTLINE OF THE EARLIER OBSTETRICAL HISTORY OF BOSTON AND VICINITY.¹

BY WILLIAM W. WELLINGTON, A. M., M. D. (HARV.),
Member of the Society, etc., etc.

Dr. WALTER CHANNING, the first professor of midwifery in Harvard College, was born in Newport, Rhode Island. His parents and ancestors were people of high social and intellectual position. His elder brother, Rev. William E. Channing, D. D., has a world-wide reputation. Hundreds of Harvard graduates bless the memory of a younger brother, Prof. Edward T. Channing, for his admirable professional work in the chair of Rhetoric at Harvard College.

Dr. Channing's name appears in the Harvard College catalogue among the graduates of 1808. He pursued his medical studies in Boston, Philadelphia, Edinburgh, and London. He established himself as a

physician in Boston in 1812, at the age of twenty-six years. Three years later he entered upon the duties of his professorship.

My first knowledge of, and acquaintance with, him began in the autumn of 1835. He was then in his prime. In the department of obstetrics he stood without a rival in this neighborhood. I shall never forget the impression made on me by his first lecture. I had just begun my medical studies, and was attending my first course of medical lectures. According to the custom of the time, for four months, from November to February inclusive, we were required to listen, from four to six hours each day, to lectures on all the branches of medicine, and to digest what we could of them. The lectures (those on chemistry excepted) were good, but to a young beginner not at first specially interesting. It was Dr. Channing's turn to officiate on the second hour of the second day. He came fresh from his morning's drive, bright, cheery, and in the best of spirits. The first impression was a favorable one. He was a fluent, at times an eloquent, speaker. He graphically described the bones of the female pelvis, and clothed them with flesh and blood; he was full of fun and anecdote; his manner was pleasant and interesting. The lecture reminded one of a refreshing easterly breeze in a dry, hot summer's day. The hour passed rapidly away; he briskly put on his coat, and disappeared as suddenly as he came, leaving us almost spellbound.

It is "due to the truth of history" to say that the promise of this first lecture was hardly fulfilled in the sequel. As the course proceeded the lectures were apt to be discursive. The doctor was rarely tedious; but he was erratic, and not always edifying. In time we began to listen to John C. Warren, John Ware, George Hayward, and Jacob Bigelow, with at least as much interest as we did to the professor of obstetrics.

Once or twice during the course we were treated to a little practical midwifery. A female pelvis was placed upon the table. The head of a rag baby was thrust into it. It was our duty to ascertain the presentations, and to deliver with the forceps. The scene in such a lying-in room may be imagined.

Dr. Channing had thoroughly studied the art which he professed to teach. He was an enthusiast in obstetrics, and was held in high regard as a counselor in this department. He made many contributions to the literature of our profession, and delivered one of the annual discourses before the Massachusetts Medical Society. His book on Etherization in Childbirth was timely and valuable. His paper on the Bed-Case is worth reading to-day.

He was connected for more than twenty years with the Massachusetts General Hospital, and was one of the accoucheurs of the Boston Lying-In Hospital.

It is to his credit, as well as to that of the donor, that he received a bequest of several thousand dollars from a lady whom he never saw but once, but then in an hour of extreme peril, and who believed that to his skill she owed her life.

He was one of our earliest members, and as our first president is well remembered. He was much interested in this Society, usually attended its meetings, took an active part in the discussions, and was always bright, genial, and kindly.

Dr. Channing was a religious man, and deeply interested in religious institutions. When his pastor was absent he would conduct the service and preach

¹ Concluded from page 497.

the sermon. He could preside over a Bible class, consisting of fifty to a hundred men and women, on a Sunday afternoon. He was willing to aid in parish work; and, though full of practice, would devote a generous portion of his time to parochial duties.

He lived to be ninety years old. During the latter part of his life the increasing infirmities of age kept him secluded. I have been told that he and his younger brother, in their last years, were in the habit of passing their birthdays together, and of devoting the time to social intercourse, to the reading of the Scriptures, and to prayer. He served well his day and generation; the close of his life was calm and peaceful; he has left behind a pleasant memory.

Dr. Charles G. Putnam was born in Salem. He graduated at Harvard College in 1824, and received his medical degree from the same institution in 1827. After practicing a few years in Salem he removed to Boston. He gave special attention to obstetrics and the diseases of women.

His life was not an eventful one. He never obtruded himself into public notice, or sought to occupy conspicuous positions. Quiet, modest, and unassuming, he devoted himself unreservedly to the discharge of his duties as a physician. He possessed a clear head, a kind heart, and a sound judgment. He was a loyal, active, and faithful member of the profession, which he had thoroughly learned, and which he ably and conscientiously practiced.

The Massachusetts Medical Society, appreciating his worth and merits, in 1869 made him its president. Upon the resignation of Dr. Channing this Society with one voice chose him to fill the vacant place.

He died suddenly, February 5, 1875, aged seventy years. His last words, while seated on the doorstep, just after the attack which proved fatal, were a request to his son to visit a patient who required immediate attention.

At a special meeting of the Suffolk District Medical Society, called to notice his death, resolutions were passed in honor of his memory. Remarks were also made by several physicians attesting to his excellence of character, his independent judgment, his kindness of heart, and his devotion to professional work. Mention was also made of his dexterity as an operator in obstetrical cases, and of the kindness and skill always manifested by him when called in consultation. In the language of one of the speakers, "He was a wise, thoughtful, genial, gentle, man. All of us must be better for the example his life has been to us."

Dr. Anson Hooker, our third president, was born July 17, 1799, in Westhampton, Mass. He graduated at Williams College in 1818, and at the Harvard Medical School in 1822.

He began his medical career at the south end of Boston, and for a time had charge of a dispensary district. He removed from Boston to East Cambridge in 1825, and from that time till his death in November, 1869, he was an active and devoted physician.

Dr. Hooker was a man of high character, and of more than ordinary ability. His life was a laborious one, but he was enthusiastic in his love of his profession, and performed its every duty with conscientious fidelity. He had a genial and cheerful disposition, was eminently social and domestic, and carried sunshine wherever he went. His reputation was good in all branches of the profession; in midwifery he was an expert. His obstetrical practice was very large. Those

who have examined his account books report that they find in them a record of about ten thousand cases of labor. His skill in obstetrical operations was proverbial.

During the war he was specially detailed, by order of Governor Andrew, to visit, and report upon, the condition of the Massachusetts soldiers invalided in the Western United States general hospitals. He performed this duty in a very satisfactory manner, and received the thanks of the governor for the service rendered.

Dr. Hooker was regarded by the community in which he lived not only as the good physician, but as the wise counselor and the kind friend. At various times he was called to fill important offices of trust and responsibility. He served upon the Board of Aldermen and School Committee of Cambridge, and for two years represented the city in the legislature.

His death, at the age of three score and ten years, was caused by disease of the heart. The scene at his funeral was impressive. The church in which the services were held was crowded, and the countenances of those present indicated clearly the sadness of their hearts. Places of business were closed, and the whole population seemed to unite in offering a last tribute of affection to one whom they loved and honored. A fitting monument has been erected to his memory by the contributions of his townsmen.

Dr. Charles E. Buckingham graduated as Bachelor of Arts at Harvard College in 1840, and as Doctor of Medicine in 1844. He was the son of Joseph T. Buckingham, the noted editor of the *Boston Galaxy* and subsequently of the *Boston Courier*, and he inherited some of his father's peculiarities. He began practice in Boston soon after he received his medical degree. He was a man of ability, energy, and industry. Independent, candid, outspoken in the expression of his opinions, honorable in his relations with his professional brethren, and possessing a generous regard for those who were his juniors, he gradually overcame the obstacles which lay in his path, and took and maintained his position as one of the leading physicians in Boston. But while ready and willing to accord to others their full rights, he was not inclined to relinquish his own without a struggle. He was not a non-resistant; whoever wished to contend with him found a foe man worthy of their steel.

His character and abilities received due appreciation both from the profession and the public. He received successively the appointment of surgeon and consulting physician of the City Hospital, and of adjunct professor of the theory and practice of medicine and of professor of obstetrics and medical jurisprudence in Harvard University. He labored assiduously to raise the standard of medical education, and heartily sympathized with the late movement to reorganize the medical department of Harvard University.

As a writer he was clear and vigorous. It is understood that at the time of his death he had made considerable progress in the accumulation of material for a treatise on obstetrics.

He was an interested and valued member of this Society, and, as its president for three years, did much to quicken its activity, and give life and character to our meetings.

He died at the age of fifty-six. A large company of those who loved and confided in him filled the church in which the funeral services were held, and united in rendering to him a last tribute of respect.

Channing, Putnam, Hooker, Buckingham,—our first four presidents; they honored their profession while living; lovingly we cherish their memory.

Although Dr. John Homans had ceased to be connected with this Society before his death, yet our pleasant recollections of him will not allow us to pass him in silence. He graduated at Harvard College in 1812, and began his professional life in Brookfield, Mass. After several years of successful practice in that town he removed to Boston, where he soon took, and for forty years maintained, a place in the front rank of his profession. He was a man whom it was pleasant to meet, and with whom it was a privilege to be acquainted. Courteous and gracious in his manners, kind and genial in his nature, thoroughly devoted to his profession, he won for himself a high place in the public estimation. He was for two years president of the Massachusetts Medical Society, and in 1844 delivered the annual discourse. In his own life he exemplified the "Good Physician," whose character he so pleasantly portrayed in his discourse. He died in 1868, aged seventy-four years.

Many of us retain pleasant recollections of Dr. Edward D. G. Palmer, of Boston, a man of quiet and unassuming manners, respected and esteemed by his professional brethren and his patients.

Dr. William Edward Coale was a native of Baltimore, and a graduate of the University of Pennsylvania. For several years he was an assistant surgeon in the navy, and for twenty-two years was a practitioner in Boston. Coming here a stranger, he soon had patients and friends, who appreciated his ability and acquirements. He was an early member of this Society, and was esteemed for his social qualities and his medical attainments. In 1862 he offered his professional services to the government, and was in service for several weeks in the memorable campaign of the Army of Virginia. Obligated by sickness to return home, he went back to the work in November of the same year, and visited the military hospitals in Tennessee and Kentucky as an inspector of the Sanitary Commission. He contracted disease in those malarial regions, from which he never recovered.

He was for many years an officer in the Massachusetts Medical Society, and an instructor in the Harvard Medical School. He was the author of a little work entitled, *Hints on Health*, very pleasantly written, and full of valuable suggestions on a variety of subjects. He was a good physician, and a genial, true-hearted man. He died suddenly in April, 1865.

Dr. Calvin G. Page died May 29, 1869, at the age of thirty-nine years. He finished his work in early manhood, a work marked throughout by energy, integrity, and fidelity to every duty. He was a man of great worth, and respected and beloved by those who knew him. He served honorably through three years of the war, and his early death was owing, in part at least, to exposure during this service. He died on Decoration Day, while loving hands were strewing flowers on the graves of his departed comrades.

Dr. Lucius M. Sargent was personally unknown to me. I knew him only by reputation. He was one of the youngest, perhaps the youngest, of our number. He was the first to die.

He was born in Boston, September, 1826. He entered Harvard College in 1844, but left during his second year. He received, however, the degree of Master of Arts with his class, as a special compliment to

his general attainments, and the zeal and ability with which he prosecuted his profession. He was always among the foremost where energy, talent, and courage were necessary. As a medical student his application was unremitting, and his enthusiasm was unbounded. The Hospital created the office of Artist to secure his services. After his graduation he soon became a prominent physician in the section of the city where he established himself, and a brilliant future seemed opening before him.

On the breaking out of the rebellion, he promptly offered his services as surgeon in the Second Massachusetts Infantry. But the routine of a surgeon's life soon became too dull for him, and he resigned his medical commission. He was next appointed captain in the First Regiment of Massachusetts Cavalry, and was in a large number of skirmishes and dangerous movements peculiar to cavalry service. He rose in course with meritorious conduct to the rank of lieutenant-colonel.

On the ninth of December, 1864, while gallantly leading a successful charge upon the outer works near Bellfield, Virginia, under orders to "drive the enemy within his main defenses, and to determine the rebel position," he fell in front of his mounted column, mortally wounded, and in two hours expired.

"How sleep the brave who sink to rest,
By all their country's wishes blest!
By fairy hands their knell is rung;
By forms unseen their dirge is sung;
There Honor comes, a pilgrim gray,
To bless the turf that wraps their clay;
And Freedom shall awhile repair
To dwell a weeping hermit there."

Twenty years have elapsed since the formation of this Society. During this time nine of the members have died, including one who had previously resigned membership. The duty was assigned me, by the President, of recalling them to your memory, and of briefly sketching their lives and characters.

This duty, reluctantly assumed and unsatisfactorily discharged, has nevertheless been pleasant in performance; the more so from my connection in the service with one whose friendship and sympathy I have shared through all my life.

It was a privilege and an honor to be associated with these men:—

neque candiores
Terra tulit.

GYNECOLOGICAL SOCIETY OF BOSTON.

STATED MEETING, FIRST THURSDAY OF SEPTEMBER,
1881.

HENRY M. FIELD, M. D., SECRETARY.

WM. G. WHEELER, M. D., president, in the chair.
DR. FIELD read by appointment a paper entitled

REPORTS FROM GYNECOLOGICAL PRACTICE OF 1880
AND 1881,

of which an abstract follows:—

The first case related to a lady about thirty years of age, who had been married ten years, and lived constantly with her husband; both of good health. Had never been pregnant. An investigation had been proposed several times by the doctor and declined, until the occurrence of pain and engorgement in the left breast, which refused to yield to the usual measures of treatment, both created a present demand and afforded

the occasion long desired for a uterine examination. Local symptoms now, as heretofore, almost wholly negative. The womb was found healthy in all particulars except that the cervix was elongated and so bent upon itself that the os presented towards the sacrum. A simple gutta-percha ring was introduced with effect to restore cervix to its natural position, and this the patient wore without irritation. The purpose and hope implied in this procedure were fully explained to both husband and wife.

Pain in the breast began speedily to diminish, and engorgement, more slowly, disappeared. Two or three months later husband called for some measure of relief of severe nausea of pregnancy. Supporter was removed after the fourth month, pregnancy proceeded safely to its full term, and patient was recently delivered of a female infant.

The second case had to do with a local condition almost exactly the same; patient had been married several years, and had had several miscarriages, in an early stage of gestation, which had doubtless been more or less encouraged; was now, however, desirous of having a child. Little or no local discomfort, but varied and extreme reflex distress, chiefly characterized by insomnia, nervous restlessness and irritability, and especially by pain in the region of the heart, with attacks of palpitation on occasion of more than usual fatigue. Indeed, she had been led to consult a physician because of her belief that she had heart disease. The same kind of supporter as was used in the first case equally well corrected the local mal-position, and very general constitutional relief followed. Earnest moral advice was given, and was greatly needed, patient being urged to give up her life of excitement and general moral dissipation, to which she was accustomed, and live as a sensible woman should. Pregnancy was represented as an end to be attained if possible.

Reported at the end of three months that she was greatly relieved in all respects, and much pleased with the results of the treatment: was evidently trying to carry out her part in the effort to recover her health. Reported again a short time since — nine months from commencement of treatment — that she was no better than at first, had lost the ground she had gained, was discouraged. Had evidently returned to her old methods of life, — had rejected the doctor's advice that she should live as much as possible with her husband, and had been away from him as much as possible. Thought the supporter was causing irritation.

Result of treatment in this case a failure. Supporter was removed, although there was no sign of local irritation, and case abandoned, which it was easy to do as patient lived at a distance of several hundred miles. Can see no valid reason why the second case might not have been as successful as the first, but in gynecology, in an eminent degree, as in other departments of medical practice, but little can be done unless the patient faithfully and intelligently cooperates with the physician.

The third case had to do with a married lady, rather above thirty, who, after several miscarriages and a birth at full term, after repeated threats of miscarriage, and the loss of her child in infancy, possessed of a morbid desire to become a mother, reported herself in a family way, and tormented with a fear that her hopes would again be blighted by abortion. Early in gestation a slight sanguineous flow showed itself, which only ceased when the patient kept her bed. Later remaining in

bed afforded no security, and the flow gradually increased in quantity in spite of all measures to arrest it. Examination about this time disclosed a considerable erosion about the os and an appearance like slight fissure to the left of the uterine orifice. If these could be cured it was believed the flow would cease, and the patient be safe. Tannin suppositories were tried for a time, and, later, careful local applications of iodine and balsam Peru. The latter seemed to promise a partial success for a time, but suddenly, as patient was approaching her sixth month, labor pains set in, and a viable fetus was extruded. Nothing about child or placenta appeared abnormal.

Patient was carefully watched, and it was intended that local applications suitable to the case should be made as early as possible. But soon after — two weeks — a tendency became apparent by which the erosion and fissure were being gradually drawn within the cervical canal, so that at six weeks after parturition nothing abnormal could be found, whether by examination by speculum or sound. The belief was expressed, however, that should this patient again become pregnant within a year or year and a half the old lesions would reappear, similar symptoms be reproduced, and she would have the same sad ground to go over again.

The fourth and last case reported was to the following effect. Mrs. L., aged thirty-five years, had had several children and one or two miscarriages. Her last confinement was at full term, and about four years prior to the beginning of this record. Had had then a bad getting up, but had gradually recovered her accustomed health. In April, 1880, consulted the doctor for great menstrual irregularities and general ill health, which she referred to this cause. Called several times upon the physician between this date and November, when she declared herself in no way improved. Had begun to menstruate ten days before, and flow seemed much like that of old times; but it suddenly ceased after two days, and left her feeling rather worse than before. Appointment made for a local examination at her home the next day.

Examination by conjoined palpation gave no results, owing to firmness of abdominal walls and thickness of adipose. Having been again catechized as to possible pregnancy, she was placed in position favorable for passage of sound, and this instrument passed to a depth of four and a half inches, the last two inches with extreme caution. Sound appeared finally to impinge upon fundus of the uterus; no obstruction occurred at any point, no pain occasioned, and no discharge followed withdrawal of instrument. Special cautions given the patient and decision reserved. The following night she was seized with severe labor pains, and a few hours later the decayed remains of a fetus and membranes of apparently three months' development were extruded, in such a state of decomposition that no possible measures of deodorization and disinfection could remove the smell from the room for several days. Patient made a good recovery.

With memory thus assisted, herself and husband recalled the circumstance that rather more than a year before she had been suspected of pregnancy on account of certain symptoms, but these soon and completely disappearing the experience had wholly passed out of mind.

The reader remarked upon this case the phenomenon of a decayed fetus having been so long retained

without any effective efforts on the part of the uterus to cast it off, and with so little local disturbance that suspicion of its presence had never been once, through the whole year, entertained by the patient. The absence of all septic infection was also worthy of remark when we remember with what fatal facility, under circumstances apparently of much less provocation, toxic material is taken up by the uterine veins and sinuses.

DR. HUNT, of Newtonville, — present by invitation, — remarked upon the tolerance which the uterus will show for bodies not living and for dead matter generally, whereas it creates, oftentimes, a great disturbance about a living fetus. Recall but a case of pregnancy, complicated by albuminuria and Bright's disease in their last stages; immense swelling over the whole body and difficult respiration, could not bend the legs on account of swelling; moreover, persistent head-symptoms like those which precede convulsions. All at once came a period of complete and universal comfort: head-symptoms abated, a great flow of urine occurred without further diuretic interference, all œdema and anasarca disappeared; but synchronous with this general relief was a stage of uterine calm, all fetal motion had ceased, and three weeks later the womb cast off an ovum of seven months' development, dead and considerably decomposed. So long as the fetus is alive we have all sorts of trouble; the moment life ceases all bad symptoms disappear. We should have expected the opposite of this, that is, that the dead fetus would make the trouble. Has had an experience like this at least three times. Had never seen mischief from anything retained within the uterus so long as it was dead; no contamination of the system.

DR. WHEELER recalled a case of placenta retained three months; no unpleasant symptoms till just before expulsion. Dilated and supposed he had to do with a broken-down fibroid or detached polypus; no septic effect.

DR. FIELD remarked such testimony had the most direct bearing upon the question of what to do in case of retained placenta and like conditions. Some physicians are never easy till they have removed the dead matter, at whatever cost of effort and of discomfort to the patient. If there is no danger of septic absorption, assuredly we should leave the patient to nature's measures indefinitely, so long as she is comfortable otherwise. He would like to ask, however, why is it the patient is safe under these circumstances? why are the uterine veins and sinuses, which appear to be hungry for septic matter after a normal parturition, so that many advise and practice carbolic injections, often repeated, and continued for a considerable time as an antiseptic measure of protection, why are these same veins and sinuses practically closed against all possibility of absorption while yet the uterus contains, for months together, a mass of corrupt and putrefying material?

DR. MARCY replied he believed no explanation of this was possible except in the light shed upon this whole subject by the researches of Ercolani. With the text and diagrams of this author before him he commenced an elucidation, which, however, was of such extent and interest that, upon motion, the discussion was waived until the doctor should find time to write a paper upon the subject.

DR. NORRIS reported the case of a lady who had been married nine years and had never had a child.

Examination showed the cervix conical, elongated, and bent on itself. A ring caused too much irritation, but the substitution of a Grailly Hewitt eradle worked well. This the patient wore comfortably for four months, and a year later gave birth to twins.

DR. STODDARD would ask Dr. Marcy if we are to understand that nature affords protection to the woman, in whom a fetus dies, above that afforded to her who produces her child at full term, in respect of liability to, and immunity from, the absorption of septic material.

REPLY. Both are protected until the serotinal cells are removed. During the ninth month cretaceous and fatty degeneration sets in, evidence of which all have seen in the chalky points visible in the placenta examined after birth; and this is nature's method of removing what would otherwise interfere with effective contraction of the uterine muscle at time of parturition.

DR. STODDARD wished to ask Dr. Field if there was elongation of the cervix in the first case reported; also what was the chief factor in the production of flexion, was it flaccidity alone or was it prolapsus.

The Chair replied, we are apt to find the elongated, cone-shaped cervix bent upon itself. Baker Brown, in the days of his prominence, suggested partial amputation as a remedial measure. More lately, a method palliative rather than curative has been accepted; obviate the mischief as much as possible by raising the uterus by some measure of support, and by changing the axis of the canal. Had himself secured pregnancy by such change of position, with or without the aid of repeated dilatation.

DR. NORRIS rejoined that the instrumental measure was far from being his sole dependence in this class of cases. He further gave especial attention to all calculated to raise the tone of the general system and so promote local tone, for example; in the case reported, he had insisted the husband should remove the patient from a cellar-basement into rooms of better elevation, and where a sufficiency of light and pure air could be obtained.

DR. W. S. BROWN remarked, in further allusion to Dr. Stoddard's question, that Huguier first pointed out that what was formerly regarded as prolapsus is simply elongation with hypertrophy and flaccidity. In this condition, the entrance of the male organ tends both to maintain and increase the flexion of the cervix and the presentation of the os towards the cervix.

Discussion followed at some length respecting measures calculated to prevent repeated abortion, in the third case reported, in which Drs. Wheeler, Hunt, Brown, and Field, chiefly took part.

DR. W. S. BROWN advised that the cervix should be dilated by sponge-tent, protected by slips of slippery elm, in order to ascertain if there was actual disease, and, if so, its exact location; in the event of the discovery of which the usual measures should be taken for its removal.

W. P. GIDDINGS, M. D., of Gardiner, Me., was unanimously elected a corresponding member. Society adjourned.

— The British Health Congress, to which will be attached a domestic and sanitary exhibition, meets in Brighton December 13th, under the presidency of Dr. B. W. Richardson, who will inaugurate the Congress with an adress. The exhibition will open December 12th.

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RUDOLPH VIRCHOW.

On the 13th of October, Rudolph Virchow completed the sixtieth year of his life and the twenty-fifth of his professorship in Berlin. The event has been marked, not alone by the private congratulations of his friends throughout Europe, but also more publicly by two festivals, the one held in the Pathological Institute on the 13th of October, the other in the Rathaus on the 19th of November. The former was especially of a medical character, consisting, as it did, of a gathering of many of Virchow's earlier assistants, together with a few of the more noted medical men of Germany, the latter was of a more general scientific character. The special feature of the meeting at the Institute was the presentation, by his pupils, of a bust of Virchow to the Institute and to himself, and of an album containing their own photographs. The presentation speech was made by Recklinghausen, Virchow, in response, giving a short sketch of the Institute and its work. In the evening Virchow's friends joined him at a dinner. The celebration of the 19th of November consisted of a fête in the Rathaus attended by a thousand or more of the scientific and medical world. The object was the presentation to Virchow of the keys of the "Rudolph Virchow Stiftung," a new Anthropological Institute, of which Virchow is to be director. The money for this purpose, amounting to seventy thousand marks, had been raised by subscription in the various European countries.

Virchow may indeed feel proud of the testimonials that he has received from all quarters on this anniversary, and, in turn, Germany and the world do rightly in honoring a man who has done so much, not alone for medical science, but also for anthropology, archeology, and political science, in all which he has been hardly less eminent than in medicine. His career may be said to have begun in 1846, when he succeeded Robert Froriep as professor of the Charité in Berlin, this giving him control of the ample material afforded by this hospital.

Of his earlier life a word only is necessary. Born in Schivelbein, in Pomerania, in 1821; graduated from the University of Berlin in 1843, the favorite pupil of the physiologist Johannes Müller, he became an assistant to Froriep in the autumn of 1843, and in 1846 professor. It was in this year that he began the investigations which have placed his name so high among medical scientists. Starting with the idea that pathological physiology constituted the basis of the

science of medicine, and that anatomy and the clinic were its annexes, he began in 1847 his teaching, having in that year been made Privatdocent.

A glance at the work of his predecessors may be of advantage as showing that the ground had already been broken for him and that the results of his investigations, though brilliant and original, were yet in a measure the further development of what had been done before his time. Already had Andral and Cruveilhier, by the observation of facts, completely overthrown the purely speculative system of Broussais, which had gained the approval of the medical world, embracing, as it did, his doctrines of the "Phlegmatics Chroniques," a system which regarded the stomach as the point of origin of all diseases, pathological changes elsewhere being but secondary manifestations of the gastric disturbance. Already had Schleiden discovered and published the fact that the cell is the unit of plant life, and Schwann had done the same for animal life. Johannes Müller had published his work on the finer structures of tumors, thus giving a basis to pathological histology, and Rokitauský had given to the world the results of nearly thirty years' careful observation and classification of the unrivaled material of Vienna, valuable for the gross pathology but marred by the prominence given to the views of humoral pathology. So much of preparatory work had been done when Virchow began his career,

Early recognizing the importance of studying the finer changes presented in pathological tissues, he appreciated more fully than any of his predecessors the value of the microscope, and he appreciated it, too, in a different way, for, excepting, possibly, J. Müller, all had been satisfied to apply it in the study of changes which were already completed; Virchow, however, put it to a far more valuable use in that he sought with it to follow out the *development* of the pathological process in detail. The abundance of original material resulting from the application of this method led him, in conjunction with Benno Reinhardt, to found, in 1846, the Archives of Pathological Anatomy, the first volume of which appeared in 1847. The joint editorship lasted till the death of Reinhardt, five years later, most of the articles being written by them, with some assistance from Leubuscher. Since Reinhardt's death Virchow has been sole editor of this monument of German industry, now arrived at the eighty-sixth volume. An active mover in the outburst of republican sentiment which swept over Germany in 1849, he lost his positions, and, though afterward reinstated, he accepted the professorship of pathological anatomy in Würzburg, a place which has well earned for itself the title of the cradle of Germany's great men. Here he remained six years, and of the amount and value of his work one can get no better idea than by looking through the Transactions of the Würzburg Medical Society, which he founded, and of which he was at first secretary and then president. His Collected Treatises, published in 1856, contain several of his more important earlier papers. In 1856 his reputation had become so widespread that in spite of his well-known liberal political views, he was re-

called by the minister, Manteuffel, to Berlin as professor of pathological anatomy, and also made director of the new Pathological Institute and physician to the Charité. Here he has since remained, and to give an idea of his work is almost to give the history of pathology during this period. In referring to the more important points only, it may be said that his work with the microscope early showed him the importance of the cell as the unit of life, as already demonstrated by Schleiden and Schwann, but he studied further into the origin of cells than either of these authors, and showed that they were wrong in their supposition that cells could form by the conglomeration of granules in a blastema, the so-called "free cell formation." He proved conclusively that every cell must come from a preëxisting cell, and hence arose his oft-quoted saying, "*Omnis cellula e cellula*." Following further the cell theory of Schwann, who, in his studies on the development of single tissues, had shown that all physiological activity was to be referred ultimately to the cell, that the seat of life is in the cell, and that for the manifestations of life under normal conditions one must look to the cells — starting with this as proved, Virchow applied to the cell in its pathological relations what Schwann had done in its physiological relation, and showed that what is called disease is simply the result of a modification of the cellular activity, caused by something outside, be it physical or chemical, and hence pathological manifestations should be referred back to the cell just as physiological are. This constitutes his famous Cellular Pathology, the ground-work for which was given in articles in his Archives, and later, in 1858, in full in the form of lectures, which were printed, and which make a book worthy of being ranked with Morgagni's *De Sedibus et Causis Morborum* in its influence upon pathology. The Cellular Pathology has replaced the humoral and solidistic pathologies, and by it most, if not all, pathological phenomena which have been thus far investigated have been explained.

In 1863 appeared the first part of the treatise on tumors, the publication of which was continued, at intervals, till 1867. Although not completed, for the carcinomata yet remain to be considered, the work is of great value. The method of classification developed by Virchow, which arranges new growths according to their anatomical structure, if not perfect is nevertheless the best that has yet been devised, and the amount of original material given in these volumes is remarkable.

In regard to Virchow's position with reference to experimental pathology, it may be said that he was a pioneer in this method of investigation, and fully proved its great value in his work on Thrombosis and Embolism. Of the numerous subjects on which Virchow has given to the world so much real knowledge there may be mentioned the work on Leucæmia, Pathological Pigments, Blood Crystals and their Import in Forensic Medicine, Endocarditis, Endoarteritis, Cretinism, Rachitis, Amyloid Degeneration, Corpora Amylacea, and Parenchymatous Inflammations. His classification of disease and his nomenclature, having as

they do an anatomical basis, form the most truly scientific ones that exist, and are now almost universally used.

Of late years Virchow's multifarious duties have prevented his devoting so much time as before to students in the laboratory, and for this reason many, certainly among Americans, prefer to study elsewhere. Nor has he given to the world the results of medical investigations so freely as before. But nevertheless he deserves the credit for what is being done in pathology to-day, for the best workers in Germany are those whom he himself has trained, and who now follow out his methods, not alone in their original work, but also in teaching and training those who are to come after them. Truly this is a master mind and its influence will be felt as long as pathology is studied. Well may its possessor say of himself with Horace, —

"Exegi monumentum ære perennius."

MALARIA IN WASHINGTON.

THE medical profession in Washington have risen in indignant response to the bad names by which their abiding place has been called, and have issued circulars to all practicing physicians within the District of Columbia, to collect such statistics as will enable them to answer and refute these epithets so dangerous to a good reputation.

Washington is surrounded on three sides by sluggish streams of water; the broad Potomac in front and to the south, the Eastern Branch to the east, and Rock Creek to the west, it stretches northerly and in a northwest direction to an elevated upland country; at the foot of this rise was once an extensive marsh, and running through the city were once a number of little creeks and streams. Not much more than fifty years ago the city newspapers complained of the carelessness of gunners for ducks and other birds in the neighborhood of Pennsylvania Avenue, near the Capitol building, a lady being injured by stray shot while taking her afternoon promenade on this the principal street. All of these localities were infested with malaria, but now the marsh has been drained, the creeks and streams have been utilized for sewers, and the draining and paving of streets have made malaria at these points a thing of the past, and some of the handsomest houses in the city have been built upon them. Rock Creek is so situated as to cause but little trouble, its banks are used for business purposes, and it too may some day serve for the building of a vast sewer. Far to the eastward lies the Eastern Branch, more malarious perhaps than it ever was, with vast marshes, the feeding ground of the duck, reed bird, and ortolan, but it is too remote from dwelling-houses to exert active influence upon the residents of Washington, and expends its force upon the inmates of the jail, workhouse, almshouse, and city hospital, thus lightening very materially the burden of the city authorities. But there remain along the city front the broad flats and marshes of the Potomac, the best view of which, in all of its significance, is from the back porch of the Presi-

dent's house, the grounds of the mansion extending unbroken to the river's brink; everywhere else are blocks of houses, and paved and drained streets, each modifying this influence for its neighbor. Stroll through the president's grounds to the river and you can see and smell huge sewers emptying their contents upon the surface of these flats, there is no current and no channel except off in the distance.

Here is where Congress has been asked year after year to reclaim valuable land, build a river wall, direct the course of the channel, and give Washington a healthy river front, and from the condition here existing comes the assertion from all sections of this country and from Europe, that Washington is unhealthy. It was the hope that this extended and growing feeling and expression of public opinion would induce Congress to take some such action which has kept the local medical men so long quiet, until now this expression has grown to be seriously objectionable. A District physician cannot visit a neighboring city or watering place without meeting strong assertions of the unhealthiness of Washington, which no arguments of his can controvert.

It was time then that the public should have a fair and full statement of facts, and health officer Townshend, in his annual report, which virtually closes with June 30, 1881, adds a supplement, giving a comparative statement, which shows the deaths from the principal zymotic diseases in fourteen of our largest cities for the thirteen weeks ending September 7, 1881, in which statement Washington stands as the fifth highest, coming after Pittsburgh, New York, Brooklyn, and Baltimore. He further states that the showing as to healthfulness is better this year than last.

The result of the issuing of the circular by the medical society, was such as to warrant the preparation of a statement, which was given to the public press, and which showed that Washington had greatly improved in its general sanitary condition during the last ten or fifteen years; that during that time there has been a gradual but decided diminution in extent and intensity of diseases of a malarial nature, which is due to improved drainage, better paved streets, and the filling in of low lands; that deaths from uncomplicated malarial diseases are rare, and that in taking the death-rate for comparison it must be remembered that one third of the population is colored, in whom the death-rate is almost double that of the white race. It further refers to the general good health of former occupants of the president's house, all of whom, down to the time of Buchanan's administration, resided there during the summer and fall months.

Some sixty or more physicians responded to these circulars, they represented almost all of the medical men engaged in active practice in the district, and they gave in detail what has been embodied in the above paragraphs.

—The alarm in regard to cholera in Egypt has largely subsided, and it is thought that travelers may safely leave out of their calculations the possibilities of an epidemic.

A STEP IN THE RIGHT DIRECTION.

THE action taken by the meeting of the censors from the several district medical societies throughout the State, held in this city on Thursday last, seems to offer hope that a much-needed reform in the methods of admission to membership in the Massachusetts Medical Society may be about to be effected. This meeting, the proceedings of which appear on another page, was called at the suggestion of the Councilors, this suggestion being in its turn the result of a petition to that body by the Suffolk District Board of Censors praying the council to take some action to secure a uniform standard of examination. The idea of an annual meeting is a good one, and we trust it will be made a permanent institution by the necessary addition to the By-Laws of the Society; the revision of the By-Law governing the qualification of membership is also important, for the censors cannot be expected to enforce a By-Law which has ceased to be an entity and allows such a great diversity of interpretation as does the one in question.

Should a comparatively uniform and reasonably severe examination be insisted on throughout the State the Massachusetts Medical Society would gain much in prestige, and a certificate of fellowship would soon come to mean much more to the laity than at present, inasmuch as it would guarantee at least respectable attainments, and would lift the Society above the plane of the many other irregular medical societies with whom we are now so ignominiously lumped in the Boston Directory.

ANOTHER ASYLUM CONFLAGRATION.

OUR readers will remember that in March last we had occasion to call their attention to the subject of fire in insane hospitals. We regret that the time has so soon arrived for chronicling another large fire.

This time the State Institution for Idiotic and Imbecile Youths of Ohio, which is near the city of Columbus, has fallen a prey to the flames. The fire fortunately broke out in the morning, when the six hundred and odd pupils were in school, and hence by good discipline they could be marched out without loss of life.

In spite of various appropriations which had been made to provide the asylum with fire extinguishers and other means of protection, "the hose and fire apparatus of the institution for such an emergency proved to be totally worthless."¹ One great source of failure was the scarcity of water. We learn that the State has refused to appropriate money to extend the city water-mains, and the asylum has been furnished with water pumped up from the river. As is often the case, a water-tower capable of throwing fifteen hundred barrels of water on to the building *would have been* finished in a few days.

The loss to the State will be upward of \$200,000, but much more will be required to rebuild the institution.

On the other side of the road from the asylum

¹ Cincinnati Commercial.

stands the Central Asylum for the Insane, containing one thousand inmates, and relying for its water supply on the same pumping arrangements.

As the State of Ohio has already lost a State House, the old Central Insane Asylum, the Cleveland Asylum, and other structures, and as these institutions have not been insured, she may eventually be expected to erect fire-proof buildings.

The Ohio people have cause to be grateful that the idiot asylum was not burned in the dead of night, as the loss of life might have been terrible. And once more institution managers have had a warning that until they have provided thorough and practical measures of protection against fire they have not done their whole duty to those under their charge. Massachusetts has, so far, been fortunate, but her turn may come next.

MEDICAL NOTES.

—The enthusiastic nomination of Dr. Samuel A. Green, the City Physician, for Mayor of Boston, by both the Republican and Citizen's conventions, is an honorable and flattering tribute to the personal character and judgment of a member of the profession, who is probably as widely known and as kindly regarded as any in the city.

—The somewhat sudden death of Dr. John Bacon, formerly professor of chemistry at the Harvard Medical School, occurred at his home in this city November 28th. He was a graduate of Harvard College and of the Medical School, at which he was appointed professor of chemistry in 1857. Dr. Bacon discharged the duties of this professorship until 1871, when he resigned on account of ill health.

—The American Public Health Association met at Savannah, Ga., last Tuesday, November 29th. Next week we hope to give our readers an account of its proceedings.

—The returns for last year from India state that the number of persons killed in that country by snakes and wild beasts has increased from 19,273 in 1876 to 21,900 in 1880. In Bengal alone 10,064 persons are reported to have died from snake-bites, and 359 were killed by tigers. The trustworthiness of the returns is questioned, and it is thought that many of the reported deaths by snake-bites were really cases of suicide, the former cause of death being given by the family and accepted by the police.

—The streak of silver sea around the Isle of Man has had, says the *Medical Times and Gazette*, a very distinct influence on the character of the mental diseases which prevail there. A pent-up population has intermarried to an extraordinary degree, and the result is that congenital mental defects abound there to an extent unknown in any other part of the kingdom.

Of the patients admitted into the Isle of Man Asylum, 10.9 per cent. labor under congenital impairment of intellect, whereas, of all patients admitted into asylums in England and Wales, only 4.1 per cent. are thus afflicted. Hereditary predisposition can be clearly traced in 34 per cent. of the lunatics in the

Isle of Man, but only in 18 per cent. of those in England and Wales. On the other hand, the moral causes of insanity, including domestic sorrow, anxiety, business trouble, religious excitement, fright, and nervous shock, are much more powerfully operative in England and Wales than in their adjacent island. Contrary to what might have been anticipated, intemperance causes a less proportion of insanity in the Isle of Man, which was long so celebrated for its smuggling and illicit stills, than in England and Wales. The Isle of Man Asylum, which is under the superintendence of Dr. Otterson Wood, contains now about 150 patients.

—A medical officer of Health calls attention in the *Lancet* to a possible source of lead-poisoning. "In decanting a bottle of good port wine a few days ago," he writes, "I noticed a somewhat more tawny color of the wine than its age would justify. The wine had no bad flavor, but on examining the bottle more carefully two large shots were detected in the bottom, and readily removed. Had there been any 'crust' upon the bottle this might not have been so easily done. The wine contained an appreciable quantity of lead, but no arsenic. The shots no doubt got lodged in the bottle during the familiar process of washing out crusted wine bottles. Here we have another possible (and to me new) means of lead-poisoning.

"In some experiments made thirty years ago I found that two dozen common shots placed in a quart bottle of spring water for a month, at ordinary temperature, only very slightly contaminated the water with lead, nor was there any reaction with the usual tests for arsenic. The shots, in spite of many industrious shakings up of the bottle, soon became encrusted with a deposit from the water, which was of medium hardness."

Miscellany.

THE PROBABLE CAUSE OF THE IMPURE WATER IN BOSTON.

SPONGILLA FLUVIATILIS.

For about eight weeks the water in certain parts of the city has had a disgusting taste and smell, not unlike fish oil. The water commissioners asked Prof. Ira Remsen, professor of chemistry in the Johns Hopkins University, Baltimore, to investigate the matter. He did this in a careful and systematic way, and has made an excellent report. He soon found that the water in Farm Pond contained a large quantity of "albuminoid ammonia," or that "produced by the oxidation of nitrogenous organic substances," but for some time there was no clue as to where it came from.

On November 16th Professor Remsen happily found caught on the screen at the effluent gate of Farm Pond moss-like matter which had the same peculiar nauseous smell as the water in Boston.

On account of this similarity of smell, he thinks it is more than probable that this substance is the principal cause of the trouble.

This bad smelling matter was recognized by Professor Farlow of Harvard University, and by Professor Hyatt, curator of the Boston Society of Natural History, as belonging to a fresh water sponge.

Professor Hyatt, who is an authority in these matters, says, that this animal is the *spongilla fluviatilis* of authors. He says there are many things about it that are unknown. For a long time it was thought to be a plant. It is not certain if it is or is not the same as either of the two similar varieties found in Europe, nor even if these two varieties are distinct ones themselves. Mr. George Dawson of Montreal has divided the fresh water sponges into quite a number of species, but they are difficult to identify on account of their minute differences. There has not been sufficient time to ascertain the exact name of the Farm Pond specimens.

This sponge is generally arborescent in shape, sometimes massive, commonly under a foot in length, though sometimes reaching to eighteen inches. Professor Hyatt has never seen one over twenty inches long.

The skeleton which supports the animal is made of a net of siliceous spicules. These project on all sides, and being covered by the animal substance, give a spiny appearance to the sponge when partially dried. These are the moss animals, so called on account of their small bush-like and creeping growths, which are found attached to solid objects lying on the bottom, or floating in the water.

Probably on account of these spicules of flinty matter no animal is known to feed on spicular sponges, except a mollusc, the body of which is found filled with the spines. They probably pass through his tissues without injuring him, as a needle may through the human flesh.

While alive the sponge is of a greenish color, due probably, as in plants, to the effect of light, as the parts of similar animals which remain under stones in the dark are of a light brownish hue.

This sponge lives in fresh-water ponds, nor can *clean* ponds be said to be free from it, and one of the first things to do should be to ascertain the truth about this, if it is not too late to do it this year.

We might expect it to prosper in ponds with dirty bottoms, and occasionally, as in Farm Pond, to multiply excessively, die, decay, and impregnate the water with the stench of decaying animal matter. A pond with a clean bottom, though not completely free from it does not probably offer the conditions necessary for its excessive growth.

This sponge does not probably live in the water pipes. The current and the pressure of the water would probably interfere with its growth. What has been found on the interior of water conduits, and has been mistaken for the seed bodies of the sponge, are probably the seed bodies of some kind of bryozoa. Alive it is quite smooth externally.

In our water supply this sponge has not yet been found out of Farm Pond, but it has not been carefully looked for anywhere. It is not impossible that it exists in the Sudbury River Basin No. 2, where Professor Roman finds more than a due allowance of nitrogenous matter; as with other growth, there are a few ponds where they can always be found.

The city government having refused to grant the sum necessary to remove the dam when the Sudbury River basins were made, though urged by the city engineers, the field was simply overflowed by damming up the river, and whatever remained of manure or dead leaves or dirt of many years was left at the bottom of the basins which were to supply the city of Boston with water, with the hope that they would clear themselves in time.

Let us hope that Basin No. 4 and the others that are to be made will not be built in this way.

Farm Pond is a shallow collection of water in a natural basin, and contains everything that for centuries has been washed down the sides into it. In some parts the mud is quite deep. It has no current of its own, but when the Sudbury River is high it is filled by it, and in dry weather the pond drained into the river through the same opening. The dam put up at this outlet keeps the water at a uniform level, and makes it about one foot and one half to two feet higher than it would otherwise be.

It is not impossible that even before, or shortly after, finishing the way by which the water from the basins will no longer pass through Farm Pond, the evil may come to an end of itself, as it did in Baltimore. Probably because there was no more animal matter left to decay, and nothing but spiculae and seed bodies remain. These are what are known as winter buds, by which the animal is propagated. Little is known of them. Many remain in the spicular skeleton, after the decay of the animal, and some are probably carried off by the water. They lie dormant during the winter and then produce moving creatures which after a while fix on some solid body and grow into sponges.

Whether they produce increased crops at irregular intervals of time, what influence the character of the mud, or the effect of a steady current, has on their growth, or whether they could be killed by intense cold, such as the ice which covers the pond protects them from, or whether desiccation kills them, and many other points, are still to be found out.

There is a *spongilla* in India which infests the water tanks and which after being dried up comes to life again after immersion into water.

It is probable that if Farm Pond could be drained completely, and its bottom exposed to a cold several degrees below zero, which we shall certainly have some time this winter, all the seed bodies of *spongilla* would be killed.

Whether this can be thoroughly done, and the effect it would have on the other organic growths in the pond remains to be seen.¹

It is possible that if Farm Pond was thoroughly drained and its bottom exposed to a cold of several degrees below zero, which we shall probably have some time this winter, the seed bodies might be killed. As this is by far the greatest evil we have suffered from it might be well to risk making the water unpalatable in some other way by so doing.

The subject is so important that probably the proper authorities will appoint some competent person or persons to investigate it in a thoroughly scientific manner.

It will be interesting, now that the principal cause of the present nuisance has been probably found out, to see how often it has been suspected before. It is not the first time that spiculae of sponge have been found in ponds of bad water.

The accompanying illustration, from Johnston, is the *spongilla fluviatilis* of Europe, which, if not identical with the Farm Pond one, is so like it that the same picture will do for both. Johnston says:—

"When allowed to putrefy in water, a thick fatty

¹ About twenty years ago Mr. Bowerbank, an English author on sponges, wrote to Mr. Theodore Lyman, of this city, asking for information about a *spongilla*, which he had been informed had appeared in the Cochituate water.

layer covers the surface of the fluid, the water acquires a turbid yellowish color, the spongilla becomes of a blackish green hue, and emits a most offensive putrid animal odor, like that of the most putrid offals."¹

Marine sponges have also a peculiar and disagreeable odor, when first exposed to the air, produced by the decay of the animal substance in them. Corals likewise have the same odor.

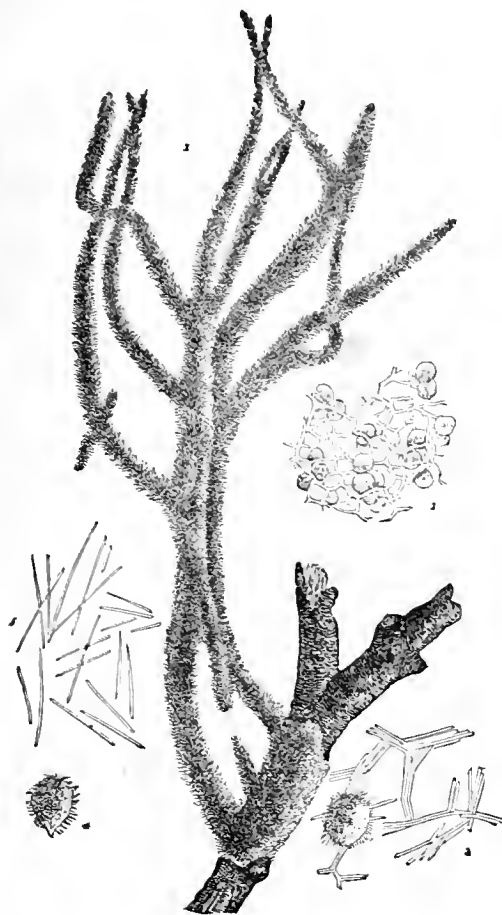


Figure 1 represents the sponge growing from a branch. Figure 2, the seed bodies held in the spicular skeleton. Figure 3, a part of the same enlarged. Figure 4, a seed body enlarged. Figure 5, isolated spiculæ enlarged.

LETTER FROM PHILADELPHIA.

MR. EDITOR, — Your correspondent having been invited to witness a recent ovariectomy operation by Dr. Atlee, it occurred to him that the details of the case might prove of some interest to the readers of the Boston Medical and Surgical Journal.

Dr. Walter F. Atlee, the nephew of the late Washington L. Atlee, the pioneer of ovariectomy in this city, is the son of Dr. John L. Atlee, of Lancaster, himself a distinguished operator, who with advancing age seems to grow only more active and enthusiastic in his profession; though delicate in frame he still has enough energy to put to shame many of the present genera-

tion; he has performed the operation over sixty times; the son, also, has operated frequently, though, unfortunately, he has not a complete list of his cases, but they cannot be less than fifty. Dr. Atlee, *filis*, states that he has saved fully ninety per cent., although some were complicated; in one case finding also a fibroid of the uterus he removed both ovary and body of the uterus, with complete success. In another case a supposed ovarian tumor turned out to be an extra-uterine pregnancy; the child was dead when removed (it is now in the museum of the College of Physicians); the mother entirely recovered. In view of Dr. Atlee's experience and success the details of his method and a report of a case will merit some attention.

Before performing the operation some preparation is required. In order to avoid any delay or misunderstanding it is the habit of the surgeon to give written directions to the patient to have ready: —

"Two basins, a bucket, a tin cup, a small tub, a pitcher of hot water, towels, cotton or carbolized tow, one and one half yards of flannel, large pins, a package of patent lint, ice, brandy, a feeding cup (or a glass tube bent), one ounce of chloroform, eight ounces of ether, bottles of hot water, adhesive plaster, a patent ironing-table.

"The patient must have on a night-dress and warm woolen stockings. The day before the operation a dose of castor oil is to be given, and nothing to eat afterward only barley-water. On the morning of the operation an enema of warm water is given."

In performing the operation, the patient, having her night-dress drawn up above her waist, her feet protected by woolen stockings, and her lower limbs covered with a double blanket, is placed upon a patent ironing-table, which allows the greatest liberty to the surgeon and his assistants; the table is just large enough for the patient to lie upon, and it is covered by a quilt or blankets to make the woman comfortable. The patient has her knees and elbows secured by a roller bandage so as to prevent struggling and falling from the board during the administration of the anæsthetic. A rubber blanket is then thrown over the patient, in which there is a large central opening, which corresponds with the anterior surface of the abdomen, the edges of this opening are secured to the abdominal wall at the circumference by soap plaster. The patient has not been allowed any food except barley-water since the preceding day, so that there is very little if any vomiting. Ether and chloroform, but principally the former, are used. The patient being ready, an incision in the median line, passing between the recti muscles, is made down to the peritoneum. All bleeding having been stopped by torsion, *serres-fines*, or ligature, the peritoneum is now cut into, the entire incision being from four to five inches in length, extending rather nearer to the pubes than to the umbilicus. A large trocar is used to evacuate the cyst if it exist, and the contents flow through India-rubber tubing into the tub underneath the table. When all the cysts are broken up, and their contents evacuated, taking care that the fluid does not pass into the peritoneal cavity, the sac is brought outside, the adhesions, if any are found, torn, and the ordinary Atlee clamp is applied to the pedicle, which is allowed to project from the wound. No carbolic spray is employed, the only use made of carbolic acid is to cauterize the raw surface of the pedicle after its section, as it appears in the clamp; otherwise the dead, sloughing tissue gives rise to very

¹ Johnston, British Sponges, and Lithophyles. Edinburgh, 1842, age 161.

had odor in the sick-room in the course of a few days. The "toilet of the peritonæum" is made with the greatest care; all blood and discharge from the tumor is carefully sponged out, the sponges being washed in carbolized water. The abdominal wound is brought together by four or five points of interrupted suture, using waxed silk ligatures armed with two needles, each point being passed in a direction from the inside including the peritonæum, the edges being neatly approximated. The dressing is completed by placing a quantity of carded cotton over the abdomen and under the ends of the clamp; it is all held in place by a flannel bandage. No morphia nor quinia is employed prior to the operation, but a tablespoonful of brandy is administered just before the anæsthetic is given, and some hours after, if there is pain or restlessness, a pill containing one eighth of a grain of valerianate of morphia is used, which may be repeated once or twice on the following day. The patient is kept quiet, and, if possible, in charge of a trained nurse.

The following are the notes of the case:—

Alice D., thirty-nine years of age, never married, had always menstruated regularly until the last six months, when she menstruated twice a month. About January, 1871, she had noticed a throbbing and fullness in the left side and lower part of the abdomen, subsequently the abdomen gradually enlarged. In 1878 she also had swelling of the feet.

When Dr. Atlee was first consulted in August, 1881, she measured over fifty inches in girth, and the lower limbs were much swollen. A tumor of the left ovary was diagnosed, and it was thought to be unilocular. She was then tapped, and three gallons of dark-colored, opaque fluid were obtained, two cysts being opened that were contained in the larger one. [This fluid examined microscopically by the reporter was found to contain the large glandular cell and an abundance of cholesterine. F. W.]

On November 17th the tumor had refilled, the abdomen measuring fifty-one inches; the operation, for which permission had been previously refused, was performed at eleven o'clock A.M. in the presence of Dr. John L. Atlee of Lancaster, Dr. Can of York, Drs. Harris, Carroll, and Woodbury of Philadelphia. The operator was assisted by Dr. Washington T. Baker and his son Mr. Lewis W. Atlee, and by his father, already named. The steps of the operation were carried out as above described; there were a number of adhesions, but no peritoneal hemorrhage. More than three gallons of fluid were obtained, similar to the first in appearance and consistency; it very much resembled crude coal oil.

The patient bore the operation (which was entirely completed in half an hour) very well; there was no vomiting; the pulse was better after the operation than before. The same evening one pill of valerianate of morphia was given, and the following day two pills. On Sunday, November 20th, it is noted that the monthly sickness came on this morning (she had last menstruated about two weeks prior to the operation). Has had no food since the operation except milk and beef tea¹ in moderate quantity, about a pint of each daily. The urine was still drawn by the catheter. Bowels not moved, although there was a discharge of

flatus (favorable sign). She had taken only four of the morphia pills since the operation. Pulse 104, temperature not taken, but there had been no marked febrile movement. The amount of milk was now increased, so that she took four pints during the following twenty-four hours. November 21st the dressings were removed for the first time, and the wound looked healthy. There seems to be every reason for hoping for a speedy convalescence.

Dr. John Atlee, in Lancaster, performed ovariectomy on the succeeding day (November 18th); the following are the details of the case, kindly communicated by him in a private letter. The character of the tumor in this case is different from the preceding.

"Miss Grace K., aged nineteen, of rather delicate frame, came to me September 6th with her mother. For two years she had been subject to a gradual enlargement of the abdomen, which had increased so much as to occasion difficulty of breathing in the recumbent position, great œdema of the lower extremities, and partial suspension of the menses, which had first commenced at the age of fifteen. Her appetite was good, the bowels regular. Upon examination I found the fluid ascitic, and in the general cavity of the peritonæum. By strong palpation I could strike through the fluid upon a very hard tumor in the hypogastric and iliac region, more especially the right side. Examination per vaginam discovered the brim of the pelvis filled with a very hard tumor pressing upon the iliac vessels and causing the œdema. The uterus was in normal position, although not very movable, and the sound passed the normal distance. The next day I took away two and a half gallons of ascitic fluid, very greatly to her relief. I then found a very hard fibroid mass, as above stated, very movable, and causing the sound to move from side to side as if the tumor were connected with the uterus. I diagnosed an extra-uterine fibroid, or a fibroid of the ovary. I told her parents that if she filled again I would tap her again, and then make an exploratory opening into the abdominal cavity, and if I found it practicable I would remove the tumor. She went home, and enjoyed great relief and excellent general health until recently. When the gradual filling up took place, and she was brought here on the 16th, I found her not so large as before, but that the size of the tumor had very sensibly increased, extending now above the umbilicus and occupying the whole lower portion of the abdomen.

"I commenced the operation this morning after eleven o'clock, in the presence of Drs. Atlee, Jr., H. E. Muhlenberg, Roland, Westhoeffler, Welchens, and Hunt of Portland, Me. The first incision was about four inches long, and when I got down to the peritonæum I found it exceedingly vascular and very much thickened. I then introduced the trocar and took off about one and a half gallons of straw-colored serum. Upon slitting open the peritonæum a hard, solid tumor was exposed, covered by a thick membrane resembling the albuginous coat of the ovary. I passed my finger around it and found it to be a solid fibrous mass containing no fluid, and dipping down from above the umbilicus to the very bottom of the pelvis. There were a few slight adhesions, which I tore with my fingers. I then enlarged the wound to near the umbilicus, and by careful manipulation and strong traction with the bulldog forceps of Pean, I brought the whole mass out, and to my infinite satisfaction I found it was the enlarged left ovary, with a good, long, and not very thick

¹ Dr. Atlee prefers the beef tea to beef essence, he orders it made with a pint of lean beef steak cut up small and soaked in cold water, the gravy being left to a boil and allowed to boil fifteen minutes, then skimming, strained, and seasoned.

pedicle. I applied the clamp, cleansed the abdomen of all fluid, and closed the wound. I used ether and chloroform combined for the anæsthetic (ether three fourths, chloroform one fourth).

"She bore the operation well. Four hours afterwards I found there had been little or no shock, hands and feet warm, patient lively, and only complaining of a burning in the track of the wound. I think she will make a good recovery. There was no carbolic acid used except a little in the water in which the sponges were washed, and a strong solution to the pedicle outside of the clamp."

WALSH'S RETROSPECT ON PRESIDENT GARFIELD'S CASE.

THE October issue of *Walsh's Retrospect*, a quarterly, devotes the editorial department to a consideration of President Garfield's wound and its treatment. Letters are given from the surgeons who were present during the first stages after the shooting, containing short statements of what then took place, and these are compared with the statements of Dr. Bliss, published in the *New York Medical Record*. From the editor's comments upon the material presented the following extracts are taken:—

What opinion must one form of a paper so at variance with the statements of reliable gentlemen?

We approach a criticism of the treatment with no pleasure. We would gladly say we believe it to have been correct in each detail, but we are compelled to assert that in our opinion the failure to enlarge the wound and remove the spicula of bone soon after reaction was established was a great mistake, possibly a fatal mistake. In substantiation of this assertion we quote from Dr. Hamilton's work on *Military Surgery*, page 265. In speaking of gun-shot wounds involving the ribs, he says:—

"An examination ought always to be made with the finger or probe to determine whether a rib is broken, and at the point of entrance a reasonable effort should be made to remove such loose fragments as may happen to be within reach. One of the most frequent causes of death and of delay in recovery is found to be *small spicula of bone loosened or completely detached from the rib.*"

We believe if an early enlargement of the wound had been made and the spicula of bone removed, in other words, if the incisions necessary to liberate pus and remove spicula of bone had been made before the mischief was done, instead of after, the pus cavity would not have formed.

And is it unreasonable to suppose that if an early enlargement of the wound had been made, the spicula of bone removed, and *free drainage from the right side of the vertebra obtained*, enlarged facilities for digital exploration would have been gained, the pus cavities and false channel not have formed, the false diagnosis not have been made, and the danger of pyæmia greatly lessened?

It is useless to attempt to gloss the mistake of not finding the wound in the right side of the vertebra by inferring what a rash surgeon might do after he found it, or to attempt to bury the mistake in a host of anatomical and surgical difficulties surrounding the extraction of the ball when there existed no reason for its extraction.

Our second assertion is that with thorough cleansing and drainage from the right side of the vertebra the wound of the vertebra was not necessarily fatal. For a wound to be necessarily fatal there must be no exceptions to death from such injury.

Our third assertion is that a traumatic aneurism was not proven by the autopsy. . . .

Briefly summarizing, we say that the failure to enlarge the wound and remove the spicula, the treatment of a false sinus for the track of the ball, the issuing of bulletins creating public distrust, the performance of the autopsy without the presence of eminent, disinterested pathologists, the arrival at uncertain deductions from said autopsy, and the false "report" made, have done more to cast distrust upon American surgery than any case heretofore known to our medical history.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 19, 1881, TO NOVEMBER 25, 1881.

McKEE, J. C., major and surgeon. The extension of his leave of absence on surgeon's certificate of disability granted him in S. O. 189, August 18, 1881, from A. G. O., is further extended six months on surgeon's certificate of disability. S. O. 262, A. G. O., November 19, 1881.

PAULDING, H. O., captain and assistant surgeon. Having reported at these headquarters per S. O. 249, C. S., A. G. O., will report in person to the commanding officer, Fort Laramie, W. T., for duty. S. O. 118, Department of the Platte, Nov. 19, 1881.

CARTER, EDWARD C., first lieutenant and assistant surgeon. To report in person to the commanding general, Military Division of the Pacific and Department of California, for assignment to duty in Department of California. S. O. 263, A. G. O., November 21, 1881.

RAYMOND, H. I., first lieutenant and assistant surgeon. To report in person to the commanding general, Military Division of the Pacific and Department of California, for assignment to duty in Department of California. S. O. 263, C. S., A. G. O.

COTES, ELLIOTT, captain and assistant surgeon. His resignation accepted by the President, to take effect this date. S. O. 260, A. G. O., November 17, 1881.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The Section of Clinical Medicine and Pathology will meet at No. 19 Boylston Place, on Saturday, December 3, 1881, at eight o'clock. Paper, Dr. H. I. Bowditch, A Fatal Case of Acute Pleurisy which occurred in 1873 in one of the Great Cities of Europe, with Remarks thereupon and Criticisms of the Treatment. Drs. F. Minor, G. G. Fairbell, H. Osgood, A. T. Cabot and others are expected to take part in the discussion.

ALBERT N. BLODGETT, *Secretary*.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held on Monday evening, December 5th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. S. W. Langmaid. Subject, Tracheal Tumors resulting from Tracheotomy.

M. H. RICHARDSON, M. D., *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — A Practical Manual of the Diseases of Children, with a Formulary. By Edward Ellis, M. D. Fourth Edition, revised and enlarged. Philadelphia: Presley Blakiston. 1881.

Circulars of Information of the Bureau of Education. No. 3. 1881. Proceedings of the Department of Superintendence of the National Educational Association at its Meeting at New York, February, 1881. Washington: Government Printing Office. 1881.

Department of the Interior. Bureau of Education. The Discipline of the School. Education and Crime. Washington: Government Printing Office. 1881.

Catalogue of Dartmouth College and the Associated Institutions for the Year 1881-82.

The Ninth Annual Report of the Charlestown Free Dispensary and Hospital.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 19, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	679	242	25.33	17.67	7.66	1.92	4.71
Philadelphia.....	846,984	328	101	27.74	5.79	7.32	9.15	2.13
Brooklyn.....	566,689	231	107	33.94	12.55	16.02	1.30	3.46
Chicago.....	503,304	219	92	40.18	10.50	11.87	10.50	3.65
Boston.....	362,535	156	50	18.59	9.62	10.26	3.85	3.21
St. Louis.....	359,522	145	48	27.59	7.59	5.52	7.59	7.59
Baltimore.....	332,190	167	69	37.72	4.79	26.95	2.40	5.39
Cincinnati.....	255,708	100	35	19.00	9.00	8.00	5.00	—
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	87	27	22.99	11.49	4.60	3.45	9.20
Pittsburgh.....	156,381	77	38	50.65	6.49	5.19	9.09	1.30
Buffalo.....	155,137	90	43	37.78	11.11	14.44	4.44	4.44
Milwaukee.....	115,578	37	18	29.73	10.81	18.92	2.70	—
Providence.....	104,857	37	6	21.62	8.11	10.81	—	5.15
New Haven.....	62,882	17	2	17.65	11.77	5.88	5.88	—
Charleston.....	49,999	43	10	11.63	9.30	4.65	2.33	2.33
Nashville.....	43,461	25	10	32.00	4.00	—	8.00	20.00
Lowell.....	59,485	24	7	12.50	20.83	8.33	4.17	—
Worcester.....	58,295	20	6	20.00	5.00	10.00	—	—
Cambridge.....	52,740	14	1	7.14	7.14	—	7.14	—
Fall River.....	49,006	22	7	13.64	4.55	4.55	4.55	4.55
Lawrence.....	34,178	8	3	25.00	12.50	25.00	—	—
Lynn.....	38,284	16	6	25.00	18.75	12.50	12.50	—
Springfield.....	33,340	9	2	—	11.11	—	—	—
Salem.....	27,598	6	1	—	33.33	—	—	—
New Bedford.....	26,875	7	5	28.57	—	14.29	—	14.29
Somerville.....	24,985	2	1	—	50.00	—	—	—
Holyoke.....	21,851	15	5	33.33	7.33	13.33	—	7.33
Chelsea.....	21,785	10	5	20.00	20.00	—	—	—
Taunton.....	21,213	4	2	25.00	25.00	—	—	—
Gloucester.....	19,329	6	1	33.33	—	33.33	—	—
Haverhill.....	18,475	8	1	12.50	—	12.50	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	2	0	—	—	—	—	—
Fitchburg.....	12,405	—	—	—	—	—	—	—
Twenty-three Massachusetts towns.....	183,818	51	13	29.41	9.80	13.67	11.76	1.96

Deaths reported 2662 (no report from New Orleans): 964 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 754, consumption 492, lung diseases 298, diphtheria and croup 273, typhoid fever 125, diarrhoeal diseases 105, small-pox 74, scarlet fever 67, malarial fevers 54, whooping-cough 18, cerebrospinal meningitis 15, measles nine, erysipelas eight, puerperal fever four, typhus fever two. From small-pox, Pittsburgh 22, Chicago 20, Philadelphia 18, New York seven, Cincinnati three, Brooklyn two, Buffalo and Holyoke one. From scarlet fever, New York 30, Brooklyn 15, Pittsburgh five, Buffalo four, Philadelphia three, Chelsea two, Chicago, Baltimore, Cincinnati, District of Columbia, Milwaukee, New Haven, Worcester, and Beverly one. From malarial fevers, New York 16, Brooklyn 11, St. Louis, nine, Philadelphia four, Baltimore, District of Columbia, and Buffalo three, Chicago two, Charleston, Nashville, and Holyoke one. From whooping-cough, New York nine, Chicago and Boston two, Philadelphia, Brooklyn, Buffalo, Providence, and Taunton one. From diphtheria and croup, New York six, Chicago three, Philadelphia, Brooklyn, St. Louis, Cincinnati, Milwaukee, and Worcester one. From measles, New York four, Buffalo three, Chicago two. From erysipelas, New York two, Philadelphia, Brooklyn, Baltimore, Cincinnati, Buffalo, and Milwaukee one. From typhoid fever, New York, Philadelphia, District of Columbia, and Providence one. From typhus fever, Philadelphia and Chicago one.

There were no cases of small-pox were reported in Brooklyn, one in Boston, four in St. Louis, six in Baltimore, nine in Cincinnati,

and 73 in Pittsburgh; diphtheria 27, typhoid fever 16, scarlet fever six, in Boston; diphtheria 16, scarlet fever 13, in Milwaukee.

In 40 cities and towns of Massachusetts, with a population of 1,072,329 (population of the State 1,783,086), the total death-rate for the week was 18.48 against 18.72 and 20.16 for the previous two weeks.

For the week ending October 29th in 149 German cities and towns, with an estimated population of 7,924,809, the death-rate was 22.3. Deaths reported 3405; under five 1549; pulmonary consumption 449, acute diseases of the respiratory organs 263, diphtheria and croup 195, diarrhoeal diseases 134, scarlet fever 122, typhoid fever 72, whooping-cough 66, puerperal fever 22, measles and Ætheln 20, small-pox (Breslau) one, typhus fever (Thorn) one. The death-rates ranged from 10.4 in Frankfurt A. M., to 39.3 in Essen; Königsberg 30.6; Breslau 27.3; Munich 29.8; Dresden 20.5; Berlin 21.9; Leipzig 21.6; Hamburg 21.2; Hanover 15.7; Bremen 18.2; Cologne 24.4; Strasburg 27.6.

For the week ending November 5th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 22.8. Deaths reported 3317; acute diseases of the respiratory organs (London) 375, scarlet fever 187, fever 100, whooping-cough 82, measles 79, diarrhoea 47, diphtheria 28, small-pox (London) 12) 14. The death-rates ranged from 17.2 in Wolverhampton to 28.4 in Liverpool; Bristol 18.6; Leeds 18.8; Sheffield 21.6; London 22.4; Manchester 22.9; Birmingham 24.9. In Edinburgh 18.7; Glasgow 24.9; Dublin 30.5.

Original Articles.

A CASE OF MORBUS MACULOSUS WERLHOFFII.
(PURPURA HÆMORRHAGICA. PSEUDO-
RHEUMATISM).¹

BY W. E. BOARDMAN, M. D.

On April 17th I was requested to visit Mr. C., of this city. A stranger to me, he showed himself to be a man of considerable intelligence, of excellent physique, well formed, of medium height, good weight, and nervous temperament. Upon inquiry I learned that he had always enjoyed excellent health, had been accustomed to observe unusual regularity in all his habits of life, and had never been addicted to the use of stimulants or tobacco in any form. His occupation was such that he spent most of the daytime in the open air and required considerable active exercise. He was nicely housed, and in comfortable circumstances in all respects. So far as could be ascertained at the time there appeared to be no hereditary, congenital, or acquired disposition to disease in any form.

He had experienced his usual excellent health until a few days or a week prior to the date upon which I was consulted for the first time. During that interval he had complained of some languor and inability to attend properly to his customary routine duties. Without experiencing any chill or even any sensation of chilliness, observing no symptoms of fever, he soon noticed pain in his ankles, followed in a day or two by tenderness and swelling of these joints. Subsequently both knee joints became similarly affected. When he first came under my observation, he was in bed, pulse 100, temperature 100.6° F., respiration normal. General appearance somewhat pale and careworn, considered to be due, in a great measure, to loss of sleep and anxiety on account of the interruption of his business, in addition to the pain from which he had suffered. There had been sleeplessness, loss of appetite, and general deterioration of strength, but the ordinary functions appeared to have been well performed. The before-mentioned joints were painful on pressure, somewhat swollen, and slightly reddened. The surface of the body generally was warm, but not moist. The lower extremities, below the knees, were cooler to the touch than the rest of the body. Examination of the thoracic and abdominal organs showed nothing abnormal. No analysis of the urine was made at the time, but inquiry elicited nothing unusual concerning it. The diagnosis of rheumatism, probably subacute, was readily made. I recommended that the affected joints should be enveloped with cotton batting, and prescribed salicylic acid in the usual way. On the following day I learned that my directions had been carefully observed, that the ordinary effects of the acid had been experienced during the night, that the pains had been relieved considerably, and that he had had some sleep; pulse 98, temperature 98.6° F., respiration easy and regular, heart sounds normal. I advised a continuance of the acid for a day or two, five grains every six hours, and also of the cotton wool dressings, to be replaced subsequently by flannel, and also a resumption of ordinary diet.

April 21st, three days later, I was requested to visit the patient again, when I learned that, during the preceding night, there had occurred what he considered

to be a return of the symptoms which had existed at my first visit. I found the joints presenting about the same appearance as before, and the temperature had again increased to 100.1° F. The acid had been stopped the preceding morning. I advised its resumption, and gave general directions similar to those given at my first visit.

I heard nothing more from my patient until May 2d, eleven days later, when I was summoned to him in great haste to relieve a very profuse and obstinate epistaxis, which already had continued several hours, and had become more violent in spite of the vigorous use of ordinary household remedies. Upon my arrival, the blood was flowing freely from both nostrils and the mouth. The patient's face was blanched, the general surface, as seen at a hasty glance, was pale. Both lower extremities, below the knees, were enlarged, apparently œdematous. The wrists and hands were in a similar condition. These parts, especially the lower extremities, were thickly studded with purpuric spots, some of them the size of a bean, or a little larger. The pulse was rapid and weak, but its exact frequency was not determined. I resorted to compression of the facial artery and to the use of various styptics, and finally succeeded in controlling the hæmorrhage by cotton wool tampons soaked in a solution of subsulphate of iron. In the mean time I was informed that since my previous visit the condition of the patient had improved somewhat, that is, the pains had subsided and his strength had returned to some extent. He had been able to sleep tolerably well, especially in the sitting posture. The swelling of the joints, however, had continued without perceptible change (they had not noticed the enlargement, apparently œdematous, of the lower limbs and hands), and having misunderstood my directions, he had continued to take the salicylic acid during the interval for the purpose of reducing the swellings. As near as I could estimate, he must have taken in all about three hundred grains.

No immediate cause could be assigned by the patient or his wife to explain the hæmorrhage. Upon inquiry I was unable to learn that any of his family were "bleeders," or that he had been liable to attacks of hæmorrhage of any kind. He had never had a tooth extracted, and the only fact of any importance in this direction which I did ascertain was that he never made use of a stiff tooth-brush, because it was liable to make his gums bleed a little. Before leaving him I examined him quite carefully. The pulse was rapid and weak, but regular. The respiration was a little hurried and somewhat labored. Nothing abnormal could be detected in the thoracic or abdominal cavities. The joints presented about the same appearance as at my first visit, the lower limbs pitted on pressure, as also did the hands, and the purpuric spots were present, as they have before been described.

I ordered tincture digitalis and ergot with perfect rest and simple, unstimulating diet.

On the following morning I was again summoned in haste, on account of a recurrence of the epistaxis. Upon my arrival I found the blood issuing copiously from the mouth, obviously from the posterior nares, and oozing from the gums, which, however, on being cleansed, displayed the clear, glistening membrane peculiar to the tissues of the oral cavity, without any appearance of sponginess or inflammation. The blood was also making its way outside the styptic tampons, which were removed and fresh ones substituted; but

¹ Read before the Boston Society for Medical Improvement, November 28, 1881.

these did not suffice to arrest the hemorrhage, and finally I was obliged to plug the nasal cavities, posteriorly and anteriorly. This procedure, together with styptic applications to the gums, checked the bleeding. During this visit I learned that in the night there had been a constant slight flow of bloody fluid into the mouth, that the patient had two evacuations of the bowels, consisting almost entirely of blood, some of it dark and some light red in color, and but little clotted, a feature which had been noticed with the preceding hemorrhages.

At this time the pulse, of course, was still rapid and weak, but not fluttering. There was considerable dyspnoea, but the respiratory sounds were clear and distinct. The heart's action was rapid and weak, but no other abnormal conditions could be detected. In the evening of this day, as on the following day, the patient's condition was fair. The oozing continued to some extent from the posterior nares, and he had other bloody stools. The urine examined on this day had a specific gravity 1016, presented a trace of albumen, and, under the microscope, numerous blood corpuscles, but no casts. The abdomen, too, presented a uniform enlargement, mostly resonant, or, rather, I was unable to detect any fluid, but for this purpose I was unwilling to change the position of the patient through fear of again starting hæmorrhage.

On the following morning his condition was about the same, though he thought he had a little more strength. His mind continued clear, as it had been throughout the illness. He complained only of fatigue, weakness, and the discomfort occasioned by the plugs. I still thought it prudent to allow these to remain, this caution being emphasized by the slight increase in the amount, and intensity of color, of the oozing blood.

At the morning visit of the next day I feared it would be necessary, before long, to repeat the process of plugging the nares, but concluded to postpone it, if possible, till the afternoon. At noon he suddenly became worse, with faintness, great dyspnoea, ending in collapse and death, after a brief interval, before a physician could reach him.

Upon my arrival I learned that the oozing had not increased much since the morning visit, nor had any new hæmorrhage been observed from other localities. Upon examination of the body externally, I found nothing additional to what has already been related, except that the abdominal enlargement seemed to be considerably greater, and percussion yielded a general dullness, but no wave could be determined. There was no autopsy.

Primary diagnosis, subacute rheumatism; final diagnosis, morbus maculosus Werlhofii, purpura hæmorrhagica, sometimes termed pseudo-rheumatism.

Cause of death, asthenia from external and internal hæmorrhage.

This case surely possesses the element of rarity, and therefore has some interest. I have presented it somewhat in detail with the view of eliciting discussion as to the correctness of my diagnosis, which has been questioned by some of my professional friends, and that I may, perhaps, receive suggestions as to treatment which might be valuable to me under similar circumstances, should they recur.

A brief recital of the more salient points connected with the disease, more familiarly known under the name purpura hæmorrhagica, will serve to confirm the correctness of my view of this case.

According to the most recent authorities, the term morbus maculosus is applied to a rare form of hæmorrhagic disease, which is characterized by the fact of its acquired, transitory nature and its apparently spontaneous development, its aetiology being still buried in obscurity. It is distinguished from the more common disposition to hæmorrhage, which is frequently observed as an accompaniment or a sequel of several acute and chronic diseases, and also from those affections in which the hæmorrhagic diathesis is hereditary. In the former cases the hæmorrhagic tendency is symptomatic merely, while the affection under consideration is regarded as an *essential disease*, which is developed suddenly in a previously healthy individual who possesses no hereditary disposition thereto. Some cases present a mild febrile stage, while others are unaccompanied by any febrile symptoms. Again, in some cases the fever is initiatory, while in others it occurs sooner or later after extravasation of blood takes place. Oftentimes the disease is ushered in by certain local disturbances, either with or without fever, which sometimes persist during the continuance of the hæmorrhages. The more common of these are pain and swelling, one or both, of the joints, usually of the lower extremities. These have been regarded by some as rheumatic in character, and hence the terms purpura rheumatica and peliosis rheumatica. The most recent authorities appear to agree that the articular affections in these cases are *consequent upon* the hæmorrhagic disease, a view which is not susceptible at present of absolute proof, though the probabilities in the matter undoubtedly confirm it.

The disease occurs at all ages in both sexes, and under every variety of constitutional condition, preferably, however, at or shortly after puberty and in females. Apart from the articular pain, to which reference has already been made, the hæmorrhages occur without pain or warning of any kind. The extravasations may take place over the entire surface of the body, and the viscera and cavities also may be the seat of hæmorrhage, though usually it is confined to the mucous cavities. The spots of discoloration vary in size and shape. Vesicles, too, sometimes are observed, but these are quite exceptional. The color of the spots is indicated sufficiently well by the common name of the disease.

Many cases end in recovery, the patient frequently manifesting no serious disturbance of the general health, while others present alarming symptoms of great pallor, extreme prostration, dropsical swellings, and fainting fits, and many terminate fatally after short or longer intervals.

Post-mortem examinations reveal practically nothing as to the cause of the malady, but merely its effects, nor have repeated examinations of the blood during life afforded any satisfactory conclusions. Recent authorities, however, appear to be in accord with the view that the affection has its origin in some primary disease, either of the blood or the vascular walls, or of both together.

This short summary of the chief points of interest which characterize the disease under consideration, I think, will enable us at once to eliminate, in a differential diagnosis, most of the affections which might be suggested by some as the essential disease. We may, therefore, exclude, without any discussion, diseases of the thoracic and abdominal viscera, leukaemia, progressive pernicious anaemia, typhus and typhoid fever, cere-

bro-spinal meningitis; embolism, for the history of the case furnishes nothing to indicate the existence of any of these affections.

In some instances it is not an easy matter to distinguish between hæmophilia and morbus maculosus. Our present case, however, does not present the hereditary element which is an essential of the former disease, nor did the patient furnish any evidence of an hereditary hæmorrhagic tendency. Nothing in his record would suggest this unless, possibly, the fact that his gums were apt to bleed slightly when he made use of a stiff tooth-brush, a not uncommon occurrence with many of us.

Under some exceptional circumstances it is difficult to distinguish between *scorvy* and morbus maculosus. Our patient, however, was in good circumstances, hygienic and otherwise; had been accustomed to the ordinary variety of diet; had been subject to no privation. No similar case occurred in the family or neighborhood. The disease evidently was "spontaneous" in its origin. There were no distinct prodromic symptoms, except a feeling of languor and inability to attend to his ordinary duties for a few days. Previous to that time he was in perfect health. The gums, from which the blood was seen to exude, presented a perfectly healthy appearance. As far as we were able to judge, none of the local symptoms afforded any evidence of an inflammatory process which is very common in scorvy.

The so-called rheumatic symptoms presented by our patient, that is, the swollen and painful joints, accompanied by a slight rise of the pulse and temperature, claim, perhaps, further consideration in making the diagnosis. It has already been stated that recent authorities are inclined to agree that mild, apparently rheumatic, symptoms occurring in association with phenomena which, without them, would indicate the existence of the purpuric disease, may, with good reason, be regarded as *symptomatic* merely. Reference to the recorded experience with acute rheumatism cannot but confirm this view. It has been shown that with the association of the symptoms the rheumatic elements never obtain any decided prominence; that they are not attended by notable perspiration and never are followed by the grave complications peculiar to the articular disease. In some undoubted cases of rheumatism extravasations of blood do occur, but it is known that this accident is due to embolic processes which have their origin in *endocarditis ulcerosa*, a condition of things which the clinical history of our patient could not suggest.

Admitting, however, with many, that it is impossible, with our present knowledge, to decide absolutely whether one or the other class of symptoms is symptomatic, it will be evident from the whole character of this paper that I rely upon the theory of probabilities in these cases in making my diagnosis, and so regard the hæmorrhagic affection as the essential disease.

It occurred to me, and has been suggested by others, that the condition presented by my patient may have been due to poisoning by salicylic acid, he having taken in all about three hundred grains. This supposition, however, may be dismissed with a few words. I know of no case on record where this agent is supposed to have given rise to symptoms resembling those presented by my patient. Excessive and long-continued doses, and smaller amounts in certain individuals, of this acid have been known to occasion a condition of extreme prostration, in some cases sudden and rapid collapse, together with cerebral symptoms varying from

those resembling cinchonism to acute delirium. Sometimes, too, it produces a miliary eruption which often becomes pustular in character. Urticaria, also, occasionally occurs as a complication. In no case, however, has the eruption become hæmorrhagic in character. Hæmorrhagic *erosions* of the stomach and intestines have been observed, but in these cases this accident has been considered to be due, probably, to adulteration with carbolic acid.

GROWTH OF BONE IN KNEE-JOINT DISEASE FROM MEASUREMENTS OF NINETY-TWO CASES.

BY J. J. BERRY, M. D.,

Late Intern of Hospital for Ruptured and Crippled, New York.

THE question which has been agitated during the past few years regarding the influence of disease of the joints upon the bones entering into their formation has resulted in the publication of very few cases illustrative of these changes. Jutland¹ has reported cases of elongation of the femur associated with disease of the hip-joint. Wagstaffe² publishes twenty-five cases, of which the femur was found to be lengthened in fourteen, and shortened in one case only. Helferich³ has given measurements of one hundred and forty-one subjects of caries of the long bones, but without special reference to disease of the knee-joint. In eighteen of these there existed an elongation of the femur in three cases only, while in fifteen some shortening was noticed.

The accompanying statistics were obtained from measurements of consecutive cases in children which came under my observation at the daily clinic during the past two years. The greatest degree of accuracy attainable was secured, and no reference is made to those cases in which there were well-defined evidences of disease, but in which no accurate notes were taken.

Of the cases under consideration sixty-eight were of articular osteitis, and gave the following results:—

In 2 cases	1 inch lengthening.
In 10 cases	1 inch lengthening.
In 19 cases	1 inch lengthening.
In 18 cases	1 inch lengthening.
In 8 cases	1 inch lengthening.

In six there was an average shortening of three eighths of an inch, while in five no change in length was appreciable. Owing to the difficulty of estimating so slight a variation as a quarter of an inch I would not claim for this measurement any great degree of reliability. In addition to this evidence of bony proliferation there was noticed in most of these cases a marked lateral expansion at the condylar extremity of the femur.

That variety of articular disease in which the morbid process was situated primarily within the synovial membrane, and may be included under the general term of synovitis, numbered twenty-four. In these there appeared to be little alteration as regards osseous development; in fact, there seemed to exist in some cases an arrest in growth rather than an intrinsic enlargement, as indicated by this table:—

In 5 cases	1 inch elongation.
In 3 cases	1 inch shortening.
In 2 cases	1 inch shortening.
In 14 cases	unaltered.

¹ British Medical Journal, February 5, 1881.

² St. Thomas's Hospital Reports, 1880.

³ Deutsch. Zeitsch. f. Chir., Bd. x., 1879.

I find among my notes eleven cases of osteitis of the tibia alone, which present the following alterations in size:—

In 5 cases	$\frac{1}{4}$ inch lengthening.
In 3 cases	$\frac{1}{2}$ inch lengthening.
In 3 cases	unaltered.

In the above I was unable to recognize any shortening of the tibia. All variations depend upon one of several distinct conditions. The duration of the disease before measurements are taken must be considered. There is absolutely no true bony proliferation after the epiphysis has become united to its shaft, and ordinarily very little during the first six months or after the second year; for the prolonged hyperemia attendant upon the necrotic process at or near the epiphysal junction advances too sluggishly and furnishes too few products of retrograde change to affect visibly the enveloping structure. It is not until the degenerative process, which we may now term miliary tuberculosis, has encroached upon the larger portion of the epiphysis and its cartilage, separated as it is by its calcareous lamina, and cell proliferation has proceeded unceasingly for many months, that bony deformity begins to manifest itself. I may state in this connection that a case of true osteitis which dates its inception subsequent to the twelfth year of life is of very rare occurrence.

The inconstant normal variation in the length of the femur should also be recognized; for it may serve to explain in a measure the elongation sometimes found in cases of synovitis when not accounted for by the deposition of layers of new bone about the periphery of the articular extremity.

As regards the location of the lesion, no case of femoral osteitis was examined in which the internal condyle was exempt from disease, though in many instances the whole lower third of this bone seemed to share in the inflammation.

The nature of the process is no longer obscure; for the researches of nearly all the modern investigators in this field of inquiry, as imperfectly indicated in a previous paper,¹ have illustrated quite satisfactorily its tubercular characteristics. They also appeared to have afforded additional weight to the theory that the effect of early synovial inflammation and also some forms of tuberculosis is not an atrophy or even sclerosis of the structure involved, but simply an arrest of development in one portion while the other centres of ossification perform their office uninterruptedly.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

CHRONIC INTERSTITIAL NEPHRITIS AND ITS RELATIONS.

THE occurrence of granular atrophy of the kidney, associated with hypertrophy of the heart, has been noticed since the time of Bright. Several hypotheses have been advanced as to the causal relation of the two. Bright himself explained it as a secondary phenomenon, resulting from the changed condition of the blood working on the heart. Traube also considered it as secondary, due, however, to an increase in the arterial

tension, following the obliteration of the vessels in the kidney, and consequent accumulation of water in the blood. Johnson, Sutton, and Gull have turned their attention to the changes in the arterioles of the entire body, and find in them a thickening of the walls and a reduction in the size of the opening. They are, therefore, led to consider the changes in the vessels as the primary lesion, to which the hypertrophy of the heart and the contraction of the kidney are associated later. Ewald confirms the fact that changes in the vessels occur, but, contrary to the above mentioned authors, considers the affection of the kidney as primary, which gives rise to changes in the blood, leading to increased tension in the capillaries of the entire body.

Still later authors, as Ziegler, recognize this arterial sclerosis as a frequent cause of the contracted kidney. Bartels denies this aetiology entirely, considering the interstitial nephritis as a disease *sui generis*, while Buhl sees in the fatty and fibroid degeneration of the arteries merely the result of the increased pressure from the hypertrophy of the heart, and not a cause of the interstitial nephritis.

The authors also differ among themselves as to the nature of this thickening of the coats of the vessels. According to Gull and Sutton there is found a layer of a peculiar hyaline, fibroid material upon the muscular coat, and they called this condition arterio-capillary sclerosis. The muscularis itself was unaltered, or else atrophied by pressure of the connective tissue. On the other hand, Johnson found a thickening of the middle coat of the smallest arteries. Dickinson, a thickening of the adventitia and muscularis. Ewald believes in the true hypertrophy of the muscular coat, but finds no abnormal relations in the adventitia or intima.

In order to reconcile these conflicting opinions, which are given more in detail in the original article, Sotnit-schewsky,² under the direction of Von Recklinghausen, examined the vessels in seventeen cases of interstitial nephritis. The vessels of the pia mater were the special object of investigation, as they could be examined directly in the tissue without teasing. The small vessels of other organs were not, however, overlooked.

The seventeen cases gave the following result:—

(1.) Thirteen cases had more or less developed genuine contracted kidney and were all accompanied by cardiac hypertrophy. Changes in the small arterioles could be recognized in all the cases but one, which was a case of glomerulitis.

(2.) Three cases had more the character of senile atrophy, although all were accompanied by changes in the vessels. Hypertrophy of the heart occurred in but one case.

(3.) One case showed a well marked old glomerulitis with quite recent round cell infiltration of the connective tissue.

Of the fifteen cases in which hypertrophied heart occurred there were six with no other changes in the circulatory system. In two cases there was valvular disease; while the remaining six showed chronic disease (atheroma or sclerosis) of the aorta.

The microscopic examination showed an increase of the adventitia and intima, while the muscularis was only affected secondarily, a fatty degeneration of the nuclei being observed. Similar changes were seen in the small vessels of the spleen and kidney, less distinctly in the liver and scarcely at all in the lungs.

The limited number of cases makes the author

¹ Articular Osteitis of the Knee in Children. New York Medical Record, January 31, 1880.

² Virchow's Archiv, vol. lxxxii, p. 212.

guarded in drawing conclusions as to the relations of cause and effect, but he calls attention to the fact that changes in the vessels do not follow all cases of granular atrophy of the kidney, and further, that in the two cases in which it was absent the condition known as glomerulitis (often found in the nephritis after scarlatina) was present. In six cases there was chronic endarteritis and as fifteen of the seventeen cases occurred in individuals of an advanced age, a period of life when arterial changes are most frequent, the changes in the small vessels may be considered as a partial appearance of general arterial degeneration. On the other hand, the fact is evident that arterial sclerosis and disease of the smallest branches does not always go hand in hand. In three cases the cardiac hypertrophy was not evident, although the thickening of the vessels was marked, thus showing that the increase in the walls of the arterioles was not dependent upon the greater blood pressure.

An experimental proof of the cause of hypertrophy of the heart has been undertaken by Israel,¹ who has fed rabbits with large doses of urea or nitrate of soda for many weeks, and found as result a hypertrophy of the heart and kidneys. He concludes, therefore, in the case of diseased kidneys, that it is the irritation of the secretions retained in the blood which leads to the enlargement of the heart. From these and previous observations, he thinks that the normal kidneys are sufficient, within quite wide limits, for any claims for elimination which may be put upon them, and it is only in extreme cases (in diabetes in men, and feeding on urea in rabbits) that an insufficiency of their activity occurs, varying in time with individual peculiarities. The products which thus fail to be eliminated act first in causing an increase in the heart's activity, and later, after long continuance, a hypertrophy. In what way this excitation is communicated to the heart, whether directly or through its nervous centres or through an irritation of the muscular coat of the small vessels of the body, the author is unable to determine.

Be that as it may, insufficiency of the kidney comes on much earlier, and the capacity of the kidney itself to hypertrophy is much less in a pathological than in a normal state. This is especially so in diffuse nephritis. In consequence, the increased activity of the heart will be called upon so long and to such an extent that the largest hearts will be here found that ever occur without valvular lesion or endarteritis.

THE HISTOLOGY OF GRANULAR KIDNEY

is the title of a paper by Dr. Saundby.² In this he agrees with Rosenstein, who considers both the large white kidney and the small red kidney as the result of a diffuse inflammation, that is, an inflammation involving both the parenchyma and interstitial tissue. He, however, believes that the epithelium lining the tubes plays a more important rôle than is generally ascribed to it. Instead of merely collapsing and being destroyed, the epithelium proliferates, and thus gives rise to the abundant small cells which have been described by Johnson as filling the tubules, and he figures the change of these into spindle-shaped cells, and finally into connective tissue. Instead of this there may be formed a gelatinous tissue with stellate cells in it, the origin of the little cysts first described by Simon. The basement membrane of the tubes merges itself in the

new-formed tissue. In the Malpighian bodies the changes consist essentially in the formation of embryonic connective tissue from the endothelium lining the capsule and covering the capillary tufts and subsequent atrophy of the vessels. In the arterioles the changes correspond with those already noticed by other authors, namely, a hypertrophy of the muscular coat in some parts, while in others there is an atrophy subsequent to the increase of the adventitia. The interstitial tissue proper is only affected to a slight degree, being only occasionally found filled with leucocytes, the result of temporary inflammatory action.

ACTINOMYCOSIS.

Pontick³ contributes three new cases of this disease, and in the introductory part of his paper gives a *résumé* of what is known on the subject. The disease was first recognized by Bollinger in 1876 as peculiar to cattle, since then it has been found affecting the human family.

In the ox it usually appears as a swelling near the angle of the lower jaw, which develops into a fleshy-looking growth, often slightly excoriated, and at first movable upon the parts beneath. Finally it invades the periosteum and pierces the bone in all directions. The soft parts with the jaw show a bulbous, fungous-looking mass, which may become as large as the two fists. In other cases it appears to proceed from within outwards. A more diffuse, tough infiltration attacks both the bones and soft parts, followed later by the outbreak. In the later stages the tumor increases in height above the skin presenting a large, uneven, ulcerating surface, which, however, does not secrete a large amount of pus.

A section reveals a soft, loose, and succulent mass, pervaded by numerous yellow spots. This consists of a connective tissue, rich in cells but poor in blood-vessels. No true pus is to be found anywhere, not even in the yellow spots, which are almost liquid, a condition due to a fatty degeneration of old inflammations and exudations. Besides this there is found, as a constant and never-failing characteristic constituent, a variable quantity of sulphur-yellow granules, the size of hemp seed, which are to be regarded as pathognomonic of the disease. These granules Hartz considered to be vegetable, and from their irregular, radiated, form proposed the name of actinomycosis for the disease. As a rule, in cattle, these tumors are not found in the internal organs.

The first clearly-described cases in men are given by Israel.⁴ Among them it also begins in the outer surface, usually about the face, but in the upper as well as the lower jaw. Its commencement is not always confined to this region, as Pontick reports one case where the thumb appeared to be the original seat. It occasions numerous communicating fistulae, which secrete little pus, but are filled with the remains of broken-down granulations and old, inflammatory, and exuded products. In this way the skin and subcutaneous tissue are undermined extensively, the muscles eaten into, and even the bony skeleton affected. Such is especially the case with the vertebrae, along which the granulation creeps, and from there invades the neck and thoracic viscera. To this continually progressing destruction the lungs are especially exposed, and as the disease is in its earlier or later stage there

¹ Virchow's Archiv., vol. lxxxvi., p. 299.

² Proceedings of the Pathological Society of London, vol. xxxi.

³ Berliner klin. ch. Wochenschrift, vol. xvii., p. 660.

⁴ Virchow's Archiv., vol. lxxiv., p. 15, and vol. lxxviii., p. 421.

is found a more or less extensive condition of hepatization mottled by numerous sulphur-yellow spots containing the above-mentioned characteristic fungus. At the same time both the cavity pleurae as well as the loose parapleural tissue is the seat of a purulent or phlegmonous infiltration, which is characterized by an admixture of fungous granules. The deep-laid organs, as the liver and spinal cord, are eroded at times, and finally destroyed by this continuously progressive malignant tumor.

Aside from this method of propagation a metastasis can take place by means of the blood-vessels. In one case it was possible to discover the point in the vena jugularis where the granulations had broken through the wall, and projected forward into the lumen of the vessel in the form of a little button. A soft tumor, the size of an apple, containing the same fungous masses, was found in the auricle of the heart, evidently developed from particles that had become detached from this node.

The clinical picture is confused, owing to the different parts attacked, and presents merely the results of a phlegmonous inflammation.

Besides cattle and men the disease has also been found in swine which are omnivora, but as yet not in the carnivora. Ponfick therefore concludes that a vegetable diet is in some way connected with its production. He further states that the local malignant character of this affection shows its difference from pyæmia and septicæmia, which have such an early tendency to become constitutional.

John¹ has found in the tonsils of twenty-one swine, with one exception, clumps of actinomyces in different stages of development, often already calcified, while the tonsil itself has presented no pathological change, and, above all, no formation of a tumor. Bits of barley and other cereals were also found on the tonsils, and on the barbs of the grain were to be seen gonidia, which were indistinguishable from those of the actinomyces lying near them.

Hospital Practice and Clinical Memoranda.

MALARIAL FEVER.

BY D. H. BATHURDER, M. D., ARLINGTON-IN-CRANSTON, R. I.

THE subject of *malaria* is now before the medical profession of New England in its most practical form. This unwelcome, though invisible, agent has in rather a surreptitious manner reappeared by way of self-introduction, making itself conspicuous in many localities in at least three of the States of New England.

But I am not disposed to treat the subject of Malarial Fever, further than to arrange and exhibit to the reader, in the simplest manner, the workings of *malaria* in my vicinity, just outside of Providence, R. I., for the last year, as I have been called on to attend, and if possible relieve, those who have been victims of the touch of this mysterious agent within my own circle of practice.

During the autumn of 1880 I was called on to attend four patients who were attacked with primary "ague chills and fever." Two of them proved to be severe and obstinate cases. The other two were rather milder, but they were all well defined, representing

every visible feature incident to the disease everywhere recognized as true "malarial fever." I was careful to note particularly every feature, as presented in these cases, type, symptoms, etc. But there being only four cases, I did not deem it advisable to make a report of them for publication.

I had no more cases of malarial disease until the fourth day of July, 1881, on which day I was called to see a patient who had been attacked with a severe chill. The man was suffering intensely. He had about got through with the chill and was suffering as reaction came on. This case was located not more than fifty rods from three of the four cases that occurred the autumn before; and it was a very severe case. From the day on which this patient was taken sick, to the 31st day of October, I was called to see, and attended, one hundred and twenty-eight patients at their homes, all of whom had chills and fever; and I prescribed for twenty more, who came to my office, having had one chill or more, but could be treated by directions given at the office.

AGES OF THE PATIENTS.

The number who had an attack between 1 and 10 years exclusive was	14
The number from 10 to 20 years	27
The number from 20 to 30 years	25
The number from 30 to 40 years	29
The number from 40 to 50 years	20
The number from 50 to 60 years	6
The number from 60 to 70 years	4
The number from 70 to 80 years	3

Making a total of 128

Not one of the hundred and twenty-eight cases whom I attended at their house, failed to fully represent the several stages, with all the physical symptoms usually exhibited in "fever and ague;" subject only to such modifications as may exist from variable habits, regimen, dissimilar constitutions, etc. Out of the whole number under consideration ninety-five were of the purely tertian type; and five more, though of the tertian, exhibited some freaky variations, which I deemed of sufficient importance to note down. A slight chill would occur on the second day, and skip the third. The case would then go along in the usual tertian form. Then there were twelve which were evidently of the tertian type, yet they had no real chill. Every alternate day the patient would pass through three distinct stages. The first stage would commence with a sensation of numbness, with the vital action largely suppressed, full and pressing cerebral sensations and also at the epigastric region, but no chilly sensation whatever. Then the fever would develop itself to some extent but in no way as severely as when it followed a chill, but the patients exhibited great distress, and in most of the cases they would vomit, and there would be a great deal of gastro-enteric hyperæmia. Then they would pass into what might be termed the third stage; did not sweat very much, but suffered apparently as severely as those who experienced the severest chill with febrile and sweating stages. On the whole, these patients did not recover in the same number of days that those did who had chills.

There were eleven cases of what is known as quotidian, with a regular paroxysm every day. Three of those exhibited some freaks, that is, in addition to the chill at twelve meridian a milder one would occur at midnight, skip over one day, then continue as at first in the regular quotidian form. There were three cases

¹ Centralblatt f. d. Med. Wissen.

of quartan type, with a paroxysm every fourth day; and two of what is known and recognized by writers as double quartan. These had a slight chill on the second day, and skipped the third.

There is in the circle wherein the malarial disease mostly prevailed quite a population of colored people; but I have been called to attend only one case, and that was a mulatto woman, who had malarial disease. So far as I have been able to observe its workings in this community, the Irish population has suffered the most, the natives the next in order, and the African the least of any class in the community.

During the month of July, subsequent to the fourth, I was called to attend eighteen primary attacks of malarial disease. Through the month of August I attended twenty-nine cases that were primary attacks during that month. During the month of September there were forty-four attacks; and through October there were thirty-seven. About thirty of the number took place during the first fifteen days of the latter month. Not an individual case has been brought to the notice of the writer on which could rest the least doubt in relation to a correct diagnosis. Every case was in its preliminary aspect ushered in by, and exhibited through the entire course of the disease, those distinctly marked symptoms and features peculiar to fever and ague the world over.

It is generally conceded by most writers, and practitioners as well, that fever and ague but seldom causes death, except in cases where some other disease joins with it to help complete its fatal work.

I am ready to give due weight to the opinions of authors in this view of the case; but shall abstain from any further remarks on this point at present, as my sole object in this imperfect report is to embody facts as they have been practically established in the course of my experience with the disease.

Out of the hundred and forty-eight cases of malarial disease, — or, if we include the four cases that occurred one year ago this autumn, the number would be one hundred and fifty-two, — in all that I have had to deal with, more or less, there have been two fatal cases. Right here, let me say, that I consider this point of so much importance that I wish to give quite an extended history of those two persons who died with malarial fever. They were both first visited on the same day; and both died on the third day after I made my first visit, the 22d day of October of the current year. The history of the two cases is as follows: —

CASE I. The first case was that of an old, retired merchant. He was born, always resided, and did business, in the city of Providence. He was seventy-four years of age. He had lived an extremely abstemious life in the strictest sense of the term; he had not used spirituous liquors in any way whatever; he had for many years abstained entirely from meat diet, neither had he used tobacco in any form, and had scarcely ever during his life taken a dose of medicine. He was seized with ague chills, but would not consent to have a physician sent for till the seventh or eighth day of his illness, when he reluctantly gave his consent. On my first visit I found him in a semi-collapsed condition; he had had chills and tertian fever of the severest kind up to that day, but had taken nothing of a remedial kind except a very little ginger tea; he had just experienced a severe rigor, but there did not seem to exist sufficient vital force to bring about the usual reaction; his legs and feet were very cold, his hands and arms

were cold, his nose and ears were cold, and he exhibited great distress all about the gastro-hepatic regions; no pulsation could be felt at the wrist, neither was the second sound of the heart distinctly audible.

Notwithstanding this suppressed and negative condition, with his vital forces in a manner far spent, his mind showed evidence of clearness and equanimity. His answers were intelligent and correct.

In this state of things I concluded that he had passed by the time for the treatment I should have rendered had I seen him in the first or primary stage of his illness; consequently there seemed to be no other alternative but to administer the most appropriate diffusive stimulants, with as large a quantity of quinine as the condition of his stomach might tolerate. But his vital forces were so low that the system was totally unable to respond even to the most active heroic treatment, and he died.

Now, in this case there was no visible sign or symptom indicating the auxiliary effects of any other disease that might help to destroy life. It is true that his advanced years might play some part in the result, yet when we consider how well he had been, and the physiological balance of his whole fabric which had apparently existed down to the time of this malarial attack, I do not see how we can charge old age in this case as being a very *important factor* in the destruction of life. I did not hesitate to sign his certificate of death as from the effects of "malarial fever."

CASE II. The other fatal case was a man about thirty-five years of age. He had all his life been healthy and robust; was born in Ireland, but had resided in this country a series of years; he was a blacksmith by trade, and on the whole was an industrious man; while engaged in his shop he had indulged largely in the use of beer, though not neglecting his business; he also, like the first case, had previously been sick but little, and had taken little or no medicine; he also was seized with ague chills and fever; he did not take proper care of himself, and his fever being of the tertian kind on the day of apyrexia he continued to go to his shop, and to drink beer and some other liquors in increased quantities for two weeks or more, the chills and paroxysms of fever becoming more intensely severe all the while. Finally his friends persuaded him to call at my office. It was with some difficulty that he was able to reach the office. He wore a ghastly appearance, and on examination I found his pulse beating in a throbbing manner, 130 per minute; he complained of acute pains in the head, shoulders, back, and lower limbs, attended with a hyperæmic condition of the stomach and probably of the duodenum.

I directed him to return home at once, and get into bed, and said I would follow him immediately and pre-scribe for him.

On my visit I found him considerably nauseated, greatly debilitated, with rather a suppressed condition of the superficial capillary circulation; his feet and legs, hands and arms were inclined to be cold, and the stomach disposed to eject whatever he took into it. I was informed by his wife that he had taken but very little food for two weeks or more; he had, however, drank fully two quarts of lager beer every day during that time; he had had a chill every other day, in the morning, for nearly three weeks, and he had one that morning before he called at my office, but the usual reaction did not take place. He had not before

or at the time I first saw him, exhibited the remotest appearance or symptom of any other disease in connection with malarial chills and fever.

He was treated heroically with hot brandy and ammonia with quinine, but his vital forces were too much exhausted to be acted upon by medicine, his heart ceased its struggling, and he died.

I know of nothing that could have had any influence in urging this case on to its fatal results except his own neglect to use means in season to modify and check the progress of the disease. It is an unsettled question as yet whether or not such free use of beer and other stimulating drinks serves to hasten on or retard the disease in the final consummation of its fatal work. I am unable to assign any legitimate cause, remote or proximate, for this man's death other than malarial fever.

I have been thus particular in narrating the sickness and demise of those two persons, as there has been some inquiry expressive of doubts in relation to the death of the second case narrated, some intimating that he died from typhoid fever and not from malarial fever. Now I desire to state frankly that during the time, three days, that this case was under my care and attendance there was not a symptom that portrayed the slightest indication of typhoid fever. And here allow me to say that not only was this case exempt from such features, but every other case was likewise exempt from the well-defined symptoms of typhoid fever. I desire, before I close, to say, also, that in my next article in continuation of this subject I shall speak more fully upon that part of the subject which more particularly relates to the connection of malarial with other zymotic or epidemic diseases, as observed and noted during my experience in the phenomena and treatment of this most of all others insidious disease, malarial fever.

In my next I shall describe the surroundings or territory wherein this zymotic has so generally prevailed, its connections with the city of Providence, and the course of treatment I have adopted.

THE TREATMENT OF HYDROCELE AND SEROUS CYSTS IN GENERAL BY THE INJECTION OF CARBOLIC ACID.

THE employment of carbolic acid for the purpose of obliterating the cavity of a hydrocele of the vaginal tunic of the testicle by Dr. R. J. Levis, of Philadelphia, has previously been referred to in the JOURNAL, and has been mentioned by him repeatedly in his clinical lectures during the last ten years; until the last meeting of the Pennsylvania State Medical Society, however, he had not formally brought it before the notice of the profession. After more than nine years' exclusive practice of this method in the treatment of hydrocele in hospital and private practice he still endorses it fully and recommends its general adoption.

The object of treatment sought after is the obliteration of the serous sac by plastic inflammation, and still to avoid suppuration caused by the seton or the more irritant injections. The suppurative process being condemned, while the ordinary fluids used for injection are too uncertain in their results, Dr. Levis was led to try pure carbolic acid to secure adhesion of the walls. The process is entirely painless. The details of his method and its results are best given in Dr. Levis's

own words. It is seen that whereas he formerly used the pure carbolic acid he now prefers a permanent solution.

"For the purpose crystallized carbolic acid is maintained in a liquefied state by a five or ten per centum addition of either water or glycerine, the quantity of the diluent to be added varying with the quality of the article and with the temperature of the apartment; but it is an object to reduce the crystals to a fluid state with no more dilution than may be necessary. Liquefaction could readily be effected by the application of a moderate amount of heat, but reduction of heat might produce solidification of it in the canula.

"After the usual tapping of the sac I inject the liquefied crystals of carbolic acid with a syringe having a nozzle sufficiently slender and long enough to reach entirely through the canula. The illustration represents the syringe, reduced to one half the proper size. The object of having this special form of instrument is to insure the placing of the injecting material entirely within the cavity of the cyst, without any reflux which would irritate the surface of the skin of the scrotum or of the fingers of the operator, and without the possibility of injecting it into the connective tissue between the skin and the tunica vaginalis. This form of syringe is supplied by the leading surgical instrument makers.



"The quantity injected varies in accordance with the size of the tumor, from thirty to sixty grains. Thirty grains of undiluted carbolic acid is the smallest amount that I have used, and the largest quantity a drachm and a half.

"As soon as the carbolic acid is lodged within the sac the scrotum is freely manipulated by the fingers of the operator, so as to diffuse it over the lining walls of the hydrocele. A sense of warmth is produced, which is quickly followed by a decided numbness, and the patient is at once able to walk about and to attend to his ordinary duties without inconvenience. I have not been in the habit of enforcing rest on the patient until after the lapse of twenty-four hours or a longer time, when intra-serosal inflammation renders quietude agreeable or imperative.

"I have never, after this procedure, been able to detect any general toxic effects from the absorption of carbolic acid. Such systemic manifestations as general depression and the characteristic evidence of the brown discoloration of the urine I have looked for, with negative results. I believe that the action of strong carbolic acid on surfaces secreting albuminous fluids is to seal them, and, as it were, to so shut them off from the system that absorption cannot readily take place. This sealing of an absorbing surface involves a surgical principle in antiseptic treatment which is applicable in very many instances in which denuded or ulcerating surfaces are exposed to septic infection. I state it as an important surgical resource that, in certain compound fractures and destructively lacerated wounds, where septic exposure is inevitable, the danger from absorption may be averted by producing the occluding influence of strong carbolic acid.

"Within my own experience no failure to radically

cure hydrocele in the manner I present has to my knowledge occurred. I have never failed to produce with carbolic acid the proper amount of inflammation within the walls of the sac, but have been informed that such failures have occurred in other hands, yet do not know the particulars of the treatment and results in those cases. In no case of hydrocele or other simple serous cyst have I seen inordinate inflammation or suppuration follow injection. In a case of cyst within a disorganized testicle, which was probably sarcomatous, treated with the injection of carbolic acid, high inflammation and suppuration occurred. In three instances of hydrocele of the tunica vaginalis testis, in which the previous injection of the tincture of iodine had failed, carbolic acid made a permanent cure."

Dr. Levis also considers this treatment as eminently applicable to the treatment of mucous and serous cysts in general, such as enlarged bursae, cystic growths of the neck, intra-scrotal cysts, etc. Housemaid's knee and miner's elbow he believes would be best treated, however, by free incisions, mopping the surface with pure carbolic acid, and packing the wound with a compress of carbolized oil and charpie.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

EMPYEMA; PARACENTESIS THORACIS: RESECTION OF THREE RIBS; SPEEDY RECOVERY.

STATED meeting, October 25, 1881. DR. H. B. SANDS, president, in the chair.

DR. LANGE presented a patient with the following history:—

Mr. W., forty-two years of age, suffered from pleurisy two years ago, and after a severe illness of three months retained an effusion in the left thoracic cavity, reaching nearly to the angle of the scapula. He carried the fluid without great discomfort. Dr. L. Conrad had ascertained, by exploratory puncture, that the fluid was serous. Three months ago the patient began to lose flesh, lost his appetite, and had more or less pain in the left side. About two months ago Dr. Conrad recognized the danger incident to the suppuration, and asked Dr. Lange to perform the necessary operation, which was done on the 18th of August, and consisted in resection of the seventh, eighth, and ninth ribs in the posterior axillary line, to the extent of one and one half to two inches subperiostally, and the eighth and ninth ribs were resected from *one* cutaneous incision. The opening into the thorax was made from the periosteal bed of the ninth rib, and at a right angle another cut was made upwards into the periosteal bed of the eighth rib. About a quart of pus escaped, mixed with abundant soft fibrinous coagulations. The pleura was about one centimetre in thickness, the diaphragm drawn upward, the lung could just be reached with the finger. It was covered by hard resistant pleura, and did not move at all during the act of respiration. The cavity was washed out with thymol, one to one thousand, and an antiseptic dressing was applied, which had to be changed, first every two, later on, every three to four days. After four weeks the discharge was quite insignificant, while the upper wound, where the seventh rib had been resected, had healed by primary union. After seven weeks cicatrization was complete, and the

lower part of the left thoracic cavity was diminished in circumference and flattened. At present the resected ribs seemed to have regained their continuity, but narrow ridges indicated the places where the bones had been resected, and the ribs themselves yielded easily to pressure. The patient had resumed his work as a carpenter, and was in a good general condition. A moderate degree of ascites, which existed from the beginning, had not changed. The urine contains no albumen.

DR. BRIDGEMAN thought that it was not absolutely necessary to make an opening into the thoracic cavity at the most dependent portion, with the idea that by so doing the most complete drainage could be secured; for it was so difficult to keep the opening patent, on account of the persistent tendency to contraction, that a collection of pus would form despite the low incision; it was exceedingly difficult to keep such wounds aseptic. He regarded the recommendation of Mr. Bryant as the best, namely, that the opening be made in the axillary region on a level with the nipple. By making the incision in that region the tendency to contraction, which existed when it was made near the angle of the ribs, was in a very great measure avoided. The intercostal spaces were wider and there was less disposition of the ribs to overlap. Latterly he had used a solution of common table salt (recommended in Ziemssen's *Encyclopædia*) as an antiseptic injection in this class of cases, and with satisfactory results, after having made an opening, in the ordinary manner, between the ribs, and inserting a drainage-tube, and he had found a large sized hard rubber trachea tube answer very well.

DR. LANGE remarked that he had been aware of the tendency to close which the opening manifested when made low down, and, therefore, had increased its size by cutting upwards from the original wound into the place where the rib had been removed.

DR. POST thought there was no difficulty in maintaining the patency of the opening when a portion of the ribs was removed.

THE PRESIDENT regarded the result in Dr. Lange's case as excellent, although it might seem that the operation was a severe one. He had effected cures, as had Dr. Bridgeman, by making an opening between the ribs, inserting a drainage tube, and keeping the cavity cleansed; but was unable to recall any case in which complete recovery took place within nine weeks.

DR. MARKOE referred to two cases, in the New York Hospital, in which the thoracic cavity had been opened for empyema. In one case, treated under the strict Lister plan, the patient was well at the end of seven weeks. The second patient, whom Dr. Markoe himself operated upon, had advanced phthisis; he was treated by "thorough drainage." The rapid progress of the case downwards was arrested by the operation for the empyema, and both the man and the wound in his chest wall were doing well. In the second case the cavity was washed out at first with a solution of carbolic acid, one to one hundred, and afterwards with thymol, one to one thousand.

Both patients were adults. In his own case the lung was bound down extensively and had expanded to only a very slight extent. In the first case when no complication existed the expansion of the lung had been very complete.

DR. LANGE thought that in his case the lung had not expanded at all. Nor did he think that it should be expected that it would, because the pleurisy had

been of so long standing and the adhesions had become so thick and firm, which held the lung in its abnormal position. He regarded the prognosis, concerning ultimate recovery, as much more favorable in cases like the one reported than in cases of acute empyema, because the surrounding tissues were in a condition that favored the supply of sufficient material to fill the cavity.

In acute empyema or empyema associated with lung disease, the conditions for a favorable result were not so good as in chronic uncomplicated cases, and in that way rapid recoveries could be explained.

Dr. L. A. STIMSON referred to the case of a child, four or five years old, in which, from two ribs, pieces of bone about an inch long were removed. There was a cavity of considerable size, the lung was contracted, and showed no tendency to expansion. The empyema had existed about a year and a half when the operation was performed. He had an opportunity to examine the patient about two months after the operation, and although the general condition had greatly improved, there remained a cavity of considerable size in the chest and the lung had not expanded.

COMPOUND COMMINUTED FRACTURE OF THE FRONTAL BONE.

The PRESIDENT presented a patient, thirty years old, who entered the Roosevelt Hospital on the 28th of May, 1881. Just previously to admission he had been injured by the bursting of a "steam pot," a fragment of iron striking him in the forehead and producing a compound comminuted fracture of the frontal bone. The long diameter of the fracture and the gap in the skull was more than three inches and the vertical diameter one inch and an eighth. The patient was seen first by Dr. Hume, the house surgeon, who removed, by means of an elevator and Rongeur forceps, many pieces of bone, and left an opening in the skull of the dimensions given. It was noticed, on removing the pieces of bone, that the dura mater was injured in two places, and that from one or both of these places a small quantity of brain had exuded.

No severe symptoms followed the accident. At first the wound was treated antiseptically. It was carefully washed out at the beginning with a strong solution of carbolic acid, the subsequent dressings for some time were applied under spray, and the Lister treatment was followed strictly.

On the sixth day after the injury it was found that the union which had occurred had broken down and there was some indication of protrusion of the brain. Within the few days immediately following the protrusion attained a considerable size, and overlapped the margin of the opening in the bone. There was considerable discharge from the wound, which was so fetid that applications of various substances were made for the special purpose of correcting the odor. At no time did severe head symptoms exist. The patient had headache occasionally, but no delirium, and never a very high temperature.

The interest in the case rested in the fact that the patient went on slowly but steadily towards recovery, which took place under the use of iodoform, freely applied to the swelling, over which an ordinary bandage maintained a moderate amount of pressure. Very slowly the tumor diminished, finally disappearing, and allowing the wound to cicatrize. The patient left the hospital on the 21st of September. On examination

the pulsation of the brain could be seen through the cicatrix.

The president asked for the experience of the members in cases of hernia cerebri, and the modes of treatment which they had adopted.

At one time he was tempted to interfere with the tumor, and to shave it off, but from the time he began to apply the iodoform, which thoroughly removed the odor and dried up the exudation, he abandoned the idea of active interference.

Dr. G. A. PETERS said that the president's case was almost exactly parallel with one which he had in the New York Hospital, except that the patient was an older man. In that case the treatment was chiefly pressure and antiseptic dressings, and a good recovery took place. At about the same time he had another case in which the wound was in the parietal region. A considerable portion of bone was removed, but there was much less hernia cerebri than in the first case. At one time some of the protruding mass was shaved off, and pressure was applied. The patient recovered. He attached much importance to pressure in the treatment of these cases.

Dr. A. C. POST had seen several cases of hernia cerebri in which recovery followed the use of pressure and the nitrate of silver.

Dr. MARKOE had had several cases in which pressure and the free use of the nitrate of silver had been attended by rapid recovery.

Dr. POST remarked that statistics showed a greater proportion of recoveries in young subjects than in adults.

The PRESIDENT said that it would be interesting to know in what class of cases recovery occurred most frequently, whether when the injury was in front or elsewhere.

Dr. WEIR saw Dr. Sand's case in July, and at that time the mass seemed to be in a sloughy condition.

In studying the subject it might be well to bear in mind the three forms of hernia cerebri, namely:—

First, that in which the tumor is composed of disorganized brain substance, as proven by microscopical examinations by Drs. Chark, Draper, and others.

Second, that in which the brain is protruded by the pressure of inflammatory processes—in such a case as this Nélaton luckily struck the abscess by plunging into the brain a bistoury, Detmold also evacuated pus in a similar manner, but his patient died later.

Third, that in which exuberant granulations spring from the damaged brain substance.

Many years ago he was engaged in the preparation of a paper upon hernia cerebri, and at that time collected fifty-five cases of this complication, and from a study of such cases it was determined that it was not a necessarily fatal complication, as out of this number thirteen recovered and forty-two died.

The treatment mostly satisfactory in the successful cases was slicing off the protruding mass, and applying caustic and compression subsequently. No trouble ensued as a consequence of the caustic, though pressure sometimes produced decided cerebral symptoms. But in two or three cases seen in later years he had not done anything with the tumor except to use deodorizing applications, and it had gradually sloughed off, contracted, and disappeared. The attempt to penetrate a possibly subjacent abscess or to let out adjacent pus was of but little avail in the cases due to meningitis or encephalitis. Hernia cerebri occurred

in a collection of one hundred and twenty-eight cases of various fractures of the skull only ten times, or about eight per cent., and in fifty-seven operations for trephining it occurred fourteen, or one in every four cases.

DR. L. A. SRIMSON had seen one case in Bellevue Hospital in which the hernia was upon the top of the head, and about eight centimetres in diameter. It was diminishing in size under pressure but he was unable to give the final result.

DR. LITTLE had seen three cases, one over the frontal bone and the others over the parietal. All three patients recovered under the use of nitrate of silver, dry chalk, and a bandage. In one of these cases there were the following interesting features: A child received an injury upon the head, and although the physician in attendance recognized a compound fracture of the skull, he let the patient alone, because there were no head symptoms present. Some weeks afterwards symptoms of compression developed, and there was strabismus and convulsions. Ether was administered, and Dr. Little removed several pieces of bone. The dura mater was uninjured. He then incised the dura, but no pus was discharged, and he then punctured the brain substance and found an abscess. Pus discharged freely, and the symptoms of compression were very much relieved. The child did well until a week or ten days afterwards, when hernia cerebri made its appearance, and the protruding tumor attained to considerable size. Pressure and the dry chalk powder were applied, and during that treatment convulsions and coma developed, but passed off, and the patient ultimately recovered entirely.

DR. MARKOE thought there were two forms of this affection, one of which was almost necessarily fatal. In that fatal form there was a condition of suppuration of the brain tissue itself, and discharge of pus from the more central portion of the cranial contents.

In such cases pressure would not be tolerated, and the outward protrusion was only an indication of the bad condition within, the protrusion consisting of flabby granulations from the suppurating and broken-down brain substance. In the other form the tumor contained no brain substance whatever, but merely granulation substance.

The PRESIDENT thought it was a well-settled fact that brain tissue did form a part of the tumor in these cases.

DR. YALE referred to a case in which a boy, six years old, received a compound fracture of the parietal bone. The fragments of bone were removed, and afterwards hernia cerebri developed, which receded under treatment, and, later, again appeared. The surface of that tumor was composed of granulation tissue. It was treated by pressure, but not successfully. The boy recovered sufficiently to go about, and one day, after having played quite freely, symptoms of meningitis supervened, and terminated fatally within two or three days.

DR. MCBURNEY referred to a case which illustrated the more serious affection mentioned by Drs. Markoe and Weir. A child, ten years old, received an injury upon the left side of the head which involved nearly the entire parietal bone, and also injured the brain extensively. The patient lived several weeks, and during that time granulation tissue developed so abundantly that a tumor was formed sufficiently large to overhang the edges of the opening in the bone nearly an inch in extent. After death the mass almost en-

tirely disappeared. Microscopical examination showed that what remained contained little or no brain substance. There was no abscess.

OSTEOMYELITIS ACUTA SPONTANEA, TREATED AFTER KOCHER'S METHOD; GOOD EFFECT OF THIS PROCEDURE; FINAL RECOVERY AFTER NECROTOMY.

DR. LANGE presented a patient with the following history:—

A boy, ten years of age, was attacked without apparent cause by acute osteomyelitis of the left tibia. He was called in consultation by Dr. Lauer, of New York, and saw the boy on the tenth day of the disease. There existed every feature of a pretty severe osteomyelitis of the upper half of the left tibia, with moderate affection of the knee-joint and marked subperiosteal effusion, especially on the inner and posterior side of the bone. No other bone or joint was affected. On the following day the pus was aspirated, and the pus cavity washed out by about twenty repeated injections of a warm two and one half per cent. solution of carbolic acid. The limb was elevated and ice applied constantly. The local and general effect were quite marked. With the internal use of salicylate of soda the fever fell considerably and the hitherto extreme pain ceased almost entirely. The pus did not gather again, though about two ounces had been withdrawn at the first occasion, and without manifest suppuration that board-like, hard infiltration occurred, which we are accustomed to see in cases of osteomyelitis during the time the involucrum is formed. It was not until at the end of the third month, and apparently then in consequence of the restlessness of the otherwise healthy child, that perforation of the skin occurred. This, however, took place almost without suppuration. A cushion of granulations gradually attenuated the integument, finally absorbing it, and more serous than purulent discharge took place. In the fourth month necrotomy was performed. In order to get at the sequestra lying on the posterior side of the bone a good deal of the anterior and lateral part of the latter had to be removed. Dr. Neuber's plan was adopted in sewing up the integument after thoroughly cleansing the bone cavity. Then the absorbable drainage tubes were inserted, and the permanent antiseptic dressing was applied. Ultimately the elastic bandage was removed, and the limb kept in an elevated position for several hours. Only a few dressings were applied within the first two months, when cicatrization was complete, and also internally the cavity seemed to be so solidly healed that the use of the limb was justified. There remained an almost linear scar, about five inches long, above the internal edge of the tibia, whose outlines were perfectly faultless. It might be added that the affection of the knee-joint ended almost instantly after the original operation of washing the cavity with the solution of carbolic acid. The use of the limb is now entirely unimpaired.

OSTEOMYELITIS ACUTA OF THE UPPER END OF THE HUMERUS; SUPPURATION OF THE SHOULDER-JOINT; BONY ANCHYLOSIS AND RESECTION OF THE SAME, TOGETHER WITH NECROTOMY; RECOVERY; USEFUL LIMB.

DR. LANGE also presented a patient and specimen with the following history:—

The patient had been presented about two years ago to the New York Pathological Society.¹ In this case

¹ See Medical Record, 1879.

the left hip and right shoulder were affected by the osteomyelitic process, but only at the shoulder did it develop to its full intensity. The patient, a girl of now eighteen years, is able to do heavy housework, though the elevation of the arm was possible only to a slight degree. Still she was able to use the arm in eating and in washing her face. Movements forwards and backwards were free and vigorous. A point of interest in the excised head of the humerus was the elongation of the medullary canal upwards nearly to the epiphyseal line. From its upper end two wide canals led outwards, and it contained a small encysted abscess, lined by dense fibrous tissue, which completely filled the medullary canal. The epiphyseal cartilage had entirely disappeared except a few small spots of about the size of a pin's head. The cancellous tissue of the head of the humerus was in a state of rarefying osteitis. The small amount of elevation of the arm possible in this case was probably due to the intense atrophy of the scapular muscles, which, in spite of all possible means, had been but slightly improved.

MULTIPLE OSTEOMYELITIS INVOLVING MOST OF THE LONG AND SOME OF THE FLAT BONES OF THE BODY.

DR. LANGE presented a patient with the following history:—

A man, now more than forty years of age, was attacked by the disease when ten years old. He ascribes the origin of it very distinctly to the influence of wet and cold. He had jumped into deep water, and remained in his wet clothes more than half a day, because he was afraid to return home. On the following day he was taken with pain, first in his left hip, which gradually went lower down, and was most intense about the knee. From the second day he does not recollect anything, and he only knows that he passed through a long and very serious disease, and that his left tibia and left humerus were operated upon. After three months he was sent to the baths of Wiesbaden, and after that he was able to walk on crutches. During the following winter suppuration occurred in different bones of the skeleton, while heretofore, in the original acute attack, only the left tibia and humerus had been affected. From those two bones only and the left femur had dead bone been removed in the course of years. The patient presented a real standard-mass of bone cicatrices all over the body, and at several spots interesting consequences upon the development and growth of bones.

The left ankle-joint was stiff and in slight varo-equinus. The tibia was several centimetres shorter than that of the other side. The left humerus was eight centimetres shorter than the healthy one of the opposite side. There was marked deformity in the region of head of the humerus pointing to epiphysitis. The shoulder-joint was movable, but not to the normal excursion, and allowed elevation of the arm somewhat above the horizontal line. In later years the patient had suffered from a fracture in the middle half of this same bone, and part of the shortening might be attributed to this circumstance. Besides the bones mentioned the following presented the marks of former suppuration in the shape of deep and more or less extensive cicatrices, the left clavicle, right scapula, femur, and tibia, several ribs of the right side, and the left ilium near the synchondrosis sacro-iliaca. The man is now very healthy, and rather stout and

ABSCESS OF THE TIBIA; PREVIOUS OSTEOMYELITIS.

DR. LANGE presented a patient with the following history:—

A woman, fifty-two years of age, was operated for large bone abscess in lower third of tibia, where, forty years previously, an apparently osteomyelitic process had existed. She mentions that after a long and serious illness in her thirteenth year bones were taken away from that very spot. The symptoms of bone abscess began to develop a year ago, and gradually increased to unbearable pain, especially toward evening. The operation was performed after Dr. Neuber's plan, and healing took place within ten weeks with a narrow cicatrix. An extensive cavity had to be formed in the lower third of the largely hyperostatic bone until healthy but sclerotic bone was reached. Use of limb unimpaired.

BONE ABSCESS IN THE HEAD OF THE TIBIA, WHICH IN FORMER YEARS HAD PROBABLY BEEN THE SEAT OF CHRONIC OSTITIS.

DR. LANGE presented a patient with the following history:—

A man, fifty-one years old, tailor, German by birth, had chronic trouble with his right knee-joint when a boy. The joint became completely stiff, the tibia became deformed, presenting an angular, bayonette-like deviation, due, without any doubt, to epiphyscolysis. The limb, however, was useful for almost forty years, when a severe inflammation occurred about the knee-joint, and especially the head of the tibia, which required a number of incisions, leaving fistulae, which led down to the bone. The patient tells that he was in high fever for four weeks, and though the physician who treated him called the disease erysipelas it might be certain that an acute ostitic process had been going on in that bone, which, during childhood, had been the seat of a chronic affection. The operation consisted in laying open the cavity which almost entirely occupied the abnormally large head of the tibia, containing at the same time a standing sequestrum of cancellous tissue. Deep incisions had to be made into the popliteal fossa in order to lay open the fistulous track and abscesses, and to remove fungoid granulations. The operation was done a year ago, and four months later the patient resumed work. The cavity was not yet entirely filled, and a deep canal leads into the head of the tibia. The cicatrix seemed, however, to cover a part of its track, and there was hardly any secretion present. The patient suffered no inconvenience.

DR. POST mentioned the case of a boy fourteen or fifteen years old who had acute inflammation involving the principal bones of the extremities,—both arms, both thighs, and one leg. There was enormous swelling, with very active inflammation, which proved fatal.

Several years ago he saw a boy fourteen years old, who was attacked with what was thought to be rheumatism. At the end of three weeks Dr. Post saw the patient, and found that one of his arms was the seat of acute inflammation, with suppuration at about the junction of the shaft of the humerus with the upper epiphysis. He made an incision, evacuated a considerable quantity of pus, found the upper part of the shaft of the bone denuded, and he excised a portion about four cm. in length. The remains of the humerus became attached to the epiphysis, and the patient ultimately had a good arm.

In addition, the patient had inflammation involving

the ulna near the wrist, but that recovered spontaneously. There was also severe inflammation involving the upper part of the shaft of the tibia and the epiphysis, and finally it became necessary to perform amputation. The head of the tibia was carious, and there was at the same time a sequestrum imbedded in the spongy tissue of the bone. The case was remarkable for rapidity of its course.

At about the same time he saw another boy who had had the disease for a year or more. It involved three or four bones, and led to necrosis, which was more chronic in character. The patient entered the Presbyterian Hospital, where Dr. Post had occasion to operate several times, but ultimately a recovery was made.

DR. LANGE remarked that an interesting feature of his last case was that most of the bones were affected secondarily. Secondary osteo-myelitic processes had been observed only rarely.

DR. BRIDGON asked whether the secondary manifestations had a direct relation with the primary affection or were both due to a general condition of the system.

DR. LANGE thought it must be assumed that foci of morbid material must have remained in the system, and under certain conditions manifested themselves in inflammatory action. Sometimes the interval between attacks might be twenty or thirty years. The later attacks were most severe, and the prognosis in secondary osteo-myelitis was unfavorable.

DR. POST remarked that primary attacks were almost entirely confined to persons who had not entirely obtained their growth.

DR. LANGE said that was so much the case that one author had described the affection as an "osteorheumatic inflammation of the youth."

DR. WEIR alluded to the difficulty of determining the nature of the disease in its early stage, for he had seen recently two cases of multiple osteitis in which he was unable to make a diagnosis until the disease had progressed for some time. It was only when the abscesses began to show themselves that he could reach a positive conclusion concerning the nature of the affection with which he had to deal. It was likely to be confounded with rheumatism.

With reference to interference with the subsequent growth of the limb his impression had been that after osteo-myelitis involving epiphyses had progressed to the extent of separation of dead bone and the opening had closed, the growth of the limb would not be of necessity interfered with. This had been met with in several instances where shortening had been anticipated but had not occurred. In all probability the inflammatory process had not destroyed to any great degree the epiphyseal cartilage, though a sinus led to and through it to the necrosed bone.

DR. LANGE thought that the growth of bones after osteo-myelitis depended very much upon the parts involved by the disease. If the process did not at all involve the epiphyseal portion growth would not be affected.

DR. STIMSON referred to a case recorded by Bryant in which fracture of the shaft of the humerus was sufficient to arrest development.

THE PRESIDENT remarked that it was difficult to conceive that the growth of bone could continue to much extent after the epiphyseal cartilage was destroyed.

DR. STIMSON referred to two cases of arrest of development, quoted by Marchand, after separation of the lower epiphysis of the radius.

DR. LANGE remarked that the credit had usually been given to Chassaignac for having first described osteo-myelitis; but he had been interested in an elaborate article written by Dr. Nathan Smith, of Baltimore, in 1831, in which the clinical features of the disease were described in a very striking manner. Dr. Smith mentions several cases in which he trephined bones and found small abscesses scattered through the marrow. His first case was observed in 1798.

RUPTURE OF THE ADDUCTOR LONGUS MUSCLE; TUMOR SIMULATING THE APPEARANCE OF A FEMORAL HERNIA.

DR. MCBURNEY presented photographs accompanied with the following history of the case:—

H. M., thirty-three years of age, was admitted to one of his wards at Bellevue Hospital on the morning of May 30th. He was suffering from several slight cuts and contusions received in a street fight a few hours before admission. What particularly attracted Dr. McBurney's attention was a tumor situated just below Poupert's ligament on the right side, in the ordinary situation of, and very accurately resembling, a femoral hernia. The tumor was three inches long by two wide, and the patient was positive that no enlargement of any kind had ever existed in that situation before the night on which he had received his injuries. The tumor was slightly tender on pressure; it was dull on percussion; no impulse was given to it by cough. No vomiting had occurred. There were absolutely no signs of contusion of the thigh, and no change in shape at any part. There was no indication for surgical interference. On the next day he noticed a very shallow, broad depression on the inner aspect of the thigh, occupying about the middle third. That made him think that possibly the tumor was the upper end of a ruptured muscle. One of the house-staff, Dr. Hartley, had already asked if such might not be the case. It was not difficult to establish the character of the swelling. He applied to either side of the tumor one of the poles of a galvanofaradic battery, and at once the contraction of muscular fibre throughout the whole mass was very easily appreciated by both the eye and the finger. By holding the limb firmly abducted, the patient attempting to adduct it, considerable contraction of the tumor took place. It was then easily determined that the tumor was formed by the upper contracted end of the adductor longus muscle, which had been ruptured.

DISLOCATION OF THE LOWER JAW.

DR. POST narrated a case as follows: A young woman presented herself at his college clinic unable to close her mouth. The history was that she had had a molar tooth extracted thirteen days previously, and, according to the patient's statement, the patent state of the mouth did not exist immediately after the tooth was removed but first appeared a short time subsequently. At all events there was dislocation of the lower jaw following the extraction of a tooth. The mouth was not as widely open as it usually is in these cases, the teeth coming together within about two centimetres, and the lower jaw projecting in front of the upper one. There was also less of a hollow in the region of the glenoid cavity than is usual after dislocation.

It is a question whether, in ordinary dislocation of the lower jaw, the inferior maxillary is dislocated *from* the interarticular fibro-cartilage, or carries it *with* it. His impression was that, in ordinary cases, the dislocation was *from* the cartilage, and it might be that the dislocation in the case reported was *with* the interarticular fibro-cartilage, which did not allow displacement of the bone to the extent usually present in the ordinary form of the injury. The dislocation was reduced in the usual manner. Dr. Post asked whether any of the members could give definite information concerning the position of the interarticular fibro-cartilage in dislocation of the lower jaw.

DEFORMITY OF THE NOSE CAUSED BY ULCERATION.

Dr. Post also exhibited photographs representing a deformity of the nose resulting from ulceration. The patient was a woman fifty years of age, who suffered from an ulcer involving the right side of the nose, that gave rise to the deformity about twelve years before presenting herself for treatment. The patient was in apparently perfect health, and the ulcer had been perfectly healed for a number of years. Dr. Post performed a skinoplastic operation, taking the flap from the corresponding cheek, and curving its peduncle so as to remove the tension, and the result was a filling up of the deficiency, an improved condition of the appearance of the patient, although the opening of the nostril was not restored.

HIP-JOINT DISEASE; MUSCULAR CONTRACTION.

Dr. Post also narrated a case with the following history: A girl, six years old, was brought to him with the statement that, two years before, she was supposed to have hip-joint disease. She had the symptoms of the disease at the age of four years, was under the care of Dr. Sayre, who used his splints with marked benefit for several months. At the end of that time the splint not only did not relieve the child, but she felt worse whenever it was applied, and consequently it was removed entirely. The limb was then kept at rest for some time, emollient applications were made, and the patient seemed to be doing well. Of late there had been no symptoms indicating inflammation about the joint, but the child has not been able to walk with any freedom. On careful examination Dr. Post found the following condition of affairs: There was no marked difference in the length of the two limbs. There was perfect freedom of motion in the direction of flexion. The head of the femur could be pushed against the acetabulum without causing pain, and pain was not produced by pressure over the trochanter. On attempting to extend the limb it was found that, although the thigh could be brought down, the movement was not between the femur and acetabulum; it was the motion of the pelvis which permitted the extension.

On further examination he found that the real obstacle to extension of the limb was apparently confined to the tensor vaginae femoris and the sartorius muscles, and the resistance which they offered was marked. He also found that the obstacle to abduction was the tense gracilis muscle. The limb could be adducted. He regarded the case as one in which the original disease was hip-joint disease, which ultimately resolved itself into the state of fixed muscular contraction described. He was inclined to the opinion that there was no disease except the fixed contraction of the muscles mentioned, and those he proposed to divide.

ANEURISM OF THE INNOMINATE ARTERY.

Dr. L. A. STIMSON presented a specimen which he believed was unique. It was an aneurism of the innominate artery, in which the tumor solidified perfectly after the simultaneous ligation of the common carotid and subclavian arteries. The specimen was removed from the body of the patient, who, in April, 1880, three months after the operation, was presented to the Society. The tumor at that time, in its reduced diameter, was about one inch, and its height above the clavicle half an inch.¹ From that time the tumor could be felt a little above the clavicle, but remained stationary, and the man worked during the succeeding summer, winter, and spring, although at times he suffered somewhat from a gnawing pain in the clavicle. In July, 1881, the patient complained of dyspnea so much, having phthisis in the right lung, that Dr. Stimson advised him to enter the hospital for treatment. Quebracho gave him marked relief. He remained in the hospital until he died, on the 20th of October, 1881.

The specimen consisted of the arch and the thoracic aorta with the subclavian and carotid arteries on both sides. The aneurismal tumor occupied the anterior wall of the innominate; stopped short of the bifurcation, and practically began at the orifice of the vessel, which was dilated to the extent of an inch and a quarter in diameter. The tumor was conical in shape, extended forwards and to the right about two inches, and its height was a little more than two inches. It was filled perfectly with an adherent laminated clot, which was skinned over, as it were; that is, its free surface was covered by a membrane continuous with the inner wall of the vessel. There was no gap between the clot and the wall of the aneurism, into which blood could penetrate. Upon the posterior or left wall there was a small shallow pouch filled with a clot which was also adherent to the wall of the artery.

The bases of these clots faced one another, were in contact with each other, and between them there could have passed a small quantity of blood, which would make its way into the subclavian artery, which was open. The subclavian artery showed the mark of the ligature in its third division, the ligature itself having entirely disappeared, but the vessel in its first and second portions was open. The carotid was completely filled by a firm adherent clot, from its origin to the bifurcation, both its branches being pervious. And the part of the clot which ceased at the bifurcation showed the same membranous continuation with the inner wall of the vessel already described as present in the aneurism. The carotid did not show the mark of the ligature as did the subclavian, but a transverse linear gap could be felt very plainly at the site of the ligature, and it was evident, he thought, that the inner and middle coats of the vessel were divided at the time the ligature was applied. The left carotid and subclavian were open. The trachea, a short distance above the bifurcation, showed a spot which had somewhat the appearance of a small ulcer, but no distinct ulceration had taken place. The aorta showed a certain amount of atheroma.

The operation was performed in January, 1880, and the patient died of phthisis in October, 1881.

The Society then proceeded to the transaction of miscellaneous business.

¹ See Medical Record, vol. xviii., p. 136.

PROCEEDINGS OF THE BOSTON SOCIETY FOR
MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

NOVEMBER 28, 1881. DR. T. B. CURTIS presided.

PSEUDO-RHEUMATISM.

DR. W. E. BOARDMAN read a paper entitled *A Case of Pseudo-Rheumatism*. Vide page 533 of this journal.

DR. WHITE remarked that the rheumatic pains in this case were no more severe than those occurring with erythema multiforme at times, or in purpura rheumatica. They were not characteristic of the hemorrhagic form of the latter affection. It seemed to him that the cutaneous hemorrhage in the case was remarkably restricted in distribution and slight in the size of the individual manifestations for one of true Werlhoff's disease.

DR. F. C. SHATTUCK remarked that true hemophilia was usually considered to be a disease which develops itself in early life, and would certainly manifest itself in some way before the age attained by Dr. Boardman's patient; he also said that children sometimes outgrow it.

DR. SHATTUCK thought that this case could hardly be one of poisoning by salicylic acid.

DR. ABBOT said that he had had the urine carefully examined in a number of cases where he had given salicylic acid, and that in some of them a slight albuminuria appeared to be caused by it, but in none a permanent injury to the kidney.

RHEUMATIC CHOREA.

DR. ABBOT also gave the details of a case of rheumatic chorea (which he had previously reported to another society), on account of its extreme rarity, the rapid recovery under salicylic treatment, and to give the members an opportunity to examine the handwriting of the patient, who was able to sign her name in a legible and almost handsome hand after fifteen days of treatment, having at the outset been unable to feed herself. The case is printed in full in the JOURNAL for December 1st, page 512.

DR. DENNEY remarked that he had examined a number of cases of chorea to determine whether the disease was hereditary, and had found it hereditary in only two cases, and combined with rheumatism in only one.

DR. MORRILL said that he had found that twenty grains of salicylate of soda given four times daily to patients suffering from sub-acute rheumatism gave considerable relief.

DR. COWLES spoke of the case of a fisherman's boy who had an attack of intercurrent chorea and rheumatism. He first had a severe attack of chorea, and then in a few days the choreic symptoms passed off, and tenderness of the joints and an attack of acute rheumatism appeared; then, as the rheumatism got better, the chorea again developed. The illness lasted six weeks, and ended in recovery.

A MEXICAN SKULL.

DR. WHITNEY exhibited the skull of an Indian, found in a cave in Mexico, showing a stone arrow head lodged in the superior nasal fossa. The skull belongs to the collection of the Peabody Museum of American Archaeology at Cambridge, and was shown by the kind permission of Mr. F. W. Putnam, the curator.

Recent Literature.

A Treatise on Orthopaedic Surgery. By J. WARRINGTON HAWARD. London: Longmans, Green & Co. 1881.

This is in many respects an excellent work. There is an entire absence of self-glorification or dogmatic reasoning from personal experience which not unfrequently disfigure the literature of this branch of surgery. It contains in the main the views of the leading English authorities, in some respects modified by the author's experience. The chapter on rickets is instructive, embracing some matter comparatively new to the general medical reader. That portion describing Dupuytren's contraction of the finger and that on in-growing toe-nail are sensibly written. The chapter on club-foot is well illustrated, but contains little that has not been said before. Diseases of the joints and caries of the spine are purposely omitted from the work, but even after thus limiting the field the author cannot be said to have completely covered it, the book being a striking example of that complacent provincialism which perhaps reaches its highest development among Englishmen. The author attempts to write a treatise, and quotes largely from English writers, but he entirely ignores the excellent work which has been done by Continental surgeons in the last ten years. There is, we believe, no quotation from any recent authority, not English, except a reference to Dr. Sayre, and a mention of Friedleben, as quoted by Dr. Fogge, an Englishman. It is to be hoped that the writer will in the future subscribe to and use the *Index Medicus*, and that before preparing the second edition of his book he will become cognizant of at least Volkmann's report on subtrochanteric osteotomy, Boeckel's experience in osteoclasis and osteotomy, the results of Delore's method in genu valgum, the valuable papers by German surgeons on wedge-shaped resection of the tarsus in club-foot, the Italian hygienic treatment of rickets, and the excellent results obtained by Hurter's operation in valgus of the great toe.

Mr. Haward's work is so well done, as far as it goes, that his readers desire a more complete treatment of the subject.

Favorite Prescriptions of Distinguished Practitioners, with Notes on Treatment. By B. W. PALMER, M. D. New York: Birmingham & Co. 1881.

This compilation of prescriptions will probably prove of value to many practitioners, especially of the kind who prefer to use the clinical experience of others rather than their own therapeutical knowledge. We cannot forbear hazarding the remark that the most skillful physicians are those who build up their prescriptions upon the basis of each case, without reference to the class of diseases to which it belongs. The olden time of dealing out prescriptions, as the card-player does a pack of cards, we hope, is almost obsolete.

—A physician of Cincinnati has been fined \$10 and costs, on complaint of the Board of Health, for failing to report a case of small-pox which he had under treatment for fourteen days.

Medical and Surgical Journal.

THURSDAY, DECEMBER 8, 1881.

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PARADOXICAL TEMPERATURES.

AN unusual number of cases of paradoxical temperatures have appeared of late in the English medical journals. Among them we notice three which may serve very well as types of the great majority of these clinical puzzles.

The first of these cases was one which had previously fallen under the observation of Dr. Horatio Donkin, who, in several articles in the *Lancet*, has analyzed a large number of instances of excessively high temperatures, and was reported by Dr. MacKenzie at the London Clinical Society.

The patient, a woman, and a confirmed opium-taker, who had had much experience of hospitals, was admitted to the London Hospital for pain and swelling of the abdomen; at this time the temperature was normal, and nothing especially noticeable was recorded concerning the case for nearly three months, when, after a "slight rigor" in the morning, a temperature of 109.2° F. was observed at night with a normal pulse. With some vomiting and "pain in the head," the patient furnished from this date, January 13th, onward to January 27th, temperatures varying at different hours and on different days from normal to 120.8° F.; from the latter date for a week there were no high temperatures, when, to cut a long story short, the previous symptoms reappeared accompanied by the thermometrical vagaries, and continued intermittently for a number of weeks. On no occasion when the patient was strictly watched or the thermometer held in the axilla were excessively high temperatures observed. In reporting this case to the Clinical Society Dr. MacKenzie expressed his decided belief that the excessively high temperatures were fictitious, and for very excellent reasons, as our brief abstract of the case indicates, though the patient stoutly denied illegitimate complicity with the temperatures. She, however, confessed producing them with the aid of poultices and hot bottles in season to enable a postscript to be added to the report of the case as appearing in the *Times and Gazette* of November 5th. The confession was sorely needed in this instance to establish the deceit, but it enables us to refer to the case as illustrative of one class of these cases of paradoxical temperatures, namely, that in which there is deception with subsequent discovery of the method.

Another instance reported by Dr. Mahomed¹ at the same meeting of the Clinical Society is a good

¹ *Lancet*, November 5, 1881.

example of the paradoxical temperature evidently spurious, but the method of producing which remains undiscovered.

A young woman, somewhat hysterical, suffering from phthisis affecting one lung, was admitted to Guy's Hospital September 30th, and was under observation for eighteen months, when she died from scarlatina. It was not her first acquaintance with hospital life. For the first three months that her temperature was regularly taken morning and evening it varied from normal to 102° or 103° F.; during the month of June it gradually assumed a higher range, varying from about 101° to 104° or 104.8° F. It first became phenomenal July 23d, registering 106.4° F.; two days afterwards, in the evening, it marked 107.4° F., and two hours later 110.8° F. During July and August the temperature only rose five times above 105° F., and at each of these the index was lodged in the end of the thermometer. Early in September the patient, probably tempted by being under the supervision of a new clinical clerk, and by the general interest which her case began to excite, indulged herself most recklessly in strange temperatures. Thermometers placed in various parts of the body simultaneously would give various readings at the same moment, and two or more successive observations on one part would give variations from normal up to 120° F. On one occasion three thermometers were used at the same time in the presence of a physician and several students, one being placed in the mouth and one in each axilla; they were not held in. On removal on one side the thermometer registered about 102° F., in the mouth 107° F., and on the other side 114° F. (these numbers are not exact). The thermometers were then all changed, the highest temperature being now recorded in the opposite axilla, and that in the mouth was about 101° F. They were again changed with fresh results. It appeared that the only check to the position of the index was the length of scale of the thermometer, it being frequently, and at this time, indeed, usually lodged in the small expansion of the tube at the top. Some thermometers were now procured from Mr. Hawksley, which had a scale for several hundred degrees, but these were non-registering, and by means of them only ordinary temperatures were obtained. The house-physician obtained a self-registering clinical thermometer with a scale reaching to 130° F., and with this an indication of 128° F. was given on October 15th. She appears to have felt that she had gone too far on this occasion, for comparatively few high temperatures were recorded after this, but about thirteen times during the next five months. It was especially noteworthy in this case that a high temperature was never indicated by a non-registering thermometer, though they were often used. She frequently objected to the use of these, which were of larger size than the ordinary clinical thermometers, calling them "horse thermometers." The loan of some surface thermometers were obtained, which were strapped on the chest wall, but they gave nothing but ordinary results, although extravagant temperatures had been recorded immediately before. The high records could be ob-

tained at any time in the day, and appeared entirely under the control of the patient, who would frequently state beforehand that the temperature would not be high. The high temperatures were not accompanied by any corresponding increase of pulse-rate or respiration, though afterwards her breathing was sometimes noticeably hurried, as if from exertion. No high temperature was ever obtained by Dr. Mahomed when he kept his hand on the arm of the patient during the time the thermometer was in the axilla. No increase of temperature of the skin or in the axilla could be detected by the touch during or immediately after the record of an extraordinary temperature, nor was the bulb of the thermometer hot at the time of removal, as it would necessarily have been had the temperature of the body been really high. . . .

"Although during June, July, and August her temperatures had been progressively increasing and always high, yet her body weight, which was one hundred and fifteen pounds on December 9, 1879, had only decreased to one hundred and twelve pounds on September 9, 1880, being a loss of only three pounds in nine months. During the next three months she lost ten pounds, her weight falling to one hundred and two pounds by November 30th, but her physical signs of disease had been steadily increasing throughout this period."

Though frequently charged with it the patient generally denied any deception, but she often smiled, and sometimes said, "Why don't you find it out?" The method employed by her was not discovered, although she was evidently much more closely watched than the previous case, and she ultimately died from an attack of scarlet fever.

The third case to which we shall refer may be fairly regarded as a genuine case of paradoxical temperature, and as sufficiently illustrative of those not very uncommon instances of flushes or flashes of heat accompanied by a more or less phenomenal and more or less evanescent increase of temperature. The patient, though, strange to say, a young man, is described by Dr. Puzey, of Liverpool, who reports his case,¹ as of such an extremely excitable and emotional temperament that the term hysterical would have been perfectly applicable to him. He was admitted to the hospital on account of old-standing disease of the knee-joint, for which he underwent excision. The case progressed very well without anything especially remarkable about the temperature until about three weeks after admission, when it rose from 99.8° F. the evening of March 9th to 102° F. the evening of the 10th, and to 109° F. at seven A. M. March 11th, from which point it declined to 103.2° F. at eleven A. M., and had returned to 99.8° F. that evening. The temperature remained pretty steady until March 20th, when the following changes were observed: At eight P. M. 106° F.; at about one A. M., the 21st, 105° F.; a few hours later 102° F.; in the evening 100.6° F. At this time there was no apparent constitutional disturbance, the wound was looking well, and free from redness or tension.

In commenting on his case the reporter says: "The temperature, which certainly had been normal before the operation, never touched the normal point after, and six months after was still higher than the standard. The markings were often lower at night than in the morning, and the pulse and respiration frequently bore no relation to the temperature. . . . When these high temperatures were noticed, he was invariably flushed and apparently excited; the hands and tongue tremulous; and any attempt at examining the affected limb caused loud exclamations of pain, sobbing, and shedding of tears, afterwards followed by just as unreasonable laughter. I should add that the man was carefully watched to see that no tricks were played with the thermometer, such as friction of the bulb in order to raise the temperature; and I ascertained practically myself that no elevation of the mercury could be caused by rolling the bulb in the mouth against the tongue."

We have noticed these three cases at some little length, not so much because they are very rare, as because they are typical of what does now and then occur, or is liable to occur in hospital, or even in private, practice. There are other rare instances of very elevated temperature, and continuously so for days or even a week, such as that reported by Mr. J. W. Teale,² the explanation of which, perhaps, still remains to be given.

Sellerbeek states that it is easy to raise the mercury to 108° F. in three minutes by rapidly rotating the bulb between the bare skin of the arm and the thorax, and Mahomed that it is easy to send the index of an ordinary clinical thermometer up to the top, in from ten to fifteen seconds, by rubbing it between the slightly moistened finger and thumb, exerting at the same time considerable pressure on the bulb. The same result, he says, can be obtained by enveloping the bulb of the thermometer in several folds of silk and placing it in the mouth; then inspiring by the nose and expiring by the mouth; this no doubt is produced by the evolution of the latent heat of the watery vapor of the breath, as it becomes condensed upon the silk.

In common with others we have not been able to verify the above statements, though unwilling to deny that some may be more expert. We are inclined to adopt the conclusions of a short report³ to the Suffolk District Medical Society on animal temperature, in which the writer states his belief: (1) that the range of animal temperature which is not incompatible with human life is much larger than has, until very lately, been supposed, extending in all probability at least from 76° to 122° F., or 46 degrees; and (2) that very remarkable and sudden oscillations of temperature, covering many degrees, sometimes occur, which cannot at present be satisfactorily explained.

— Dr. Louis Elsborg, of New York, has been appointed Professor of Laryngology and Diseases of the Throat, in the Dartmouth Medical College.

² Lancet, March 5, 1875.

³ Dr. F. C. Shattuck, Boston Medical and Surgical Journal, page 61, 1879.

¹ Times and Gazette, November 12, 1831.

THE HOSPITAL SATURDAY AND SUNDAY ASSOCIATION OF NEW YORK.

THE Hospital Saturday and Sunday Association of New York has just issued its annual tabulated statement, showing the work and resources of each of the hospitals connected with the Association, for the year ending September 30, 1881, and this is accompanied by its annual appeal to charitably disposed individuals, and to the various churches. From the statement we learn that of 8688 patients treated during the year in the 20 hospitals of the Association, 6698 were free and of the class to whom the contributions solicited by the society are applied. During the year 248,680 days of hospital care have been given to these free patients, in 17 hospitals, and this, at the average cost of \$1.15 per day, shows an expenditure of \$285,982 by these institutions in the free care of the sick. Of this large sum but \$88,735.05 was received from the invested funds of the hospitals, and for the balance they are dependent upon the yearly gifts of the benevolent and such appropriations as are made by the city. The hospitals represented in the Association treat nearly all the diseases to which the human race is subject. In eight of them cases of accident and every kind of non-contagious and acute disease are treated; four are hospitals for diseases of women and children, two for the ruptured and crippled, four for diseases of the throat, ear, and eye, and three are devoted to the cases of incurables. They all receive patients of every age, nativity, and creed, so that the charity represented by the Saturday and Sunday Association is large enough to embrace every case of real need which is brought to the attention of the society, its capacity for effective benevolent work being limited only by the amount of funds at its disposal. A new feature of the work this year is the establishment of auxiliary associations, which have been formed in some of the various business pursuits under a common constitution and by-laws. The hospitals forming the Association will be asked to agree to receive any sick person nominated by the designated officers of these auxiliaries as free patients under the following conditions: Every general hospital, and the hospitals for women and incurables, to take patients thus nominated for so long as they may need hospital treatment, at the rate of one day's care for every dollar contributed by the auxiliary which nominated them; the hospitals for children, one day's care for every 75 cents thus contributed; and the hospitals for the treatment of the throat, eye, and ear, one day's care for every \$1.25 thus contributed. The total collection for this work in 1879 was \$26 155.07, and for 1880, \$44,371.97; but these large sums fall far short of the actual needs of the hospitals composing the Association.

Hospital Sunday this year, in New York, is fixed for the 25th of December, and the day preceding is Hospital Saturday. Christmas Eve and Christmas Day are peculiarly appropriate occasions for soliciting contributions to a charity of this description. Those who are well and in comfortable circumstances can in no way contribute to their own enjoyment more than by the consciousness of alleviating somewhat the

trials of those who are sick and miserable. The Association is certainly justified in believing that the good days will multiply the good deeds and enable it to carry out generously its plans for increased usefulness.

FIGURES ABOUT THE INDEX MEDICUS.

WE took occasion, not long ago, to take exception to what seemed to us to be a very injudicious method of advocating the claims of the *Index Medicus* to support on the part of the *Philadelphia Medical Times*. Because the *Times* was ignorant of the contributions of other cities it supposed nothing was done in them. The correctness of our view of the case is borne out by a letter of the publisher of the *Index* addressed to the editor of the *Philadelphia Times* and published in its last issue. We feel justified in reproducing a portion of it:—

“DEAR SIR.—Allow the publisher of the *Index Medicus* to thank you, on behalf of that publication, for your earnest and timely words in the *Medical Times* of November 5th; but, lest some of your remarks may be misinterpreted, allow him also to state, in justice to those concerned, that the reproach of ‘has done nothing’ cannot properly apply to the cities of New York and Boston. It is true your remark only refers to the work of the organizations, in which Philadelphia has so prominently taken the lead. But, while New York and Boston have not yet succeeded in carrying out the Philadelphia plan of co-operation, it should not be overlooked that (a fact of which you evidently were not aware) the *individual* support in both cities has been proportionately more than that of any other place. Boston in particular has distinguished itself by a number of liberal private contributions. The following is an approximate percentage of support, representing subscriptions, contributions, and appropriations:—

United States (exclusive of other mention, as specified below)	27½
New York city	22½
Boston	16
Philadelphia	12½
Government departments	11½
Foreign countries	10
	100

“This schedule shows that (Philadelphia and the Government departments excepted) Boston and New York alone contribute more than all the rest of the world.”

We have no desire to pride ourselves on the matter. We hope the contributions will continue to be freely given so long as the *Index* needs support, and we know of no more honorable way for the societies of different cities to afford each other mutual aid than by uniting in the support of this valuable *Index*.

MEDICAL NOTES.

—An out-patient department has been established at the Boston Lying-In Hospital. Hereafter medical attendance will be furnished at their homes to all women who reside within the limits of the city proper, and who are unable to pay for such services.

Miscellaneous.

ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION AT SAVANNAH.

FIRST DAY'S PROCEEDINGS.

THE ninth annual meeting of the American Public Health Association began at Savannah on Tuesday, November 29th. Among those present were Drs. H. P. Walcott, S. H. Durgin, Azel Ames Jr., and B. Joy Jeffries from Massachusetts; and Dr. Stephen Smith and Professor J. L. Cabell of the National Board of Health. After the formal exercises of the opening and the election of new members, a communication by Dr. Ames, recommending the establishment of a National Museum of Hygiene at Washington, was followed by the offer of the free use of the one already founded by the Surgeon-General of the Navy. Among other communications were those advising the abolition of governmental regulation of prostitution, and that the Society should obtain charters in the various States where it has members.

The first regular paper of the day was by DR. EZRA W. HUNT, of New Jersey, on

THE CONTAGIOUS DISEASES OF DOMESTIC ANIMALS.

Beginning with a generalization of the importance of the study of comparative physiology and pathology, and the direct benefit accruing to man from a more accurate knowledge of the morbid processes in animals, the writer passed to the consideration of the separate diseases found among them. Contagious pleuro-pneumonia has as yet produced no specific disease in man, its importance depending upon the production of an inferior quality of meat. It was otherwise, however, with splenic fever and other forms of anthracoid disease, which are directly and virulently contagious. Hog cholera derives its interest, not only from the immense pecuniary loss it entails, but from the fact that the pork when eaten is capable of causing sickness. In the remarks on trichinosis it was shown that, relative to the vast number of swine produced in this country, the per cent. of those infected falls far below what is found abroad, and that, though there is a reaction against the stringent legislation regarding American pork, still, until a regular governmental system of examinations is instituted, our exports must necessarily be limited. The paper closed with practical suggestions regarding the inspection of all meats.

DR. JOSEPH R. SMITH, U. S. A., offered the next paper on

DISEASE AMONG TEXAS CATTLE.

From his observations he concluded that Texas cattle in their prairie pastures are singularly free from disease; that the weight of the spleen is an element of value in determining diseased conditions only in comparison with the weight of the whole animal and its age. As the result of experiments upon the temperature of cattle it appeared that the normal range was four to five degrees higher than in man.

TRICHINA SPIRALIS.

A report of the New Orleans Sanitary Auxiliary Association upon the Examination of Hogs at the New Orleans Abattoirs during the summer of 1881 followed. Of the fifty-four hundred hogs examined, twenty-two were found infected with trichinae. As a result of

study upon these it appeared that corn-fed hogs alone were affected and that Southern swine were free from the disease.

The fourth paper, by DR. JOHN PATRIDGE, of Indiana, on *Trichina Spiralis*, commenced with remarks on parasites in general as found in man and in animals, noticing their method of development after ingestion, and the varying larva produced by the same ova in different animals. The trichina spiralis as found in man was then considered, a brief pathological sketch being prefaced to a clear clinical history of the disease. The case of a nursing child, infected through its mother's milk, was instanced as showing the wide distribution of the parasite when once in the body.

A paper by DR. F. S. BILLINGS of Boston on *Trichina Spiralis* in American and German Hogs killed at San Antonio, Texas, read by title only, closed the morning session.

The first paper of the afternoon was by DR. S. S. HERRICK, of New Orleans, on

THE COMPARATIVE VITAL MOVEMENT OF THE WHITE AND COLORED RACES IN THE UNITED STATES.

He showed that the rate of mortality was much greater among the colored, especially during the first five years of life; that there was a greater liability to consumption and acute lung disease, while especial immunity was enjoyed from cancerous diseases, delirium tremens, and suicides. Much of the increased mortality was due to inferior medical and hygienic attention. He also proved that there is a steady increase in the colored population, and that the African race is not dying out. An interesting fact was the vital disturbance in the colored gain during the decade 1860-70, being 9.9 per cent. against 22.1 per cent. in 1850-60, and 34.8 in 1870-80. From the almost absolute immunity from competition in their occupations, and the absence of overcrowding, he considered there was destined to be a constant numerical increase, but the same factors will prevent any corresponding intellectual improvement, because of the lack of incentives to other and higher industries. An interesting discussion on the probable future of the colored race in America followed.

PROF. JOHN L. CAMPBELL, of Indiana, next read a paper upon The Kankakee, a Sanitary Problem of Indiana, showing how a large tract of waste and malarial land could be made productive and healthful by securing drainage by the Kankakee, and suggesting various methods for accomplishing this result. The two remaining papers, The Disposal of our Dead, by DR. W. H. CURTIS, of Illinois, and The Relation of Alimentation to Infantile Development and Disease, by DR. T. C. DENCAN, were read by their titles only.

At the evening session a formal welcome was extended the Association by CAPTAIN MERCER, representing the city, who alluded to the increasing value of the results of these meetings. He was followed by DR. R. J. MUNN, of the Georgia State Medical Society, who dwelt especially upon the opposition with which advanced sanitary measures were received by the people, and the importance of the work the Association had undertaken.

ANNUAL ADDRESS.

The annual address by DR. C. B. WHITE, the president of the Association, followed. Giving the names of the deceased members, he spoke warmly of the services they had rendered, and suggested the ap-

pointment of a committee to prepare a suitable memorial. Among the replies, he continued, to a circular asking for subjects for investigation, was the suggestion whether there was such a thing as sanitary science, and this question formed the general theme of the address. The speaker said that at all times there had been individual observers and collectors of vital statistics but never any uniformity either of observation or arrangement, and attributed this to lack of proper training in scientific investigation even among scholars, a defect, which as scientific methods are made more familiar, and scientific men are better known, will be lessened generation after generation, although at present we are almost at the beginning of knowledge in this particular. He deprecated the hasty generalizations and unfair, incomplete theories constantly thrust forward and as constantly overthrown, thus causing distrust to those not conversant enough with science to discriminate judiciously. He alluded to those who, living in opposition to all known hygienic rules, continue strong and well, as possessing some hitherto undefined peculiarities beyond their fellows, enabling them to defy all laws of health. The individual he regarded as the offspring of race hygiene, and race hygiene as the object of sanitary science. He thought the point had now been reached when expert work was necessary for progress, and that the efforts of amateurs of unbounded zeal and equal ignorance required trained guides, which the States must furnish. That over these there should be a still higher power, of necessity national, which should systematize and bring into a complete whole the works of individuals, and with other countries form an international commission. Regarding the proper education of the people as most essential for the acceptance of whatever good sanitarians may discover, he suggested suitable study and preparation, beginning with early childhood, and not limited to scientific schools alone. The address closed with the prophecy that as population was increased by race hygiene, so sanitary engineering would develop nature's resources, and the struggles for existence would be lessened rather than increased.

A committee was appointed to prepare a suitable memorial of the deceased members, and, after accepting an invitation to the members to attend a reception at the residence of Dr. Falligant, the meeting adjourned.
(To be continued.)

LETTER FROM LONDON.

THE PROSECUTION OR PERSECUTION OF PROFESSOR DAVID FERRIER, F. R. S., M. D., BY THE ANTI-VIVISECTIONISTS.

MR. EDITOR.—A fortnight since a summons was granted at the Bow Street Police Court, returnable to-day, against this world-famed physiologist and physician. It is almost needless to say that this course was adopted at the instigation, if not indeed by the very hands, of those numerous, perhaps soft-hearted, little-thinking and misguided persons who support the various associations having for their ultimate purpose the total suppression of scientific research by experiment upon living animals other than human. At two o'clock this afternoon Sir James Ingham, the senior magistrate for this metropolis, sat to hear the case. The precincts of the court bore an altogether unusual appearance. Its approach, which is most often crowded by an illit-

erate gathering whose features bear undeniable testimony to their drunken and criminal habits, was surrounded by an enthusiastic, educated, and surging assembly numbering many hundreds, among whom the experienced eye could recognize many of the chief of the leaders of medicine, surgery, and science in this country. Considering the amount of feeling that was evidenced by such an assemblage, and that its great majority were medical, and therefore physiological, students, all of whom must have entertained the highest opinion of the defendant, it is highly satisfactory to be able to report that the ever over-zealous police deemed it advisable to arrest only a single individual, who, happening to be in the front of the clamoring and ardent crowd, became the scapegoat of the occasion. The interior of the court presented a no less unusual aspect than its exterior. Seven chairs on either side of the magistrate gave accommodation to a favored few, among whom there were five ladies, besides Dr. Hughlings Jackson, Professor Lister, Curnow, and Bell. I was informed, though unable to see from my position, that the Baroness Burdett-Coutts was in the court, and this I regret to say is only too probable, for in this matter her kindness of heart has conspicuously eclipsed that calm judgment which should have led her to accept the unanimous verdict of her late guests, who, during the recent International Medical Congress, so unhesitatingly declared themselves opposed to the whole principle of the anti-vivisection legislation in this country. The audience in court included numerous distinguished members of our profession, and I recognized Michael Foster, Gerald Yeo, Burdon-Sanderson, Klein, and others, especially the defendant's colleagues at King's College. The summons was taken out under the vivisection act, and charged him with having, on the 4th day of August, and on divers other days thereafter, performed experiments calculated to give pain to two monkeys, and in violation of the restrictions imposed by the above acts. Mr. Waddy, Q. C., Mr. Besley, and the Hon. Bernard Coleridge appeared on behalf of the Victoria Street Society for the Protection of Animals from Vivisection, by whom the proceedings were instituted; Mr. Gully, Q. C., and Mr. Houghton appeared for the defense.

Sir James Ingham, addressing the defendant, intimated that, by the provisions of the Act, he could be tried by a jury, and asked whether he would prefer that course, or have the case dealt with summarily.

Mr. Gully decided upon the adoption of the latter course.

Mr. Waddy then addressed the magistrate, and said that, though he had stated the case a fortnight ago, he proposed to reopen the facts briefly.

Mr. Waddy's opening address could have been judged brief by none other than himself, for to all who heard it it was the prosiest and poorest twaddle that could have been tolerated in the support of the feeblest case. This counsel for the prosecution repeatedly endeavored to gull the magistrate into the belief that the vivisection act should be interpreted for the persecution of individuals who were utterly unimplicated in the infliction of pain upon animals. The magistrate repeatedly indicated his own view that a prosecution which failed to attach to the defendant the infliction of pain to some animal could not be maintained under the act. However, despite all consideration for the time of those present, and the feelings of the numerous patients who must have been anxiously and painfully awaiting the

visits of their respective medical men, Mr. Waddy expended over an hour in urging that under the fourth section of the act any person would be guilty of an infringement of the act if such person made any observations, no matter how painless, at any time upon any animal, prior to its death but subsequently to its having been experimented upon. Indeed, the well-concealed ingenuity of this prosy counsel was at one time apparent in the suggestion that it would be possible for animals to be sent abroad, there to be mutilated beyond the jurisdiction of the vivisection acts, and then brought back to be observed here. The first witness called was an honorary secretary of the Physiological Section of the International Medical Congress. This witness was examined by the prosecution with a view to authenticating a report of the proceedings of his section as published in the *British Medical Journal* for October 8th. Instead of so doing the witness stated that he was excessively and variously occupied during the sitting of the Congress; that some days later he was applied to for some matter which might furnish a foundation for a notice in the *British Medical Journal*; that he then dictated such particulars as then occurred to his memory; that a short-hand writer, of whom he knew nothing, professed to take down such reminiscences as were dictated, and the witness neither saw nor heard anything more of the seven or eight columns which it was endeavored to attribute to his pen until they were published to the world some two months later. The witness made it evident that the council of the Physiological Section of the International Medical Congress had taken pains to avoid involving themselves, through the official business of their section, in any controversy on the so-called vivisection question.

The next witness called by the prosecution was professor Michael Foster, F. R. S., president of the physiological section at the Congress; whose titles alone more than bewildered the "Hon." junior counsel for the defense. Michael Foster corroborated all the last witness's evidence concerning the unofficial participation of his section in any controversial matter under the vivisection act. He very clearly stated that on August 4th Professor Goltz described certain phenomena as resulting from the removal of the surface of the brain of animals. This professor quoted numerous experiments, and mentioned having brought over a dog on whom he had operated in support of his view that special motor phenomena could not be rightly ascribed to definitely localized portions of the surface of the brain. Professor Ferrier then expressed views antagonistic to those quoted by Professor Goltz. The former supported his views by reference to numerous experiments upon the brains of monkeys. Such experiments might be for the purposes of the trial divided into two sets, old experiments and more recent experiments; the former had nothing to do with this act, the latter had been performed antiseptically. Here Michael Foster, in compliance with the request of the bench, most pithily defined in non-technical language antiseptic surgery as he understood it. He said that unofficially, purposely unofficially, though president of the physiological section, he had, in conjunction with probably a hundred other physiologists, including the most eminent, arranged on the 4th of August to pay a visit to the physiological laboratory, presided over by Professor Gerald Yeo, at King's College. That he had there seen the dog of Professor Goltz, and two

monkeys which had been referred to by Professor Ferrier, when speaking of the observations he had made upon monkeys which had been operated upon antiseptically. The witness described how the visitors to the laboratory witnessed the demonstration of the phenomena displayed by the dog and monkeys, which had been operated upon many months before. He testified to the defendant's conduct with the monkeys having on that occasion been confined to demonstrating the deafness of one monkey, by firing a toy pistol in the neighborhood of such monkey and another, when the latter started while the former paid no heed to the report of the explosion. While in the case of the second monkey, it was alleged to demonstrate its partial hemiplegia by perambulating about the floor and taking a biscuit from Professor Ferrier's hand. The witness said the observations had special reference to motor functions, that no galvanic battery was used, that he did not remember a monkey being pinched, but if it were pinched on that occasion the pinching would have been slight and solely for the purpose of eliciting the comparative sensibility of the two sides of the monkey. He had known for a very long period of the experiments on these monkeys, such knowledge having been the common property of physiologists; he knew that Professor Yeo had carried out the operations on these monkeys, and that such operations had been performed under anaesthetics. The proposition to kill the dog and one of the monkeys had been the result of the consensus of opinion expressed by the physiological visitors to Professor Yeo's laboratory, and this proposition was not put into effect with Professor Yeo's consent. The post-mortem examination of these animals had been assigned by the Congress to four eminent histologists, including Schaefer, Klein, and Gowers.

After this witness's examination the case would have closed but for the obstinacy of the prosecuting counsel, who would under any other circumstances have deserved pity, on account of the feebleness of the cause they represented. The editor of the *Lancet* was the next and last witness put in the box; he produced the manuscript with which he had been furnished by Professor Gamgee. This last-named gentleman, who hails from Owen's College, Manchester, was not in court, and on this score an adjournment was demanded by the prosecution. The magistrate said he could only grant an adjournment on the condition that the defendant's reasonable costs in consequence thereof were guaranteed by the prosecution. The prosecuting counsel, whose conduct of this feeble case was from the first as feeble as it was obstinate, directly insinuated that the adjournment was necessary in consequence of the great opposition which the medical profession had, during the last fortnight, placed in the way of the preparation of the case against the defendant. However, the defendant's counsel, whose conduct of the case was as able as it was brief, elicited the fact that the prosecution had made no effort to ascertain the authorship of the *Lancet* report; though, since the summons was taken out, the defense had ascertained who was the author of the matter furnished for the *Lancet* report. Further, that Professor Gamgee asserted that he could in no way vouch for the accuracy of his notes otherwise than so far as they referred strictly to the scientific and non-legal general bearing of what took place in reference to, or in connection with, the discussion opened by Goltz.

In desperation, the prosecuting counsel, while withdrawing his application for an adjournment, claimed that though Professor Yeo made the first and painful part of the experiment, Ferrier was guilty of an infringement of the act in having countenanced the subsequent keeping alive of the grievously injured animals.

The magistrate then dismissed with costs the summons against Dr. Ferrier, whom he considered implicated in any breach of the act of parliament, which he did not believe could be stretched to involve, in a criminal conviction, any person or persons who, subsequently to the performance, by some other party, of a cruel (and correcting himself he said painful) operative experiment on any animal, simply made observations during the remainder of its life.

This termination of the case barely afforded the defending counsel an opportunity of explaining much, which, but for his brief remarks, might have left many of the outsiders to believe that the defense was trumped up, and that the failure of the prosecution was solely attributable, or indeed at all attributable, to the blundering incapacity of the junior counsel, who attempted to examine the few witnesses, who it was vainly hoped might let drop some expression in justification of this prosecution, which it is difficult to speak of in measured terms.

Mr. Gully stated that the monkeys had been operated upon under anaesthetics by Professor Yeo, who held a license under the said act. That the experiments had been carried on in Professor Yeo's laboratory, from which the monkeys had not been removed during life. That keeping them alive subsequently to a cessation of the effect of the anaesthetic under which they were operated upon, had been duly sanctioned in accordance with the act, and that in every respect Professor Yeo, who was alone responsible for the experiment upon the monkeys, had conformed to the requirements of the act.

LONDON, November 17, 1881.

MALARIA IN NEW ENGLAND.

MR. EDITOR, — In response to your inquiries about indigenous malaria in New England, the following has some interest: A little girl, seven and a half years of age, who was born in Fall River, and had never been out of New England, after ailing a few days, had a chill September 15th. She was well on the 16th, had a chill on the 17th, was well on the 18th, had a chill on the 19th, when the administration of quinine every four hours was begun. Since that time she has been well. The chills were very severe, almost congestive. There is not a doubt in my mind as to the nature of the case, though the patient, a bright little girl, was called upon to do a good deal, and her general health had suffered somewhat before the chills occurred. She lives on a high, sandy plateau, with a mud-pond covering an acre about one thousand feet from the house. I had another similar case, though that patient had been out of New England. Yours truly, W.

PAULICKET, R. L., September, 1881.

MR. EDITOR, — In response to your inquiry for cases of malarial fever arising in this vicinity, the following may be of interest: —

August 7th I was called to see Paul B., 12 years of age, living near Fresh Pond, Cambridge. He had been unwell for three weeks, and for the last week had had a chill at about noon of each day, followed by fe-

ver and sweating. I ordered quinine, one dose at night and one at 8 o'clock, A. M. He did not have another chill, and recovery was perfect. This boy had never been farther away than Newton.

I have had several other cases, but they were not so well marked, though they yielded promptly to quinine. I will report the following: —

In July, 1880, I was called to a boy living on Spruce Street, Cambridge. For ten days he had had an attack of colic and diarrhoea at 4 o'clock, P. M. After about an hour he would have considerable perspiration and then would be very well till the next attack. He had never been out of Cambridge. This case yielded at once to quinine. Yours truly, H. P. M.

WEST SOMERVILLE, October, 1881.

CORRECTION: SPONGILLA FLUVIATILIS.

OWING to an unfortunate transposition at the press, of several sentences in the remarks on the fresh-water sponge (*Spongilla Fluvialis*) which appeared in the last issue of the JOURNAL, page 527, the true meaning was somewhat obscured and a false impression conveyed on one or two points. We therefore reproduce the sentences on page 528, the first column, which were affected by the error: —

The skeleton which supports the animal is made of a net of siliceous spiculae. These project on all sides, and, being covered by the animal substance, give a spiny appearance to the sponge when partially dried. Alive it is quite smooth externally.

Probably on account of these spiculae of flinty matter no animal is known to feed on spicular sponges, except a mollusc, the body of which is found filled with the spines. They probably pass through his tissues without injuring him, as a needle may through the human flesh.

While alive the sponge is of a greenish color, due, probably, as in plants, to the effect of light, as those parts of similar animals which remain under stones in the dark are of a light brownish hue. This sponge lives in fresh-water ponds; clean ponds cannot be said to be free from it. We might expect it to prosper in ponds with dirty bottoms, and occasionally, as in Farm Pond, to multiply excessively, die, decay, and impregnate the water with the stench of decaying animal matter.

A pond with a clean bottom, though not completely free from it, does not probably offer the conditions necessary for its excessive growth.

This sponge does not probably live in the water pipes. The current and the pressure of the water would probably interfere with its growth. What has been found on the interior of water conduits, and has been mistaken for the seed bodies of the sponge, are probably the seed bodies of some kind of bryozoa. These are the moss animals, so called on account of their resemblance to small bush-like and creeping growths, and which are found attached to solid objects lying on the bottom, or floating in the water.

In our water supply this sponge has not yet been found out of Farm Pond, but it has not been carefully looked for anywhere. It is not impossible that it exists in Sudbury River Basin No. 2, where Professor Remsen finds more than a due allowance of nitrogenous matter; and one of the first things to do should be to ascertain if it be there or not, if it is not already too late in the year to find it.

THE LONDON SANITARY PROTECTION ASSOCIATION.

In commenting upon the first formal meeting of this Association, held lately, the *Lancet* says Professor Huxley, with his usual happy phraseology, described the Association "as a coöperative store for the supply of good advice." He was less happy in his description of the objects of the Association, and of the position it holds in the sanitary advancement of the public; and an obvious lapse of memory was evident when he remarked that "disagreeable as the old cesspool system was, it was attended with very little danger compared with that which waited upon the water-carriage system if that system was imperfect." When, moreover, he stated that there were two ways of meeting the dangers which the Association sought to cope with—namely, one by the action of the Government, the other by promoting an intelligent knowledge of the

evils to be removed, it was insufficient to point out that governmental action was impracticable, as involving an intrusion in the affairs of private life which would be intolerable, and moreover, on account of the expense. By recent statutes communities have, or may have, large powers of providing for themselves all essential sanitary requisites. The extent to which such provision has been made must depend on the level or intelligence in sanitary matters to which the community has reached. This as yet falls far short of the level which the legislature contemplated, and in proportion as associations such as the Protection Association cultivate a higher knowledge and better appreciation of sanitary matters as relates to dwellings among individual householders, in proportion they will reach a matter which is beyond the power of the legislature, and develop that knowledge among the masses which must underlie all sound local self-government, and upon which the efficiency of sanitary legislation depends.

REPORTED MORTALITY FOR THE WEEK ENDING NOVEMBER 26, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	664	265	27.41	16.11	11.14	1.65	3.61
Philadelphia.....	846,984	327	112	25.99	7.03	10.70	6.12	1.83
Brooklyn.....	566,689	247	97	29.96	17.81	13.77	1.21	3.64
Chicago.....	503,304	239	107	37.24	8.37	9.62	7.53	2.09
Boston.....	362,535	168	49	17.26	15.48	8.93	2.98	3.93
St. Louis.....	350,522	162	48	21.60	11.11	4.32	3.09	4.94
Baltimore.....	332,190	144	62	34.63	4.86	20.83	3.47	2.08
Cincinnati.....	255,708	96	34	18.75	15.65	7.29	2.08	3.13
New Orleans.....	216,140	112	25	18.75	8.93	.89	2.68	8.93
District of Columbia.....	177,638	93	32	19.34	9.67	2.15	2.15	7.53
Pittsburgh.....	156,381	77	30	44.16	10.39	7.79	6.48	—
Buffalo.....	155,137	71	26	38.03	—	12.68	2.82	9.86
Milwaukee.....	115,578	36	16	30.56	2.78	11.11	5.56	2.78
Providence.....	104,857	30	9	20.00	6.67	13.33	3.33	3.33
New Haven.....	62,882	17	5	29.41	11.76	11.76	11.76	—
Charleston.....	49,999	31	7	12.90	3.23	3.23	3.23	3.23
Nashville.....	43,461	15	6	13.33	6.67	—	13.33	—
Lowell.....	59,485	13	5	15.38	—	15.38	—	—
Worcester.....	58,295	15	3	26.67	13.33	6.67	13.33	—
Cambridge.....	52,740	15	3	26.67	13.33	13.33	—	—
Fall River.....	49,006	16	8	18.75	—	12.50	6.25	—
Lawrence.....	39,178	—	—	—	—	—	—	—
Lynn.....	38,284	14	4	28.57	—	7.14	21.43	—
Springfield.....	33,340	7	3	28.57	14.29	14.29	14.29	—
Salem.....	27,598	16	3	12.50	12.50	12.50	—	—
New Bedford.....	26,875	3	—	—	—	—	—	—
Somerville.....	24,985	7	2	14.29	28.57	—	14.29	—
Holyoke.....	21,851	11	4	56.36	18.18	18.18	—	18.18
Chelsea.....	21,785	6	2	—	—	—	—	—
Taunton.....	21,213	10	2	20.00	—	—	20.00	—
Gloucester.....	19,329	4	2	25.00	—	—	—	—
Haverhill.....	18,475	3	0	—	—	—	—	—
Newton.....	16,995	3	1	—	33.33	—	—	—
Newburyport.....	13,537	7	2	14.29	—	—	14.29	—
Fitchburg.....	12,495	7	0	—	—	—	—	—
Nineteen Massachusetts towns.....	152,706	36	9	22.22	5.56	11.11	5.56	2.80

Deaths reported 2722: 983 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 727, consumption 412, lung diseases 308, diphtheria and croup 271, typhoid fever 102, diarrhoeal diseases 94, small-pox 80, scarlet fever 78, malarial fevers 48, measles 13, whooping-cough 12, erysipelas 11, cerebro-spinal meningitis 10, puerperal fever eight. From small-pox, Chicago 28, Pittsburgh 20, Philadelphia 16, New York eight, Cincinnati five, Baltimore three. From scarlet fever, New York 36, Brooklyn 16, Buffalo five, St. Louis and Baltimore four, Chicago three, Philadelphia, Dis-

trict of Columbia, Pittsburgh, and Milwaukee two, Cincinnati and Worcester one. From malarial fevers, New York 11, St. Louis nine, Brooklyn and New Orleans seven, District of Columbia five, Philadelphia four, Buffalo two, Chicago, Baltimore, and Charleston one. From measles, New York eight, Chicago two, Philadelphia, St. Louis, and Milwaukee one. From whooping-cough, New York and Chicago four, Baltimore two, Brooklyn and Boston one. From erysipelas, Chicago three, Boston two, New York, Philadelphia, Brooklyn, Baltimore, Buffalo, and Milwaukee one. From cerebro-spinal meningitis, New York five, Chicago, Pittsburgh, New Haven, Gloucester, and Wal-

than one. From *puerperal fever*, Brooklyn three, Cambridge two, Chicago, St. Louis, and Buffalo one.

Eight cases of small-pox were in Brooklyn, two in Boston, four in St. Louis, 10 in Cincinnati, two in District of Columbia, 61 in Pittsburgh, and 14 in Holyoke; diphtheria 38, typhoid fever 18, scarlet fever two, in Boston; diphtheria 12, scarlet fever 10, in Milwaukee.

In 37 cities and towns of Massachusetts, with a population of 1,031,439 (population of the State 1,783,086), the total death-rate for the week was 18.25 against 18.48 and 18.72 for the previous two weeks.

The meteorological record for the week ending November 26th, in Boston, was as follows:—

Date.	Barometer.	Thermometer.			Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
November, 1881.	Mean.	Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 20	30.329	34	40	29	63	46	65	58	W	NW	W	18	19	7	C	C	C	—	—
Mon., 21	30.218	41	52	27	68	56	73	66	S	SW	W	5	19	12	O	O	O	—	—
Tues., 22	30.300	29	44	18	53	45	70	56	NW	NW	NW	21	16	7	F	C	C	—	—
Wed., 23	30.150	28	36	15	83	71	100	85	W	E	NE	4	8	12	F	O	*	7.05	.08
Thurs., 24	2 611	32	42	26	90	54	73	72	NW	W	W	9	15	13	O	F	C	5.30	.39
Fri., 25	30.232	27	36	19	70	60	61	64	W	W	S	14	12	5	C	C	C	—	—
Sat., 26	30.144	39	53	24	77	63	47	62	SW	SW	W	8	9	8	F	F	C	—	—
Week.	30.141	33																12.35	.47

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing. * Sleeting.

DR. DANIEL HARWOOD.

At the fourteenth annual meeting of the American Academy of Dental Science, held in Boston, October 26, 1881, the following resolutions were unanimously adopted:—

Resolved, That the American Academy of Dental Science have received with sincere sorrow the intelligence of the death of their late associate Dr. Daniel Harwood, one of the oldest honorary members and formerly President of this Society. He departed this life on Saturday, October 2, 1881, in the eighty-first year of his age.

Resolved, That by the decease of Dr. Harwood, whose professional career extended through a period of more than half a century, we add another honored and illustrious name to the catalogue of distinguished members of the dental profession who have finished their earthly labors and passed on to the land of rest and immortality. He was one of the first in our country to take a high stand in the practice of his profession. He was unmistakably a man of energy and talent, courage and fidelity. The designs of his operations have always evinced good, strong practical common sense, and their execution has demonstrated an honest determination to do the best for his patients possible.

Resolved, That the example of Dr. Harwood has done much to stimulate young men to put forth their best exertions, and few indeed will leave behind them so good a record as he. Although his departure will be deeply felt, yet we should be thankful that he was spared so long, and that in his declining years he had the satisfaction of seeing that his profession was advancing nearer the ideal that he and others reared for it in other days.

Resolved, That a copy of these resolutions be sent to the family of Dr. Harwood as an expression of our sympathy in their great bereavement.

Resolved, That a copy be entered upon the records of the Academy and also sent to the dental and medical journals for circulation.

LESLIE G. TICKER, }
EDWARD N. HARRIS, } *Committee.*
GEORGE F. MORTVILL, }

JACOB L. WILLIAMS, *President.*

JOHN T. COOMAN, *Recording Secretary.*

OFFICIAL LIST OF CHANGES OF STATIONS AND PLACES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 26, 1881 TO DECEMBER 2, 1881.

WILLIAM R. captain and assistant surgeon. The 1st Cavalry, from to S. O. 224, Department of the Missouri, November 24, 1881, as a furloughed officer. S. O. 120, Military Division of the Missouri, November 25, 1881.

CORRISIER, WILLIAM H., captain and assistant surgeon. Granted leave of absence for four months. S. O. 266, A. G. O., November 25, 1881.

DAVIS, WILLIAM B., first lieutenant and assistant surgeon. Granted leave of absence for four months. S. O. 269, A. G. O., November 29, 1881.

STRONG, N., first lieutenant and assistant surgeon. Relieved from duty at Fort Douglas, U. T., and assigned to duty as post surgeon at Fort Cameron, Utah. S. O. 121, Department of the Platte, November 26, 1881.

CARTER, E. C., first lieutenant and assistant surgeon. Assigned to duty at Angel Island, Cal. S. O. 203, Military Division of the Pacific and Department of California, November 22, 1881.

RAYMOND, HENRY I., first lieutenant and assistant surgeon. Assigned to duty at Alcatraz Island, Cal. S. O. 203, Military Division of the Pacific and Department of California, November 22, 1881.

BOOKS AND PAMPHLETS RECEIVED.—A Pocket Book of Physical Diagnosis, for the Student and Physician. By Dr. Edward T. Bruns. With Wood Engravings. Philadelphia: Presley Blakiston. 1881.

Address delivered at the Dedication of the Hall of the Boston Medical Library Association, December 3, 1880. By Oliver Wendell Holmes. With Reports of Officers of the Association and Remarks of Guests.

The Quality of Mental Operations debased by the use of Alcohol. By T. L. Wright, M. D., Bellefontaine, Ohio. (Reprint.)

The Surgeons of Baltimore and their Achievements. By B. Bernard Browne, M. D., Baltimore, Md. (Reprint.)

Sympathetic Ophthalmia. Two Cases under Peculiar Circumstances. Sequel of Surgical Operations. By Julian J. Chisholm, M. D. (Reprint.)

American Health Primers. Winter and its Dangers. By Hamilton Osgood, M. D. Philadelphia: Presley Blakiston. Paper covers. 1881.

The Physician's Clinical Record for Hospital or Private Practice. With Memoranda for Examining Patients, Temperature Charts, etc. Philadelphia: D. G. Brinton. 1881.

A Manual of Ophthalmic Practice. By Henry S. Schell, M. D. With fifty-three illustrations. Philadelphia: D. G. Brinton. 1881.

Transactions of the Medical and Surgical Faculty of the State of Maryland at the Eighty-third Annual Session, held at Baltimore, Md., April, 1881.

Rudolf Virchow, an Address introductory to the Course of Lectures of the Term 1881-82. By A. Jacobi, M. D. (Reprint.)

Lectures.

CASES ILLUSTRATING RARE COMPLICATIONS AND SEQUELE OF TYPHOID FEVER.

A CLINICAL LECTURE DELIVERED AT THE PENNSYLVANIA HOSPITAL, NOVEMBER 19, 1881.

BY J. M. DA COSTA, M. D.

*Professor of the Theory and Practice of Medicine in the Jefferson Medical College, Philadelphia.*¹

GENTLEMEN, I will to-day group together for you a series of cases of typhoid fever, which show a few rare complications and sequelæ. Perhaps some of the peculiarities of this affection may be best illustrated by the following specimens taken from a case that perished during the height of the disease:—

CLINICAL HISTORY AND MORBID ANATOMY OF TYPHOID; EXAMINATION OF THE HEART.

These specimens were taken from the body of a man who died in the wards a few days since of typhoid fever. His case was looked upon as hopeless from the beginning, for reasons which the autopsy has fully demonstrated to have been correct. His name was James Y., born in England, thirty-nine years of age; he was admitted into the hospital on the fourth of this month with diarrhœa. The record states that he had then been ill for nearly a month. He was a machinist, and had only been in this country a few months. At the beginning of his illness, it is said, that there had been no chill, the onset of the fever was gradual, but diarrhœa was a prominent symptom; he also had bilious vomiting, frequent epistaxis, and severe headache. Upon admission he had a dry cough, fever, and diarrhœa, his stools were thin, yellow, and frequent, so frequent that he had ten during the first day. From the first he had been troubled with a symptom which always makes one solicitous about a case,—he could not sleep; his temperature was 104.6° F.; the pulse was, however, only beating 80 in the minute; it was compressible and very weak. Upon examining his chest, we found slight dullness existing beneath the angle of each scapula. There was a good deal of hypostatic congestion in both lungs posteriorly, with coarse râles very generally distributed. But what struck us most forcibly, and what indeed made us think the case one of the greatest gravity, and most likely to prove fatal, was the state of the heart, the sounds were muffled, the first was only with difficulty detected; every now and then, about every second or third beat, there was a most marked intermission.

In consequence of his general condition and weak heart he was at once placed upon stimulants, at first wine, subsequently whiskey, gradually increased to twelve ounces in twenty-four hours, with four ounces of sherry wine. He was also steadily given strychnia, one sixtieth of a grain three times a day, in view of the fact that the great danger was going to be a failure in the action of the heart. This proved to be true; for while he remained weak, and was suffering with restlessness, delirium and tremor, the gravity of the symptoms was not so much due to the effect upon the nervous system of the typhoid fever poison, nor to the state of the bowels,—for the diarrhœa was readily kept in check with mineral acids and a little opium, in the form of suppositories,—as to the weak and irregular

action of the heart, which indicated grave disorder of the walls of the heart. Towards the end it became somewhat more regular, but it remained weak. I ought to state, also, that about five days before death there was a slight but not excessive epistaxis. The temperature all the time remained high, and on the day before death was 105° F. I will now invite your attention to the specimens.

Let us first confirm the diagnosis of typhoid fever by examining the intestines. Here is the cæcum, here the ileo-cæcal valve. These large ulcers in the wall of the ileum are remarkably fine specimens of the lesions of typhoid fever. Besides the great ulceration of Peyer's patches, these solitary follicles are in the same condition. Passing up the bowel, we find patches infiltrated, and with only superficial erosion, a condition not incompatible with recovery; others more affected are ready to slough away. The kidneys are large, somewhat fatty. There had been no albumen in the urine during life, and this fatty condition must be looked upon as due to a cause antecedent to the occurrence of the fever; it is not the form of renal degeneration which is often found in typhoid. Look at the spleen. As the intestinal ulcers were characteristic, so this spleen is characteristic. It is very large and full of blood, weighing twenty-five ounces; it constitutes a lesion almost as essential as that we have just seen in the bowel. This is the large dark spleen of typhoid fever, the currant-jelly spleen. The lungs show very marked evidence of hypostatic congestion at the postero-inferior portions, but there is no true pneumonia; the tissue crepitates, it is not infiltrated to the extent of consolidation, but simply engorged with blood, the congestion we recognized during life. The liver, also very large, weighs sixty-four ounces, at least fourteen ounces more than normal, it is dark-colored and exudes dark blood on section. The heart is fatty, the walls distinctly so. The leaflets of the tricuspid valve are healthy; those of the mitral valve are slightly thickened, especially at their free border, but were not sufficiently affected to permit mitral regurgitation during life. Now why did this man die? I believe it was from the fatty heart. Of course it was a bad case in itself, the temperature indicated that; it was, you recall the record, 104° F. to 105° F. The marked nervous symptoms also, which he presented,—the tremors, depression, and sinking down in bed, always indicate gravity; but with the condition of the heart these made the prognosis especially bad. There can be no reasonable doubt about one feature in the history, although the man was unable to give a full account of himself, yet the fact I refer to is confirmed by these appearances, the man had been very intemperate. The liver and kidneys show the intemperate habits of the individual. The same cause may have had much to do with the weakness of the heart, and the degenerative condition of its walls.

REMARKS ON SLOW PULSE IN TYPHOID.

Before passing to the next case I will make some remarks upon one of the prominent clinical features of the disease, which the case will bring to your mind—the slow pulse. I have said that the pulse was only eighty when he was admitted, although the temperature was 104.6° F. I have also told you that it was intermittent. Now, gentlemen, look at this disproportion between the pulse and temperature, 80 and 104° F. Is this a good or bad sign? It is a bad sign. A slow pulse is not of itself of grave import in typhoid fever,

¹ Reported for the Boston Medical and Surgical Journal.

for the case may be a very light one; but when the thermometer indicates a high temperature, then a slow pulse indicates danger. This is so true that when I find this disproportion existing between the pulse and temperature I know that I have so grave a case that in the vast majority of instances the patient will die. You may ask again, What is this slow pulse owing to? and why the irregular pulse? I attribute them in part to a peculiar influence of the typhoid fever poison; but largely to this, — it was acting upon a weak and fatty heart. It is a curious fact in fatty heart that in acute diseases, instead of becoming more frequent in its action, it becomes often slower. This is not an isolated case in my experience. I have known it to occur in pericarditis and other acute maladies. Therefore, a slow pulse in this case had to do with a condition of the heart which in itself is a cause of great danger.

But I should be giving you a wrong impression, if you have been led to infer, that in every case of slow heart, in typhoid fever, be it regular or irregular, this is the effect of a degeneration of that organ. That would be incorrect. I recall a case which I saw a few weeks ago, in a young man, too young to have fatty heart, where there was no question of intemperance, for he was perfectly free from bad habits; his pulse was 80, his temperature from 104° F. to 105° F., but the heart was not irregular as it was here. The slow pulse in the case I refer to was, therefore, not due to a fatty heart nor to any fault of the ventricular walls or valves, but to some peculiarity in the poison which prevented the heart from rising coincidently with the temperature. The case, after a long and desperate illness, proved fatal. Whatever be the explanation, a slow pulse and a high temperature are among the most dangerous combinations of symptoms of typhoid fever.

You will also be interested to learn — and I will now only call your attention to the fact, intending to return to it — that this man had epistaxis again only a few days before his death. Another case will furnish me with a better illustration to speak of this symptom.

A CASE WITH RECURRING EPISTAXIS AND PAROTID SWELLING.

I shall now show you a case of typhoid fever with most unusual complications, and one in which I have instituted a treatment, which has been followed by considerable success. This man has been in the hospital for seventeen days. His name is Emil B., twenty-seven years of age, a cooper; he is a German. He came into the wards a very ill man, having been sick for four weeks before admission with diarrhoea and weakness. He had headache, with a furred tongue, and vomiting, and yellow conjunctiva; indeed, there had been what is roughly and loosely sometimes called "a bilious complication" in the case, but this was all over before we saw him. He also had epistaxis, which from his history had been very free and frequently repeated; in truth it was stated that he bled at the nose every morning for a while.

Upon admission the man was found to have typhoid fever, he was very pale, weak, and feverish, the thermometer indicating 101° F., his pulse was 120 in the minute. He had frequent but not exhausting diarrhoea. He was so weak that we placed him promptly upon stimulants and quinine; and for the restlessness which he exhibited, he was ordered an ice-cap, to be kept upon his head. The looseness of the bowels was quite marked, but what is of more importance, he lost control

of his sphincters, and the copious frequent discharges were passed involuntarily so that it was difficult to ascertain the number of passages. Not to detail all the features of this grave case besides the frequent pulse, high temperature, and diarrhoea, I will say, in brief, that the looseness of the bowels was kept in check with opium, the restlessness was also relieved by this agent aided by the ice; and with steady nourishment, and twelve ounces of whiskey daily, the man rallied, and what seemed a very bad case soon showed great improvement. How bad a case it was you may judge from the temperature chart. Here it is: 104° F. the first night, 105° F. the next, then 103° F., and after that gradually declining to 101.5° F.; then, suddenly, up shoots the temperature again and becomes 104° F., and this rise, of which I am speaking, is found to be coincident with just the complication for which I wish to show you the case this morning. Look at it, or at least look at what remains to-day, for enough remains to identify it. See this dense parotid gland forming a considerable tumor on the left side at the angle of the jaw. This is a parotid swelling or a parotitis occurring as a complication of typhoid fever, and limited to one, for on the right side there has never been any such affection.

TREATMENT OF SWOLLEN PAROTID IN TYPHOID FEVER.

Now, gentlemen, this man, who was doing very well, when this swelling appeared seemed very ill, and the whole aspect of the case became more threatening; for this occurrence is one of considerable gravity. I will not dwell upon its pathology at present, but at once call your attention to the treatment instituted, a treatment which I have, in at least one case in this hospital, previously known to produce a remarkable result. It is the steady application of ice to the swollen gland. Mark you, the usual termination of this glandular inflammation in low fevers is profuse suppuration, long continued discharge of unhealthy pus, and a pyæmic condition; the state of the patient becoming more and more grave until he perishes from blood-poisoning or exhaustion. I have tried before now all methods of treatment, painting with iodine, the application of blisters, hot poultices, only to give them up as valueless. It then occurred to me that the steady local application of ice at the beginning might prevent this suppuration and the consequent exhaustion. We resorted to it as in the previous case, and the result was admirable. The swelling became less within twenty-four hours; the tenderness also was not so marked, the general condition much better. This was continued for several days with steady improvement. Yesterday, the resident physician, perhaps too soon, believing that the swelling was reduced and the inflammation over, suspended the ice treatment. Moreover, you observe that the temperature had gone down before that time from the effect of the ice, which acted as a general sedative. There was good reason then for interrupting the treatment, but what was the result? He has more swelling this morning. But we have not lost the good accomplished by the ice, merely the benefit of its continued use. There is no suppuration, the gland is hard, and tender, the surface red. I will resume the treatment, and unless I am very much mistaken, I shall be able to show you the case at our next meeting entirely free from this complication.

His pulse is now good, not over 100; his general

condition decidedly improved; the bowels are under control, but still require looking after; he is having three or four stools a day, when too frequent he is given an opium suppository from time to time; he has more strength than before; his tongue is cleaner; the mental condition has been improving. Therefore the group of symptoms which were at first so marked are now in abeyance. Notwithstanding that this glandular swelling is looked upon as a bad complication, I am disposed to continue his treatment for a few days longer, then if the condition is favorable I will abandon it, and apply iodine. He now is taking tincture of iron, twenty drops four times daily, and eight grains of quinine, twelve ounces of whiskey (half ounce every two hours in milk) through the day, keeping the bowels in check with a little opium by the mouth or in a suppository, given as may be necessary. The man made an excellent recovery. Towards the end a slight amount of purulent discharge was evacuated from above the angle of the jaw, where the ice had not been well applied.

The complication I have shown you here is one of the very rare ones in typhoid fever. I have seen it very often in what is called typho-malarial fever,—that is to say for the most part typhoid fever with malarial complications.

PATHOLOGY OF TYPHOID PAROTITIS.

I am speaking from a large experience with the disease when I say that it is also not uncommon in typhus, but in typhoid it belongs to the rarest of its complications. I have told you already that its tendency is to suppuration, which makes the condition of the patient much graver. But, gentlemen, unless the size of the swollen gland is reduced by resolution, it is better for it to suppurate than to remain enormously enlarged. I remember a case of typhus fever where it was necessary to resort to tracheotomy to prevent suffocation from the mechanical pressure exerted by the mass upon the trachea. If it be found impossible to prevent suppuration with ice, then the next best thing would be, I say, to encourage free discharge to prevent burrowing and pressure upon the air-passages. I have spoken of its rarity, now what is the cause of this complication? It is an expression of blood-poisoning. It belongs to certain low forms of fever in which the blood becomes profoundly altered, and the wonder is that it is not more frequent in typhoid fever than it is. It results, moreover, not only from a septicæmic condition, but also in the pyæmic state, which is more often seen in surgical than medical cases. In the latter condition it always indicates great gravity. I have not conversed with surgeons upon this ice treatment of gland swellings in pyæmia to prevent suppuration, but will suggest it, as it may prevent an additional drain upon the system. I believe it deserving of further trial.

SOME UNUSUAL SEQUELE OF TYPHOID.

We are dealing this morning with bad cases and rare complications. I now show you another typhoid fever patient, who has been very ill, and could not be brought into your presence before; he is now improving so that I can show him without any risk to himself. I will, however, proceed at once to examine him so as not to detain him in the clinic-room; I will then make some remarks upon the case.

His name is Martin M., twenty-one years of age, of Irish extraction. You see he is very pale, frightfully

anaemic; his mind is now perfectly clear; he passes out his tongue when told; it is not very much coated, you are, perhaps, struck more with its pallor than with anything else; his pulse is feeble, and beats 110 in the minute, it has been always about 120; his bowels are now regularly moved once a day, or sometimes only every second day; he has no tenderness in the iliac fossa nor indeed anywhere in the abdomen.

MILK LEG IN TYPHOID.

But now comes one of the symptoms which made this so serious a case, and of which you will see sufficient evidence remaining to identify the clinical history. He has had milk leg of very bad character, a phlegmasia alba dolens. Look at it. Although the leg is markedly diminished from what it was, you will still see that the right leg is considerably more swollen than the left. It has been still more swollen and very tender on pressure; the pain on pressure now has also subsided, except immediately along the course of the saphena vein, which is large and of cord-like density.

PURPURA DURING TYPHOID.

This swollen leg has been one of the symptoms from which this poor man has been suffering, now happily declining; it was associated for a time with considerable pain in the thigh and in the calf of the leg, but he also has had something else. Look at this left leg. Just above the ankle and on the dorsum of the foot see the large petechial spots, dark blotches, now only seen in this situation, but about a week ago they were all over the body, large purple and black spots in the skin, which have now almost all disappeared.

There is another point to which I will call your attention, and then will let him go out. In addition this man's life was almost ebbing away by profuse and repeated bleedings from the nose, so much so that the only means we could employ to stop them was plugging the nose, which finally arrested the hæmorrhage, which not only gushed from his nose but passed into the pharynx, and was swallowed, and afterwards vomited. This is a case of recurring epistaxis late in the disease. It was subsequent to these attacks of bleeding that these spots appeared all over the body, although a few had been observed before.

These are the principal features of the case. I will now only make an examination of his heart. I tell you that there is no valvular disease; the first sound is still feeble and laboring, the second is clear; a systolic blood murmur is heard at the right base as well as at the left, but more at the right. There is also a certain amount of bronchitis, for a number of mucous râles are heard in the lungs. This completes our examination of this unpromising case, and he can be removed to the ward.

TEMPERATURE RECORD DURING OCCURRENCE OF SEQUELE.

Let us now study his temperature record. His temperature this morning is normal. I will now show you some of the most interesting temperature sheets [Each sheet contains the record for four weeks. *REK.*] it is possible to see. Look at this last one, see the enormous variations during the last two weeks, now down to 98° F. then shooting up to 105° F. This is not the course of typhoid fever temperature. Look at it; it begins at the end of the second temperature

sheet, and here it is at its maximum. Now, the interesting part to us is that these temperature variations were accompanied by chills which were not influenced by quinine, and these temperature rises corresponded with attacks of epistaxis; during the last two instances this was noticed certainly.

This is not the temperature record of typhoid fever, certainly not the typical record of a man ill with typhoid, who has been in the hospital for eight weeks, and who has been sick at least nine weeks. It is, therefore, the record of these strange complications from which this unfortunate has been suffering. Milk leg, epistaxis, profound alterations in the blood, petechiae, and chills, the latter uninfluenced by quinine. What does it mean? It means that this man has been pyæmic. There has been septicæmia, milk leg, finally a pyæmic condition of the blood induced by the phlebitis, as shown by these irregular chills.

REMARKS ON EPISTAXIS.

This altered condition of the blood, which gave rise to this marked anæmia, was also the cause of the recurring epistaxis. Now, late epistaxis in typhoid fever as compared with early epistaxis is relatively very rare; it almost never occurs, although you have seen in this clinic to-day two marked cases which apparently prove the contrary. In the other case the epistaxis occurred within two or three days before death, but in this man it came on in the seventh or eighth week, when his life was threatened by the petechiæ (purpura hæmorrhagica). Gentlemen, epistaxis, as the rule, is an early symptom of typhoid fever, occurring prior to the decided development of the fever, or in the first week. Here you have had an illustration of how it may happen as a late complication, but when late it is a most dangerous one.

The treatment for the epistaxis, ergot, iron, locally and internally, was unsuccessful, until we finally resorted to the plugging of the nostril.

BLOOD CHANGES IN LOW FEVERS.

Finally, before dismissing this much-complicated case, I must say a word about the petechiæ. Do petechiæ belong to the clinical history of typhoid fever? Gentlemen, you may pass through a lifetime without being able to duplicate this case. These extravasations you will see in typhus or in cerebro-spinal fever, but they are most rare in typhoid. They bespeak a condition of blood that is serious in its results, a state of dissolution to an extreme degree, occurring very late in the disease. I have seen this also in typho-malarial fever — which is still typhoid — as it occurred in the army in soldiers who had acquired the so-called Chickabominy fever; among those who were thus brought to Philadelphia I remember a number had petechiæ.

PROGNOSIS OF CASE.

These are some of the leading clinical features, complications, and sequelæ of typhoid fever under rare conditions. This man has passed through a severe ordeal, but I believe that he will rally, and if we can get his blood in better condition I think we may now look for recovery. His temperature is once more normal, the milk leg is passing away, the chills no longer occur, nor the attendant phenomena that bespeak a condition of pyæmia from which he was once laboring.

His treatment now is fifteen drops of the tincture of the chloride of iron, with five of muriatic acid, which,

formerly taken thrice daily, we will increase to four times a day. He also gets five grains of quinine each morning.

His chances are now fairly good; a week ago you would not have thought he had a chance. There were no difficulties of diagnosis here; the early symptoms of typhoid fever were marked, very marked; it was always a bad case. We found before the peculiar sequelæ appeared, that there had been also a strong history of syphilis, although there were not any strong syphilitic manifestations. I mention this because it belongs to the clinical history, not because it had any especial influence upon the course of the disease.

Original Articles.

MORAL INSANITY.¹

BY GEORGE F. JELLY, M. D.

MORAL insanity, that is, insanity in which the moral or affective qualities of the mind are chiefly involved, was first described by Dr. Prichard, but found its most earnest advocate in the late Dr. Ray, to whom, more than to any one else, is due its recognition at the present time by both the medical and the legal profession.

I think that every one has been tried and puzzled by patients afflicted with this form of mental disease, and has approached its study with many doubts; but by writers on insanity, with occasionally an exception, it is as fully recognized as is melancholia or general paralysis. Still, even now no medical man can feel free from anxiety when he endeavors to give a victim of moral insanity the benefit of his opinion in a criminal trial, or even to have such a person committed to an insane hospital, he or she often appearing so well and talking so plausibly that an ordinary examination may fail to convince either judge or jury, while at the same time to the family and intimate friends the patient may be a terror.

True moral insanity may be defined as a disorder of the moral or affective powers of the mind with little or no apparent intellectual disturbance.

I do not mean to deny that there often and perhaps always is some intellectual impairment in cases of this disease, but what I do mean is that in those which are typical it exists only to that extent that the patient would be practically sane if the moral faculties were not disordered, and did not overpower the intellectual. The control of the moral by the intellectual powers is one of relative, not absolute, power. While the moral faculties remain in their normal condition the power to control their manifestations by the intellect is clearly evident, but when they become diseased the latter is unable to perform its office. Its own power may not be diminished, but the power of the moral sentiments is unnaturally or immoderately increased by the influence or intrusion of the foreign element of disease. This relation between the intellectual and moral powers is such that to render an act insane it is not material whether the derangement is in one or the other. As in other forms of mental disease a derangement of the intellect may lead to outrageous and immoral acts, so in moral insanity the morbid moral influences may be so strong that the intellect cannot control or resist them, the individual at the same time fully understand-

¹ Read before the Boston Society for Medical Observation.

ing what he is doing. For instance, a man may be overcome by an impulse to homicide or to some other unnatural act, the nature of which he clearly knows, and which he has resisted with all his strength till he can resist no longer, and he makes the plunge which proves him insane and irresponsible. Kleptomania, suicidal mania, and dipsomania are often of this origin, and the results of such a struggle. Cases of dipsomania are almost exact types of this disease; the patients, in the intervals of what may be called the paroxysms of excitement, are clear, well behaved, attentive to business and the ordinary duties of life, but when the impulse to drink comes they find it irresistible, though they know fully what they are doing, and its consequences.

I have recently been consulted by a lady of intelligence and good position who is thus overcome at every menstrual period, though reliable and to be trusted at all other times.

In many instances a well-marked depression precedes these outbursts, and sometimes there is some excitement or decided exaltation, which comes to be recognized by the friends, and not infrequently by the patient, as the precursor of an attack.

It cannot be denied that there is and always will be some difficulty in distinguishing this form of disease from moral depravity, and certainly no cases require more careful and patient investigation, and many interviews may be necessary to settle the question, but a thorough study will always reveal the difference. Moral wickedness will be shown by its ordinary characteristics, but in moral insanity the elements of change, disorder, and derangement will be found as in other forms of insanity.

Within a few days a young man was committed to the Boston Lunatic Hospital whose case is a marked instance of the periodical uncontrollable desire for liquor so characteristic of dipsomania. He seems during a portion of the time fairly well, and has no desire for drink, but suffers at irregular intervals from well-marked depression and wretchedness, accompanying or following which he has a most intense desire for liquor, which he will obtain by stealing, pawning, or any possible means. In my certificate for commitment I felt justified in stating that in my opinion the excessive use of intoxicants was one of the symptoms and not the cause of the insanity.

Perhaps I cannot do better here than to quote a few paragraphs entire from Dr. Prichard and Dr. Ray, though they are very familiar to many:—

Dr. Prichard says: "There are many individuals living at large and not entirely separated from society who are affected to a certain degree with this modification of insanity. They are reputed persons of a singular, wayward, and eccentric character. An attentive observer will often recognize something remarkable in their manners and habits which may lead him to entertain doubts as to their entire sanity, and circumstances are sometimes discovered, on inquiry, which add strength to this suspicion. In many instances it has been found that a hereditary tendency to madness has existed in the family, or that several relatives of the person affected have labored under other diseases of the brain. The individual himself has been discovered to have suffered in a former period of life an attack of madness of a decided character. His temper and disposition are found to have undergone a change, to be not what they were previously to a certain time;

he has become an altered man, and the difference has perhaps been noted from the period when he sustained some reverse of fortune which deeply affected him or the loss of some beloved relative. In other instances an alteration in the character of the individual has ensued immediately on some severe shock which his bodily constitution has undergone. This has been either a disorder affecting the head, a slight attack of paralysis, or some febrile or inflammatory complaint which has produced a perceptible change in the habitual state of his constitution. In some cases the alteration in temper and habits has been gradual and imperceptible, and it seems only to have consisted in an exaltation and increase of peculiarities which were all more or less natural and habitual."

Dr. Ray, in his Medical Jurisprudence, says: "A more serious error than that of limiting the influence of mania to them [the intellectual faculties] can scarcely be committed. It will not be denied that the propensities and sentiments are also integral portions of our mental constitution, and no enlightened physiologist can doubt that their manifestations are dependent on the cerebral organisms. Here, then, we have the only essential conditions of insanity, a material structure connected with mental manifestations, and until it is satisfactorily proved that this structure enjoys a perfect immunity from morbid action, we are bound to believe that it is liable to disease, and, consequently, that the affective as well as intellectual faculties are subject to derangement. In fact, it has always been observed that insanity as often affects the moral as it does the intellectual perceptions. In many cases there is evinced some moral obliquity quite unnatural to the individual—a loss of his ordinary interests in the relations of father, son, husband, or brother—long before a single word escapes from his lips 'sounding to folly.' Through the course of the disease the moral and intellectual impairment proceed *pari passu*, while the return of the affections to their natural channels is one of the strongest indications of approaching recovery. Such being the fact, it ought not to be a matter of surprise that in some cases the aberration should be confined to the moral impairment, the intellectual, if there be any, being too slight to be easily discerned. The doctrine that insanity may be confined apparently to the affective powers has been stoutly resisted by lawyers, by whom, during the last twenty-five years, it has been often pronounced to be without any foundation in true metaphysics, and dangerous in its consequences. They contend that insanity, such at any rate as annuls criminal responsibility, necessarily implies intellectual disturbance, and that unless this be established a person can claim no exemption from the ordinary consequences of crime. If the intellect be sound, they say, it perceives all the relations of the criminal act; there is no reasoning right from wrong premises, or wrong from right premises, and thus the individual acts solely in accordance with his own good will and pleasure. If he blindly follow the guidance of his passions, unheeding the voice of conscience or common sense, we are not warranted in taking his case out of the category of ordinary crime. In fact, every alleged case of moral insanity may be paralleled by one of proper moral depravity universally recognized and admitted as such. By those who reason thus, the admission that the intellect may possibly be disturbed though the fact cannot be demonstrated, is deemed to be insufficient, because the intellectual disturbance (in their

view) must be manifested in an inability to recognize some of the qualities of crime, and, therefore, so long as these are correctly discerned there can be no intellectual disturbance, none certainly which a court of law need take into account.

"If we choose to indulge in metaphysical subtleties we may, no doubt, arrive at one of two conclusions equally false: either that all criminals are insane, or that every insane person, unless actually raving, is responsible for any criminal act which he may commit.

"But common sense and professional experience teach us that there is a distinction, obvious enough for all practical purposes, between the depravity which belongs to the character of the man and that which is the result of disease or congenital deficiency.

"Here it is enough to say that the former is marked by method, object, motive, deliberation, coolness, and consistency; the latter by impulse, agitation, nervous excitement, and unnatural conduct. It is not generally understood that in a large proportion of the insane, leaving out of view the imbecile and demented, we observe no delusion or hallucination, nor, it may be, any other derangement of the intellectual faculties. Some of them may not evince all their natural strength and sagacity of mind, but their discourse is always coherent, correct, and pertinent, exhibiting nothing that in itself can be regarded as indicative of disease. Others may show a degree of shrewdness, promptitude, and vigor scarcely manifested in their best estate. Now the insanity of these people is not questioned. They are regarded as unfit to be at large, and by universal consent are confined in establishments for the insane. Their disorder is exhibited not in intellectual aberration, but in morbid exaltation and depression, so that they are ardent, sanguine, and full of schemes of advancement, or sunk in the lowest depths of despondency, and revolving thoughts of self-destruction, in unnatural indulgence of appetite, in moral perversions which render them quarrelsome, vindictive, savage, impatient of contradiction, careless of appearance, regardless of domestic proprieties, and indifferent to the feelings of others. For a different purpose it has been said that the very fact of a person's being under the undivided dominion of the affective powers and yielding to their paramount influence is of itself sufficient proof of intellectual impairment. This position can hardly be maintained without ignoring a matter of common observation, that within certain limits the moral and intellectual faculties act independently of each other. Intellectual power and the perception of moral truth frequently do not exist in the same degree in the same person, and they do not develop equally. Moral insanity often precedes and passes into outbursts of general mental disease, and sometimes the moral disturbance persists when all other derangement has disappeared; and a person can only be well when not only are hallucination and intellectual disturbances of all kinds gone, but when, also, he has at the same time returned to his natural feelings."

Dr. George H. Savage, superintendent of the Bethlehem Hospital, in an article in the *English Journal of Mental Science* for July, says:—

"It may seem to the philosopher rather a mistaken way of considering the mind to divide it into intellectual and moral components, but we in asylums have constantly to take notice of cases in which the moral side of the patient suffers very much more than the intellectual; and though I should not deem any per-

son capable of being intellectually complete and yet morally defective, I would maintain that the defect on the intellectual side may be so little appreciated, or of so little importance in reference to the individual's relationships with the outer world, that it may be disregarded.

"I would say that I look upon the moral relationships, so called, of the individual as among the highest of his mental possessions, that long after the evolution of the mere organic lower parts, the moral side of man developed; that the recognition of property and of right in property developed with the appreciation of the value of human life; so that the control of one's passions and of one's desires for possession and of one's passion for power developed quite late in man, and, as might be expected, the last and highest acquisitions are those which are lost most readily. It is often noticed that in cases in which slow progressive nervous change takes place, the moral relationships are the first, or among the first, to be affected; and in the same way after an intellectual storm it is no uncommon thing to see the intellect partly restored to its normal equilibrium, but still wanting the highest and most humane of its attributes, high moral control; so in the emotional states of acute mania, of general paralysis, or of chronic insanity, we have corresponding defects in this highest intellectual control."

DIAGNOSIS.

The diagnosis of moral insanity is not always readily or rapidly made, but here, as in all forms of disease, patient investigation will generally reveal a cause. The patient should be compared not so much with others as with himself; in this sense a man is properly a "guide unto himself." We must convince ourselves in all cases whether in the particular individual under consideration "there is, according to the old definition, the prolonged departure without adequate external cause from the states of feeling or modes of thinking usual to the individual when in health." In mere vicious impairment of the moral powers there has been no change of character dependent upon fever, apoplexy, injury to the head, or other notable disease or shock, but the power of desire and of unbridled propensities has been of slow growth, arising from frequent indulgence. The law has always recognized a difference between passion as the result of disease and passion which is the result of indulgence, correcting the latter by punishment but giving the former medical treatment. It is necessary to go carefully back and learn the entire history of the person we are examining. For instance, when a man of character and good standing is arrested for stealing some article of little value (and of no value to himself) suspicion of insanity would at once be aroused, and it may be found to be one of the earlier manifestations of general paralysis. In another case an unaccountable perversion of feeling and conduct may be finally explained by the occurrence of epilepsy. This test can, however, be applied only where the mental disease is acquired. To those congenitally deficient in intellect it will not apply; the natural character, being abnormal, cannot be used as a normal standard. In these patients the natural deficiency can be traced to the earliest childhood, the patient having been perverse, wrong-headed, and capricious from birth. Dr. Woodward believed that besides a disease of the moral powers there is in some cases a condition like moral idiocy, which renders the

individual morally irresponsible from birth. There certainly can be fair intellectual ability with congenitally feeble moral powers. Such a person should not be held responsible for any criminal act which he might commit.

CAUSE.

Of all causes of moral insanity heredity is the chief, a patient's parents or near relatives having been insane, or drunkards, or eccentric, or having been instances of the insane temperament. The change in the system at time of puberty is a frequent cause, both in young men and young women, and the disease often originates in epilepsy (which has not produced apparent organic change in the brain), in injuries to the head, in debilitating sickness of any kind, in shocks or severe mental strain, and in previous attacks of mental disease.

PROGNOSIS.

The prognosis is always doubtful and generally unfavorable, the strong heredity and the manner of development in so many cases indicating an impaired or weak organization.

In some instances recoveries take place, but the tendency is to a weakening of the intellectual power, ending in dementia, if the patient live long enough, often by the development of other more severe forms of mental disease.

Very little can be said in the way of treatment. A patient should be put under the conditions most suitable to encourage moral control. He should be removed from temptation as much as possible, and any physical disease should receive appropriate treatment. Undoubtedly the *régime* and restraint of a well-organized and well-regulated hospital for the insane afford the patient the best chance, though no class of patients is more to be dreaded in such an institution, on account of the demoralizing influence which they exert upon their fellow-patients and the anxiety and annoyance which they cause the officers in charge. Such cases should, however, always be sent to a hospital where the patients have regular employment, and should be obliged to work as a means of cure.

One of the patients whose history I shall give seemed to derive benefit from the rigid discipline of the House of Correction at South Boston, but I think that we would hardly be justified, as physicians, in advising such a course of treatment.

I have selected for purposes of illustration some cases which were under my observation at the McLean Asylum, and concerning whose history I have refreshed my memory from the records through the courtesy of Dr. Cowles.

I have taken these from many others because I have been able to follow the patients for several years, both while they were at the asylum and subsequently, and also because they have been known to several other members of this Society.

CASE I. A. B., aged twenty, single, admitted to the asylum March 28, 1876. An aunt died at the Boston Lunatic Hospital. Was, as a young boy, remarkably conscientious and truthful, a fine scholar, and in every way promising. Four years previous to coming to the asylum was injured at school about the head, though the cause of the injury is unknown. Was unconscious several days. Soon after his recovery from this accident his family first noticed peculiarities: he would borrow money without any apparent reason,

and gave the impression that he was wealthy. Developed a great fondness for horses; would hire one for half an hour, then another one, till he had tried several. He was excited easily when opposed, became utterly unreliable in word, telling the most outrageous lies unblushingly, gambled and drank, manifested slight alternations of mild depression and exaltation, borrowed money of every one. General health has failed. A month previous to coming to the asylum went to Maine. Left there without knowledge of friends and went to New York. Soon after was heard of in Boston, frequenting the lowest resorts. No shame. Very plausible. Came to asylum willingly to please his mother, the only person for whom he has any regard. When admitted he was suffering from gonorrhoea, which was followed by orchitis which was extremely painful. He was easily excited, but never manifested any delusions, though there were slight periods of depression and exaltation. At first he was quite indifferent, but as he gained in strength he became more natural, and seemed to try earnestly to gain self-control. The irresponsible element in his case was very apparent, he often saying, and I think with honesty, that there were times when he could not control himself.

His moral sensibilities were very much blunted, though he never lost the knowledge of right and wrong, and was rather above the average in intellectual ability. Two months after admission he escaped over the fence, breaking his word to do so, and went directly home. His mother persuaded him to return, which he did in a day or two, upon her promise that he should leave in three months from his admission. He remained till the end of that period, when he was discharged in good health, and having full faith in his ability to do well, a faith not shared in by any one who had known him at the asylum.

In a month he was returned to the asylum with a history of lack of self-control, drinking, carousing, and spending money which he had obtained by forging checks on his father, etc. He would make these checks payable to his own order, sign his father's name, indorse them with his own name, all in one handwriting, and then present them to the bank, manifesting no fear of detection, either then or afterwards, and never hiding from pursuit. When brought to the asylum this time he had been drinking. As there was some informality in the certificates he was discharged the next day, but was arrested the same evening, and was committed to Taunton Hospital the day following on the certificates of Dr. Fisher and myself. From Dr. Gidding I learned that he exhibited the same characteristics as when at the McLean Asylum, and that all who saw him were convinced of his irresponsibility. After many months' residence there he was discharged, and sent by his friends into the country. He did well for a time, but again forged, and was arrested and lodged in jail at East Cambridge. There I examined him with Dr. Taylor, the physician of the jail. His case presented the same peculiarities as before. A period of good behavior had been followed by a period of slight depression, an uncontrollable impulse to drink, then by forgery, conducted without any discretion and in the same way as before, resulting in sure detection (which he did not avoid) and in his arrest. Both Dr. Taylor and I were again convinced of his irresponsibility. We so certified to the judge of the Superior Court, the indictment was quashed, and he was sent to Taunton Hospital by order of court. He remained

there again about a year, I think, eloped, and went to sea. He went to the West Indies, was very ill, returned to Boston, commenced his old course, committed his forgeries exactly in the same way, was again arrested, and lodged in Suffolk County jail. There Dr. Fisher and I again examined him, and found the same elements of weakness and irresponsibility. We endeavored to give him the benefit of our opinion in court, but the jury did not agree with us, and he was sent to the House of Correction for eighteen months. There he conducted himself with propriety, was given charge of the library, and many privileges, none of which he ever abused. He served his sentence, and was discharged last autumn. He called on me several times in the weeks following, seeming in good health and to have perfect control of himself. He believed that the rigid discipline of the prison had been an excellent thing for him. He subsequently went to the western part of the country, and so far as I have learned is doing well and is at work.¹ Should he now prove that he has recovered, his case would, I think, be a remarkable one. No one who should see him now could doubt his honesty of purpose. During all his attacks, and at the present time, there has been and is no diminution of intellectual power, and there have never been delusions, so far as could be ascertained.

CASE II. J. L. J., aged twenty-two, single, native, and resident of Boston. Admitted to the asylum May 30, 1873. My first knowledge of him was derived from the following letter written by his family physician (Dr. F. G. Morrill):—

"A friend and patient of mine has a son who steals everything which he can lay hands on. He has everything that is necessary for his comfort, a good home, good clothing, and an ample allowance of spending money; is treated kindly, and has every possible encouragement to do well. But notwithstanding all this he will steal the jewelry and wearing apparel of members of his own family and their friends, and pawn them for a mere song. What he can do with the money no one can find out. He does not drink, and is not known to frequent bad women. [In both these particulars his history, learned afterwards, proved the doctor mistaken.] He is an organist and has been one for a year or more certainly. I have no doubt whatever that he is insane.

"I cannot tell you the care and anxiety he causes his parents, who are most worthy people, and have tried every means in their power to reform him. They are willing and able to pay for treatment, but are afraid that you would not be willing to retain him long enough at the asylum to work any permanent good. His family are in the highest degree respectable."

I replied that he could be received, and he came to the asylum on the certificates of the gentleman who had written me, and, I think, Dr. Fisher.

He came quietly and without opposition. No hereditary disposition could be learned, but on acquaintance I found his mother an eccentric woman. On admission he seemed indifferent and careless, but presented no marks of delusion, and conversed clearly and intelligently. His friends represent that he was reliable and conscientious till within a year or two previous to coming to the asylum, and that then, without known cause, he changed and began to present the characteristics described in the letter previously quoted from.

¹ He is employed on a good salary in a large mercantile house.

For some time he remained quiet and indifferent, complaining occasionally of headache and dizziness, and was soon found utterly unreliable. He was inclined to be mischievous and to tease other patients, was restless and threatened to run away. After two months he climbed a fence from an inner to an outer yard, to see, as he said, "what there was there," but was brought back.

Four months after admission the record reads: "Little change, still mischievous, and fond of playing tricks upon other patients. Sometimes very irritable, profane, and fault-finding. Obscene, and fond of talking of his exploits with women. He was found to have a gleet, about which he manifested no shame, and of which he often talked to others with some apparent pride. Totally indifferent to family and friends. Threatens to elope but says that he can stand it as long as they (his friends) can. Is anxious to procure liquor or stimulating medicines, and sometimes feigns sickness in the hope of obtaining one or the other. When reproved manifests some penitence and promises to do better. At these times seems honest but lacks the ability to carry out his purpose. Manifests decided, though slight, alternations of depression and excitement. Childish at times, and, like a child, asks for childish favors. Sometimes requires to be denied privileges to induce him to exercise more self-control." This was a fair account of his condition for the first four or five months of his stay at the asylum. After that he manifested some improvement. Was more gentlemanly, manifested less petulance and more strength of mind, was more uniform and rather more reliable, and his regard for his friends returned. Still he seemed weak and no great amount of dependence could be placed upon him. About fourteen months after his admission to the asylum he was anxious to leave, and he was discharged at the request of his friends, they having become wearied, apparently, with his importunities. They adopted, upon their own responsibility, the somewhat novel expedient of sending him to Kentucky with only money enough to pay his fare and his board for a few days, and then letting him shift for himself. He went to Kentucky, soon became destitute and fell into his old ways; his father sent money for him to return. He manifested the same unreliability and was soon after sent to the Taunton Hospital. There he remained a year or two, and was finally discharged *improved*. He came home, and now for more than a year has been a bookkeeper in this city. Has controlled himself, has given his employer satisfaction, and seems well. Should he continue as now, we may, I think, properly regard him as recovered. No one could doubt his unreliability and irresponsibility, and when he left the McLean Asylum I had no faith in his power to control himself for any length of time. He is kind and attentive to his friends, and especially solicitous for his father, who is feeble from paralysis. It is seven years since he first came under observation.

CASE III. The third case which I shall describe is, to my mind, one of the most typical instances of the form of disease which we are considering. H. T. First admitted to the asylum December 18, 1874. Single, aged nineteen, grandmother insane, mother flighty and unsettled during every pregnancy, and always a weak, nervous woman. Has never been a remarkably strong-minded boy, but is of average intelligence. Two years before coming to the asylum his friends first noticed peculiarities. He would take articles from his father's

store, pawn them, and gamble with the proceeds, manifested no shame afterwards for a long time. He seemed for a time to be utterly controlled by this passion for gambling, and to have no moral power of resistance.

These exhibitions, the records say, seem to come on in paroxysms, and after a few weeks he seems more reasonable, is sorry, for a while, does fairly well, till another paroxysm comes on, and the same things are enacted again. He drinks, goes with women, and undoubtedly masturbates. He has gradually grown worse. Threatened to shoot his father because he prevented him from marrying a young girl (whom he some months afterwards seduced), and also threatened suicide. After a course of drinking and gambling he once manifested some intellectual aberration. At one time thought that he fell from the dome of the State House. Memory somewhat defective. These attacks come on with constipation, followed by voracious appetite and severe pain in head.

On admission, sullen, weak, but quiet. Slept well the first night. The next day, moody, irritable, and fault-finding. Has a very voracious appetite. After a few days became more pleasant, and continued so for some time. Said he had tried in every way to make us believe that he was well, but might as well give up as he could deceive no one. Some alternations of depression and exhilaration not very marked. Gained for the first four months physically but not mentally. Manifests some periodicity in his disturbances. When they come on he is very morose and loses his self-control. Annoys every one around him. Sometimes, when opposed, throwing articles about his room. When comfortable he is very plausible, quite gentlemanly, but very unreliable.

After about five months there was some improvement, but not much. Sometimes angry and threatening. Very plausible to his friends, whom he persuaded to remove him without special mental change.

He conducted himself pretty well for a time after his discharge, and returned to his father's store. He was free from special manifestations of the disease for some weeks, then began to pawn, gamble, drink, frequent bad houses, and to manifest sullenness, anger, and suspicious. He would pawn all his clothing except just enough to cover him, although his father gave him a liberal allowance. He struck his brother when he interfered: was arrested and put in a police station for the night. Returned to the asylum next day, eight months after his discharge. During this residence of eleven months he manifested the same symptoms, in an aggravated form, as during the previous residence. At first there was evidently a good deal of suppressed excitement. Sometimes sullen, and depressed, sometimes jovial, and sometimes restless like a caged bird. Always tricky, unreliable, and lacking in self-control, and a very unsatisfactory, annoying patient both to his companions and the officers of the institution. Threatened suicide to his father at one time when visiting him. When asked about it laughed and said he wanted to scare him. After several months' residence he grew calmer and more self-controlled. Then admitted his former lack of control and seemed to make some effort to do better. Discharged after eleven months, at the request of friends.

Remained away from the asylum fourteen months, when he was returned with the same history and the same symptoms, but conducted himself pretty well for

a longer time after his last discharge. Then the seemingly irresistible impulse came on and there were the same stealing, pawning, gambling, drinking, and threatening, with alternations of sullenness and irritability. When he returned to the asylum, February 10, 1878, he had gonorrhoea, which was accompanied by orchitis of both testicles. The extreme pain of his testicles seemed to have a good moral effect upon him, and he did well for a time, but afterwards manifested the same utter unreliability. He gradually gained more self-control, but was restless, unsettled, taking every mean advantage possible, and was one of the most troublesome patients. He was discharged after seven months more comfortable in some ways but essentially the same. His former history was again repeated. He did well for a time, the irresistible impulse came, and he pursued the same course; threatened his mother, pawned everything he could find, was arrested, and I was asked to see him in the station house. I found that he had deteriorated mentally, manifested the same irresponsibility, and with another physician took him to the probate judge for commitment to the McLean Asylum. After five minutes' examination the judge declined to commit him, as he talked very clearly and plausibly, and said that he would put him "on probation." After six weeks more, he in the meantime keeping his mother in constant terror, he was again arrested. I again examined him and he was then committed for the fourth time to the McLean Asylum, in January, 1880.

I have made a longer history of this case than I could have wished, but perhaps not long enough to convey the impression which even a short personal acquaintance could not have failed to give. He inherited insanity, congenitally was not well balanced, and he has steadily gone on from bad to worse, losing in self-control and moral power but never manifesting any marked intellectual aberration, or anything which had any resemblance to a delusion, except once, for a short time, after a course of drinking and gambling. I can see nothing in store for him but a constant repetition of these attacks and eventual dementia, if he live long enough. In his early attacks I think that he sometimes honestly tried to do well, but I now doubt his intentions as much as I believe in his inability to control himself.

A GRAVE DEFECT IN OUR MEDICAL EDUCATION.

BY CHARLES SEDGWICK MINOT, S. B., S. D.,

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For some time past I have been interested in certain questions of medical education. Various circumstances have conduced to bring me to the conclusion that several important, I might almost say fundamental, changes should be made in the arrangement of the earlier and strictly scientific branches of medical instruction. It also appears to me desirable to alter to some extent the subjects themselves. As the notions to be advocated are partly novel, and perhaps peculiar, it seems to me desirable to preface what I have to say with a brief explanation of a personal nature.

I am not a physician, and have never had any intention of becoming one. For many years I have

been aiming to fit myself to become a professional zoölogist. At the time when I began my studies the conception of biology as a distinct science did not exist in this country, and our naturalists were, with a few brilliant exceptions, apt to be either narrow specialists or else superficial. In striving after a more general training, the importance of which was then just beginning to receive recognition and commendation, I soon found that there were many things that I ought to know, which I could not hope to secure from any of the current zoölogical instruction, but which I might secure from the medical schools. I therefore pursued for several years those medical studies which are commonly designated as scientific, and which may be of immediate utility to a zoölogist. It thus happens that I have had opportunities for becoming familiar with the methods and needs of an important part of medical instruction. I hope that this much of personal digression will be deemed pardonable, since it explains how I was brought to hold the following views.

Physicians are often struck by the extent and variety of ground over which their training carries them, and they are certainly justified in regarding medical education as liberal. Yet their mental attitude is often illiberal in one important respect. They measure the value of everything by its immediate relation to man, and consequently they lack, as a class, appreciation for the broader aspects of biological science, and really rarely understand that the whole of medical science and art together make but a small part of zoölogy. Indeed, the physician occupies the same relation to the investigating biologist that the technologist holds towards the chemist. In a philosophical view of these connections practical medicine is upon a par with, for example, economic entomology, as regards its relation to the science of life. This is, I think, seldom clearly understood by medical graduates.

Now this might, perhaps, not be of great consequence were it not that a considerable portion of the ablest physicians carry out original investigations, partly purely scientific, partly, of course, with a view to applications in medical practice. Now, these researches are often of very great value, but they lose an immense proportion of the worth they might have because the physician has never learnt to understand, even imperfectly, the problems of comparative morphology, physiology, or pathology. This assertion is made advisedly, and if it had been made much more forcible it would have still been true.

The question therefore arises whether it is advisable to attempt to remedy the matter, by so far changing our usual medical instruction as to impart to our students a correct appreciation of the true standing of medicine and of the lesser intellectual importance of medical problems as compared with the greater importance and wider bearing of biological problems. It seems to me that it is, since some of the best students are to become investigators.

For this reason a special course on biology might be added to the curriculum. This appears eminently desirable when we consider that biology has a very great number of immediate and practical applications to medicine. There are the great fields of medical botany, vegetable and animal parasites, the animals useful to man, the theory of inheritance and reproduction, the laws of embryology, the anatomy of the domestic animals, and the comparative anatomy of the animals used for physiological experiment, and so on.

By a judicious and painstaking selection a general course might be arranged in which the leading laws of life and the general principles of botany and zoölogy should be succinctly expounded, while likewise including a fuller treatment of comparative anatomy and physiology, devoting most attention to whatever is of interest and value to the student of medicine. It would require a courageous and enthusiastic person to carry out this plan successfully. Probably the subject of embryology might be best given in connection with the course suggested, because our knowledge of embryology is derived mainly from animals.

The advantages to be reaped from this change being admitted, the objection will probably be made that our students are already so overcrowded with work that neither their time nor their strength will permit any such additions as proposed to the requirements already made of them. But I believe, on the contrary, that in the end the student would find all his studies lightened very essentially. There are many things which he has now to learn empirically, and which he would then be enabled to arrange in a clear and reasonable intellectual order. Moreover, many of his notions would be rectified. How many students acquire just ideas concerning bacteria, poisonous animals, the way in which protophytes multiply and pollute fresh water, the metamorphoses of parasites, or of how to translate into terms of human physiology the results gained by experiments upon animals? Yet all these matters, and many others like them, would belong in a course on medical biology.

Assuming, now, that the course we have recommended is admitted to be both desirable and practicable, it still remains to inquire at what period of the student's career it should be introduced. I think at the very beginning, for the following reasons:—

(1.) It forms the most appropriate introduction to the whole course of medical instruction. Is not this a necessary consequence of the subordination of medicine to the general science of life? Of the fact that medicine is only a branch, and by no means nor in any sense even the chief branch, of biology? Supposing that a polytechnic school should attempt to train a chemist for dyeing and printing mills, and should give him no systematic instruction in the principles of chemistry, but only so much as happened to turn up in connection with the special instruction about dyes, and so forth, would not all agree in condemning the method? Yet this is precisely what all our medical schools are doing without a word of condemnation ever being said against them. Undoubtedly medical training warps the mind, yet surely every intelligent physician must recognize that his art is merely the practical application of the laws of biology to special and restricted uses,¹ so that it would be really an economy to teach the student of medicine those laws of life which especially concern him, rather than to leave him to pick them up at hazard incidentally in the course of his special studies.

¹ I am afraid that my position here may be misconceived in view of the fact that the greater and most important part of the history of medicine, of its development, has been quite independent of biology, that is, biology in the restricted sense. It seems to me that we cannot justify continuing a separation which prevailed in the past when knowledge was fragmentary. We might with equal propriety maintain that dyeing was not applied chemistry because the art of dyeing arose from empirical knowledge, which was only later verified, extended, and improved by scientific chemistry. I should regret very much to have the reader think that I overlooked the fact that the best part of practical medicine rests on an empirical basis, while comparatively little has as yet been contributed by pure science.

(2.) It would essentially lighten his pursuit of anatomy and physiology, which, under the present prevailing arrangement, he enters upon at an extreme disadvantage. Leaving out of consideration those wretched schools which have no distinct course of physiology, not having yet attained a comprehension of its indispensability, we find that it is usual to begin both anatomy and physiology at the opening of the first term. In the anatomical lectures the bones are taken up first, and occupy many weeks, during which the unlucky students are expected to listen with profit to elaborate explanations concerning the functions of organs of which they very probably have never heard even the name before. One is never quite able to comprehend how an intelligent set of men can go on year after year in apparent unconsciousness, continuing so obvious a blunder. It may, perhaps, be said by some one that this criticism is unjust, since there are too often practical difficulties which interfere. To this comment the response is that the evil is so serious an impairment of the value of the studies, that hardly anything short of sheer impossibility of change can excuse the continuance of the present disordered methods. Certainly no school which permits so bad an arrangement to be kept up can justly be said to be managed with thorough efficiency. The difficulty might be obviated by commencing the anatomy with the treatment of the viscera, so that the physiologist could turn immediately to the discussion of digestion, respiration, and excretion, and find his audience prepared to comprehend him. There are, indeed, practical reasons for dealing with the bones first, namely, the ease with which they may be preserved and always supplied in sufficient abundance to every student, and, on the other hand, the difficulty of procuring and keeping subjects for the demonstration of the soft parts in the autumn before the season of cold weather. In spite of these reasons it still, I think, remains advisable to change the order, because it is all important to enable the student to begin his dissections with a preliminary knowledge of what he is to learn from his work in the dissecting-room. In any case this clashing of advisability and convenience would cease if the student were instructed in the general principles of anatomy and histology as recommended.

(3.) It would more accurately impart the principles that govern the organization and functions of the body. Anatomy, for example, necessarily enters on so many descriptive and topographical details that the laws of morphology are easily lost sight of. How many of the graduates of our medical schools appreciate the fact that the structure of man is entirely subordinate to the division into three germ-layers, the separation of the body into two systems, the neural union and the independent cells, or are aware that the vertebrae do not correspond to the segments of the body, but to the divisions between the segments? Or, if we turn to physiology, how many students become familiar with the effects of ether and other substances on the individual cells, or comprehend the importance of the pseudopodia in the ingestion of food by epithelial cells? Such questions might be multiplied almost indefinitely, but surely the position taken does not need ampler justification.

Generally speaking, the chief defect of medical education at present, I think, is that the student is thrust forward into new subjects before he is prepared to reap the full benefit of them. He goes to dissect the soft parts when all his anatomical knowledge is about

bones; he listens to lectures on the process of digestion before he has heard of an epithelium, a peptic gland, or the duodenum; he makes analyses of urine, normal and pathological, before he has seen renal tubules or learned the nature of the diseases whose abnormal products he laboriously examines. All this involves a frightful waste of labor and time, and constitutes an imposition upon the student, and, one is tempted to add, a fraud upon the community. This is strong language, but I think the case calls for it, because the evil is patent and great, and the remedy entirely feasible.

Time should be allowed the student to acquire a general knowledge of anatomy, especially of histology and the structure and relations of the soft parts, before entering upon the study of physiology. He ought also to have a little knowledge of pathology before beginning with pathological chemistry. Now, I believe that all these general and introductory matters might be most successfully treated by beginning with a succinct course of medical biology, which would naturally, I might say necessarily, precede the others.

To conclude, the arrangement which I at present consider the best would be, for the studies of the first year (comprising two terms), as follows:—

First term: anatomy (beginning with the soft parts), histology, general chemistry, and biology.

Second term: anatomy of the bones and muscles completed, topographical anatomy, physiology, medical chemistry, and general pathology.

It is proper to add that the entirety of the views above advanced are merely personal opinions of the author, and could doubtless be improved and rectified by opportunities for discussion with a larger number of experienced medical instructors than the author has yet had the pleasure of conversing with upon these questions.

REPORT ON PROGRESS OF DENTISTRY.

BY T. H. CHANDLER, D. M. D.

DENTISTRY, in its progress, seems to have come to a pause in the direction in which for many years it has been so active, namely, in operations on the teeth and the manipulation of gold, and to have turned back to take up again the long neglected and despised mechanical methods and appliances. Some few are still at work on the minute microscopy of the tooth substance, and claim to have discovered, under the guidance of Heitzmann, a living network branching in every direction and penetrating the formed material, uniting the offshoots from the nerve substance or tooth pulps, the soft solids as they are often called, and explain in this way the mysterious sensitiveness of dentine, which has up to the present so puzzled all workers on the teeth, and claim to show how the tooth itself is built up and nourished.

Legros and Magitot in France have investigated the tooth follicle, and their original memoir has been done into English with additions, fitting it for an elementary text-book, by Dr. M. S. Dean of Chicago. Kingsley's Oral Deformities has been added to the literature on this side of the Atlantic, and on the other several books of less pretension, chiefly upon mechanical dentistry. Several new dental magazines have come into existence, without adding much to the quality, but a great deal to the bulk, of the read-

ing matter which every progressive man is expected to peruse. The *Dental Cosmos* still keeps the lead of the magazines, and within a short period has much improved in the quality of its articles.

The new English Registration Act has given a fresh impulse to dental education which the dental schools in this country are feeling. Out of the "bogus diploma" business has sprung a desire to investigate the character of those schools which issue *bonâ fide* degrees, which has been greatly strengthened by the vigorous measures taken by the German government to prosecute all whose diplomas cannot be shown to have been honestly obtained from an authorized source. Letters are coming from abroad inquiring into the standing of the various schools, and the worthy will in the near future reap the benefit. On the other hand some of our States have lately granted articles of incorporation to schools whose diplomas are or may be given *sine curriculo*, on examination merely, or even without examination, for a stipulated payment of cash in hand. Says one of the announcements, "Students receive diplomas, degree D. D. S., for what they know and can do, and not for the number of terms spent at the college." The clause allowing five years of practice to take the place of one term in the school still exists in some of the dental colleges, a certificate only being demanded from a known or unknown practitioner to permit the student to enter at once upon his second year, and be graduated with his parchment in due form in one short term of four or five months.

"Owing to the great advances made in the *methods of instruction*," the faculties of one medical college and of one university give "the two degrees, in dentistry and in medicine, in *three years*" of five months each. Two years are necessary, according to them, to obtain the dental and three years for the medical diploma, yet by some strange process of condensation both degrees may be had in three years. This record shows that there is still room for improvement in the matter of dental education, though why institutions of such standing as the Jefferson Medical College and the University of Pennsylvania should go so far out of their way to cheapen their degrees, passes ordinary comprehension. The Wisconsin School, regularly incorporated under the laws of that State, offers by circular to all comers its honorary degree for twelve dollars cash paid. The tendency to multiply schools of dentistry is to be deprecated, as it inevitably tends to cheapen the degree and to lower the standard. With too many the sole object of attending a school is to obtain its diploma for use as an advertising medium, and not for the education to be had, as is surely shown by the success of Buchanan and his imitators. With the demand comes the supply, and multitudes of dentists possess diplomas of slightly greater value than his, though regularly obtained from regularly organized and recognized schools. Yet, on the whole, the cause of dental education is advancing. A few of the best schools are honestly taking such measures as their circumstances permit to advance their standards, and graduate men whose student life will not end with the reception of their diplomas, whose promise is of honor to their training and their chosen calling.

As was said at the outset, operative dentistry has apparently come to a pause in its career, and the army of practitioners is dividing its forces: "Some for Paul and some for Apollon;" some are looking back to the old-fashioned soft foil, and the ancient methods, as

though all that is new is vanity, and "there is nothing new under the sun;" still others seem to think all that is old is worthless, and nothing of value that is not "brand new." Such adhere to the use of cohesive gold, or follow the leaders of the "new departure," whose gods are amalgam and other plastic materials; who declare that "in proportion as teeth need *saving*, gold is the *worst* material to use;" and that "a filling may be the *best* known for the tooth and yet *leak badly*." (Italics not mine.) As long as these varying methods are in the hands of thoughtful men, some good may come out of the evil, and the pause may be but the precursor of another era of progress. Skepticism leads to inquiry as well as the bold assertion of startling propositions. Men will at last be brought to examine and compare, and he that is honestly seeking the best way for himself and his patients, who is not a partisan, will soon eliminate what of his own is faulty, and adopt what he finds good in his neighbor's.

Partisanship is the bane of all true progress, and the differences of opinion seem so far to have tended in this direction. Especially is this true with regard to the advocates and opponents of the "new departure." Arguments give way to recrimination, assertions are made to stand for proofs. So startling is the assertion made by the adherents of this new school, namely, that "since the very day of the birth of dentistry its practitioners have been on a wrong scent, have been, and still are, ruining teeth instead of saving them," it is little wonder that amazement and indignation should have been the first feeling awakened, that wild assertion should have been met by as wild contradiction, and as wild counter-assertion. Just now the battle seems to be hushed, and the combatants are looking for results. The truth seems to be that, like all hobby-riders, the riders of this new horse drove him too hard at the beginning. What there was of good in their claims is not new, and what is new is not all good. At the bottom of their claims is the galvanoelectric theory, which has yet to be proved, and until this is done it would seem of little use to build theories or methods upon it.

Mechanical dentistry, which has so long held a subordinate place, seems now coming to the front again. New ways of working old materials, and new operations, are being constantly brought forward and claiming the attention of the best men. Of the new materials, celluloid is holding its own against vulcanite, and the controversy over the latter seems to have resulted in giving us a really valuable base. The "new mode" of working it promises to revolutionize its character and to render it, instead of an unreliable and poor material, one of the most useful in our possession, almost a new thing. Even vulcanite, which all thought had reached its climax, feels the impulse of this "new mode," and with it better results are reached than ever before. Continuous gum work, as it is called, consisting of a platinum plate, entirely covered on its buccal and lingual surfaces with a veneer of porcelain, imitating in its color that of the natural membrane, feels the boom, and better ways of making it and improved material have made it the fashionable base for whole sets of artificial teeth. The setting of "pivot teeth," formerly confined to the six front upper teeth, is now by new methods extended to the bicuspids, and even to the molars, enabling good roots to be saved and made useful that were formerly worse than useless, freeing the patient from the necessity of a plate. It is safe

to say, that by one or the other of these methods, more roots are now saved and made useful than at any previous period in the history of dentistry.

Hospital Practice and Clinical Memoranda.

EPIDEMIC CROUPOUS PNEUMONIA.

BY S. E. WYMAN, M. D. (HARV.), CAMBRIDGE, MASS.

THERE came under my observation, during the early part of March, 1881, two cases acute of croupous pneumonia in the same family and under such circumstances that I was led to think of the possibility of there being some causal connection between them, either in the way of a common local origin or of a direct contagion from the first to the second case.

A little boy aged five or six years, previously in perfect health, is suddenly attacked with marked symptoms of some approaching illness, namely, several attacks of vomiting, flushed face, furred tongue, and general debility. Cough, fever, and anorexia follow, with the subsequent development of a typical pneumonia of the upper lobe of the right lung. The physical signs are most pronounced; the attack runs a mild course, with moderately high temperature; defervescence, with the signs of beginning resolution, takes place on the seventh or eighth day. Convalescence is speedy and uninterrupted.

His mother, a delicate woman of twenty-eight or twenty-nine years of age, had not been well for several days previous to her son's illness. She had taken cold, and repeated examinations of her lungs gave evidence of a general bronchitis. She had recovered so as to be feeling quite well, when suddenly, just at the time when the pneumonia had reached its height in her boy's case, she was taken worse, and obliged to take to her bed.

By the way, she had occupied the same room in which the boy was ill during the day and night. Examination at this time gives the signs of a pneumonia of the lower lobe of the left lung. These signs were at no time pronounced, and in nearly every particular it was a typical case of croupous pneumonia. The symptoms were correspondingly mild, with the exception of obstinate vomiting, lasting thirty-six hours, which yielded to treatment. At no time was the temperature high nor the respiration greatly accelerated. The pulse was, however, rather rapid, 110 to 120, but of a good character, regular, even, and not intermittent. This then caused no uneasiness, especially as it was known that she had in health a very rapid pulse-rate.

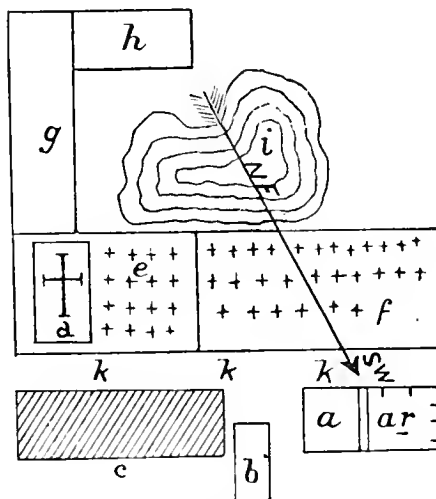
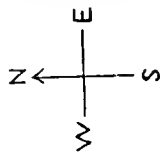
One morning there was an improvement in all the symptoms, the temperature nearly normal, the number of respirations less, the pulse-rate diminished, and there were evidences that a corresponding improvement had begun in the affected lung. The patient was removed to another chamber, up one flight, during the afternoon. According to the nurse's account a change took place during the latter part of the night. Certainly this change was evident at the time of the morning visit, for the patient was pulseless, face cyanotic, with marked evidences of pain, breathing very much labored, and body bathed in cold sweat. Every effort was made to restore her, but to no avail, and she died in a few hours, with all the symptoms of a slowly-

forming thrombus in the pulmonary vessels. A post mortem confirmed the diagnosis of croupous pneumonia of lower lobe of left lung; it also showed a firm, undoubted ante-mortem clot, which started in the right ventricle and was continued through the pulmonary vessels down to those of very small dimensions. There was also a solidification of the lower lobe of the right lung, which was not diagnosed during life, although daily examinations of the front of both lungs were carefully made.

In the *Berliner klinische Wochenschrift* of October 3 and 10, 1881, in an article entitled Epidemic Croupous Pneumonia, are detailed the histories of forty-two cases of croupous pneumonia by Dr. Penkert, the physician who attended all the patients. These cases are all traced, either directly or indirectly, to local causes which seemed to be adequate for their production, at least to Dr. Penkert.

The epidemic was observed in Riethnordhausen, a little village of upwards of seven hundred inhabitants, situated in a hilly country, itself higher than any of the neighboring villages, and built on the slope of a hill. The part of the town of especial interest was situated lowest, in a valley running northeast and southwest, hills shutting it in on the northwest and southeast. In the most southerly part of this valley is the school-house, which had been built only four years, but was always damp; in this building the scholars of the middle and lower classes received instruction, and it was among them that the first cases were observed. Just to the north of, and close by, the school-house are two dwellings.

To the east of the school-house, and separated from it by a narrow street, is the new cemetery, which has



been in use for several years. Bordering upon and to the north of the new is the old cemetery, which is bounded further on the north by the church, which is built in a direction from east to west. Running along in the same direction as, and continuous with, the

church are stables, and, at right angles with the stables, the sheep-house of a neighboring farm. These buildings, the school-house and neighboring dwellings on one side, the church and stables on a second side, and the sheep-house on the third side, form roughly three sides of a hollow square, in which are the two cemeteries. Directly in front of these, and close up to their boundary wall, is a pool in which the water is still standing.

The school-room is in the corner of the building, with its windows opening on two sides, namely, to the east and south. The cemetery, laid out on filled land, containing much loose calcareous rock, has a very porous soil.

Although it is not rarely that the ground-water in the spring of the year reaches a high level, sometimes even flooding the surface, still the water has not stood so high in a long series of years as it did early in March of the present year. The highest point reached by the ground-water was observed on March 10th. Since, now, the water stood in the cellars of the houses situated on the highest ground, it is self-evident that the level of the ground-water in that part of the village immediately around the school reached a very high point. During this high water, as was easily to be seen from the then-existing level of the water in the neighboring pool, water stood in all the graves, and some of those which had been made during the preceding year fell in. This thorough soaking of the graves, subsequent to the falling of the ground-water, accelerated the decay of the corpses. The exit of the emanations, which carried with them the infectious material, was very much facilitated by the porous soil of the cemetery.

On the day when the water reached its highest point and on those immediately following, from March 10th to 12th, the weather was cloudy, with a barometric reading of 773 mm. (30.13 inches), a mean temperature of $+5^{\circ}$ R. (43.25° F.), and a prevailing southwest wind; from March 13th the barometer rose, so that it reached its highest point on the 16th, 790 mm. (31.1 inches), with a temperature of 0° R. (32° F.), and weather bright and clear. The ground-water fell. From March 17th the temperature rose, so that on the 18th to 20th the maximum temperature in March was reached, $+6^{\circ}$ R. (45.75° F.), a circumstance which was well calculated to influence the processes of decay. On the 22d the wind came from the northeast, but only the school-house and the neighboring dwelling were struck by this wind, since the remaining houses were protected from it by the sheep-house. The north-east wind, sweeping across the pool and cemetery, blows directly upon the school. In this way it is easy to suppose that the infectious materials, brought directly from the cemetery by the wind, penetrated the school-room through the opened windows and there caused the sickness. For the first cases occurred among the eighty-eight scholars of the two lower classes, twelve children being attacked during three periods, namely, March 27th to 29th four cases; April 2d to 4th four cases; and April 8th to 14th also four cases. The history of each of these cases corresponds with a sudden invasion of pneumonia, for in nearly every case the child, previously in perfect health, is attacked by vomiting, chills, headaches, pain in the side, and fever. The subsequent history and the accompanying physical signs warranted the diagnosis of croupous pneumonia. On the days immediately preceding the

above-named three periods there was generally a brisk northeast wind; on the intervening days the wind was generally in the opposite direction. Easter vacation occurred from April 13th to 25th, and during this time no new case of sickness was found among the scholars.

The spread of the epidemic took place partly among the brothers and sisters of those originally attacked, and partly through the association of the children and adults in other families. In all the forty-two cases it was possible for Dr. Penkert to ascertain the place of infection with tolerable certainty.

If we unite the cases which belong together ætiologically, then there were infected:—

(1.) At the original source, in the school, twelve cases.

(2.) Through three individuals, exposed to the same infection, but remaining healthy, four cases.

(3.) Through reproduction of the infectious material in the patients themselves and its direct transmission:—

(a.) Fixed as during the incubation period, five cases.

(b.) During the incubation period or the fully established sickness, nineteen cases.

(c.) After the end of the sickness, two cases.

As regards the probable duration of the incubation period, the facts justified Dr. Penkert in assuming this to be from five to eight days.

The ages of the children varied from one year and three months to twelve years; three adults, aged respectively thirty-seven years, forty years, and sixty years.

As regards sex there were twenty-seven females (twenty-four girls, three women) and fifteen males.

The seat of the pneumonia was:—

In 15 cases.....	inferior lobe of left lung.
In 16 cases.....	inferior lobe of right lung.
In 2 cases.....	upper lobe of right lung.
In 1 case.....	upper lobe of left lung.
In 1 case.....	upper and inferior lobe of right lung.
In 3 cases.....	inferior lobes of both lungs.
In 2 cases.....	whole right lung.
In 2 cases.....	not known.

The course of the pneumonia was light in thirty-three cases, and only nine cases could be called really severe, two of which ended fatally.

The duration of the attack until defervescence was:—

1 day.....	in 1 case.
2 days.....	in 3 cases.
3 days.....	in 3 cases.
4 days.....	in 9 cases.
5 days.....	in 3 cases.
6 days.....	in 8 cases.
7 days.....	in 11 cases.
8 days.....	in 2 cases.
Undetermined.....	in 2 cases.

— As far as known, the first dentist in this country was Josiah Flagg. He held a major's commission in the American Revolutionary Army, and began to practice dentistry at the close of the war. An officer under Count Rochambeau taught Flagg while the two armies were quartered in Rhode Island. Later he practiced in Boston, and during the last war with England he was taken as a prisoner to England, and while on parole made the acquaintance of Sir Astley Cooper, and worked with him in Guy's Hospital.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. H. RICHARDSON, M. D., SECRETARY.

MORAL INSANITY.

MEETING OCTOBER 3, 1881. DR. JELLY read the regular paper on Moral Insanity. Vide page 560 this Journal.

DR. BOWDITCH said that the paper was a very interesting one to him, and that it suggested certain thoughts with regard to our mode of discipline in insane cases; whether there cannot be more regular and severe discipline. In the first case reported by the reader the discipline of the House of Correction cured the man after three previous commitments to an asylum, where there was no such discipline. Most of us would call two or three of these cases devils incarnate. The last case seems to be very suggestive of a youth badly born and educated, without proper parental discipline. We are beginning to think that tender care is necessary in the treatment of such men as these, even if they perform the most atrocious acts. More evils follow false philanthropy than the hanging of a morally insane man.

DR. COWLES said that in the last case reported he felt that there was some degree of impairment of the intellectual faculties. The man also seemed to have become, in a certain way, expert in indulging his propensities in annoying people and causing them trouble. To create sympathy for himself he sometimes feigned the intention to commit suicide, and practiced various devices and means to gain his ends. There is one interesting feature of these cases, brought out by Dr. Ray, which illustrates their morbid perversity. He mentions a person who could talk beautifully on various good topics, but nevertheless would constantly annoy people about him, his acts being at variance with his professions. Dr. Ray asked him why he did so. The patient replied that he knew the difference between right and wrong, that he knew his acts were wrong, but that he enjoyed doing them. This case was cited as a peculiar one, illustrating the great difficulty in drawing the line between moral depravity as a part of the character of a man and that moral depravity resulting from disease. With regard to the causes of moral insanity, they vary greatly. In one case there was a strong hereditary taint—father, grandfather, and other members of the family, all committed suicide. The patient was afraid of doing the same thing himself. He was a man of marked peculiarities of character, with alternations of good-fellowship, and moroseness and unsociability, being often unpleasant to those about him. Sometimes these peculiarities were more marked than at others. He was sent to an insane asylum, where he was a very troublesome patient. He was discharged after a few months, but for some years he continued in a morbid state, finally recovering sufficiently to be able to transact business. There is no doubt but that a cause which operates largely in the production of moral insanity is defective education of the young. In two cases there was distinct history of youth spent in habits of self-indulgence, uncontrolled by relatives or parents, and untrained in anything like good habits. Both were persons of exceptional ability.

DR. GOLDSMITH, of the Danvers Asylum, said he had seen very few such cases, in fact but one, in which he could detect no impairment of the intellectual faculties. He had, however, seen cases where the intellectual impairment was so slight as to appear an unimportant feature of the disorder, not being sufficiently marked to prevent the patient from living in ordinary relations to society. These latter cases are very trying and unsatisfactory to treat in asylums, as they are very shrewd in planning and executing mischief, and cannot be controlled without a more vigorous surveillance and discipline than is contemplated, or allowed, in asylum organization. The change of form of mental disorder, which Dr. Jelly describes in one of his cases, appeared to him a very important guide in distinguishing whether or not bad conduct be a part of the manifestations of mental disease. Dr. Jelly says that the young man would have a period of unusual depression and inactivity, then one in which he would appear ordinarily cheerful and well behaved, and finally would become restless, active, and prone to various vicious practices. Dr. Goldsmith knew of no explanation for these changes, unless they be regarded as the results of disease, and the case appeared to present all the features of *folie circulaire* in miniature.

DR. CHANNING said that moral insanity is a convenient name which applies to certain symptoms. It seemed to him a great question whether there is such a disease. Sufficient observations have not been made to warrant the use of such a name. In such cases there exists generally a certain amount of intellectual disturbance. At Auburn there were a number of cases of this kind which were morally insane. Some of these were found to have disease of the brain, epilepsy, etc. Several of these were called moral insanity.

DR. JELLY remarked that he meant to have said in the cases reported that intellectual impairment was not a prominent symptom.

DR. INCHES said that he was strongly impressed with the remarkable success achieved in one of the cases recorded, where, by the refusal of the judge to listen to the sworn affidavit of two alienist physicians, the patient was sent to prison, whence, after undergoing the required discipline with daily work at a trade, and a comparatively short detention, he was, at the expiration of his sentence, discharged cured, and remains so since, holding a responsible financial position, his special form of insanity having been kleptomania and dissolute conduct. Dr. Inches thought that the lesson to be learned from this case was an improved arrangement of our asylums by which such patients can be subjected to regular discipline and daily labor. He suggested that a committee be appointed to look into the matter.

DR. JELLY thought the number of cases of the kind which he had described too small to require a separate institution, or even a separate ward. While of the opinion that more discipline and hard labor might be the proper thing to do in these cases, he should feel it his duty not to enforce it.

DR. C. F. FOLSON said of the second case described by the reader of the paper (which he did not consider one of moral insanity) that he had been placed in an uncomfortable ward of a State asylum and had been finally told that he must stay there until he could behave himself at liberty, which he finally concluded to do; in other words, he gave up his wicked habits as soon as it was found by him decidedly for his interest

to do so. Dr. Folsom did not think insane asylums could be so conducted as to be fit places for such persons, who really needed punishment and nothing else. They are to be found in large numbers in our reform schools, our industrial schools, and our prisons (where they belong), and constitute a large portion of the inmates of these institutions. Moral insanity undoubtedly exists, but, except in very rare instances, it is combined with disorder of the intellect, which could be recognized; although uncomplicated with other forms it is an exceedingly uncommon type of insanity, and is often confounded with simple depravity, different persons differing in opinion, as they probably always will, in regard to the amount of responsibility attaching to individual cases. One of the most common and striking diagnostic marks of moral insanity is periodicity, there being, as a rule, intervals of self-control and good conduct, even in its later stages. In dipsomania, for instance, one of the forms of moral insanity, the impulse to drink is sudden and uncontrollable, and very often at the last time that the sufferer would be likely to give way to his passion if he could resist it, in contradistinction to debauchery, where there is preparation for the excess, or to softishness, where there is a steady and progressive brutalizing of the individual, and blunting of the mental capacity and moral sense. The Pomeroy murderer was mentioned as a case in which moral insanity and epilepsy both were testified to at the time of the trial, but Dr. Folsom had watched the young man since his commitment to prison (six years), and neither he, nor the prison physician, nor the officers had observed any indication of either epilepsy or moral insanity, while his behavior had been exceptionally and uniformly good, as soon as he learned that he must be punished if it were not so. If epilepsy or moral insanity existed, Dr. Folsom did not believe either could be concealed without treatment for six years and, therefore, thought now, as he did at the time, that the court was right in declaring the young man guilty of murder, although his sentence to be hanged was commuted by the government to imprisonment for life in a separate cell.

Recent Literature.

A Manual of Histology. Edited and prepared by THOMAS E. SATTERTHWAITHE, M. D., in association with Drs. Thomas Dwight, J. Collins Warren, Wm. F. Whitney, Clarence J. Blake, and C. H. Williams of Boston; Dr. J. H. C. Simes of Philadelphia; Dr. B. F. Westbrook of Brooklyn; and Drs. E. C. Wendt, A. Mayer, R. W. Amidon, A. R. Robinson, W. R. Birdsell, D. B. Delavan, C. L. Dana, and W. H. Porter of New York city. New York: William Wood & Co. 1881.

In view of the demand for a concise manual of histology which should represent our present knowledge of the science, Dr. Satterthwaite, with the assistance of the gentlemen named in the title, have produced the above book. It is divided into twenty-eight chapters, the first nine of which were written by the editor himself. In speaking of the requisite materials and their use, he wisely omitted the subject of optical principles, which form so prominent a feature of many of our histological manuals, and which are much better treated of usually in any of the standard text-books of physics.

The chapter on the blood is especially good, and we would heartily endorse the cautionary remarks made

on measurements of the red corpuscles in man and animals. Epithelium and the tissues forming the connective substance group are treated very thoroughly in four chapters. Then follows a good description of the teeth, and a long chapter on the general histology of the nervous system. This first part is marked for evenness of style and clearness of expression, and in it are embodied original observations.

The tenth chapter, on muscular fibre, is by Dr. Dwight, who presents the results of some original researches.

Blood-vessels are next discussed by Dr. Wendt, who expresses his belief in the *physiological occurrence of endothelial desquamation*, as he explains the *interecalated areas* of Auerbach, and the bodies hitherto known as microcytes, hamatoblasts, etc.

Dr. Birdsell gives a very satisfactory chapter on the lymphatic system.

The liver and biliary apparatus, together with the kidney, are discussed in two chapters by Dr. Mayer, who has made a careful study of them, and, among other things, makes a positive assertion that the bile-capillaries are provided with walls of their own.

The two chapters on the male and female generative organs were written by Dr. Simes, who does not attempt to settle disputed points by means of personal observations, though the subject is presented very well.

Dr. Westbrook has written the chapter on the respiratory tract, and given the essential details very satisfactorily.

The chapters on the skin by Dr. Robinson, and the central nervous system, by Dr. Amidon, are long and exhaustive, and deserve a careful study.

The chapter on the eye, by Dr. Williams, and that on the ear, by Drs. Whitney and Blake, are well written, and present the histology of these parts very well indeed.

Dr. Delavan on the nasal fossae, pharynx, and tonsils, and on the mouth and tongue, has done some good work.

The alimentary canal, the urinary excretory passages, suprarenal capsules, and the mammary gland, are treated in three chapters by Dr. Wendt, who has presented his subjects very clearly. He considers that the evidences of destruction of the epithelium in the secretion of milk are not positive and convincing.

Dr. Dana is the author of the chapter on the spleen, pancreas, thymos, thyroid and pineal glands and pituitary body, and gives all the essential points in the histology of these bodies.

The thick cutis vera forms a separate chapter, written by Dr. Warren, who details his discovery of the fat-columns.

A third of the illustrations in the book are original, and all are very well executed. The type is large and new and the typographical errors remarkably few in number.

In conclusion we may say that we consider it without question the best book on the subject in the English language.

— Von Arlt, the professor of ophthalmic surgery in the University of Vienna, would, on completing the seventieth year of his age in April, 1882, have retired in accordance with law, but has been requested by the Minister of Instruction to remain in office until the end of the academical year in 1883, and has accordingly withdrawn his notice of resignation.

Medical and Surgical Journal.

THURSDAY, DECEMBER 15, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number; \$5.00 a year, including postage.

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No. 4 PARK STREET, BOSTON, MASS.

THE GARFIELD MEMORIAL HOSPITAL.

THE movement set on foot in Washington, some weeks since, to establish this institution, has so far met with but indifferent success. Already has the reaction set in from the feverish excitement attendant upon the sufferings and death of our late President, and our sympathies are no longer so easily aroused. The mourning has been removed, and it is with even a little impatience that we find late issues of some medical journals still discussing the wound, the treatment, and medical attendants. *Le roi est mort; vive le roi!* Well, this is, perhaps, one of the healthiest and happiest tendencies with which man can be endowed, but we have not yet done with all feeling; the trial of Guiteau is now progressing in a crowded court-room, and we cannot foretell how far the plea of insanity will be recognized, nor where or to what lengths this trial will proceed. Congress has yet to assemble, publish its memorial volume of addresses, and vote a few thousands of dollars for a fitting tribute to the memory of the late President of the United States.

What shape shall this tribute take? and would not the memorial hospital most humanely, most beneficently, and most lastingly perpetuate his memory and our appreciation of his martyrdom? These are the questions which it would be well to consider.

Washington is already a city of monuments and statues, good, bad, and indifferent, very few of merit, very many costing far more than their materials will ever bring at second-hand prices; as objects of art they would probably have no bidders, and none appreciate this more than Washingtonians themselves; but through and around all this adornment of parks, statues, and monuments the poorer classes may wander at will, admire the engineering skill which lifts huge blocks of stone to the dizzy height of the half-finished shaft to Washington's memory, which has already taken so many years to become half finished, and endeavor there to obtain employment, and eke out their scanty portion of this world's goods. With many, however, must arise the thought, What if sickness or accident comes,—what then? The poor-house and work-house hospital, a bed of pain in an unhealthy location, in the midst of thieves and prostitutes; and that is the City Hospital. Are there then no other hospitals? Yes, there are; one, an accident hospital, recently established, well conducted, with an excellent corps of attending physicians, but very limited in its

means and accommodations, struggling for existence; then there is Providence Hospital, where your poor man may so influence the sister in charge as to obtain admission, but he has no right there simply as a resident of the District of Columbia. Certainly, you perhaps query, the hospital staff of medical men would see that he be readily admitted? Their power, unfortunately, is limited, as they themselves hold their positions at the will of the sister in charge, and thereby hangs a tale which has already been told by a number of able and prominent physicians who *once* constituted the medical staff. There remains the Freedman's Hospital, created by a kind and fostering government for that race whose sudden relief from bondage brought this welcome burden upon our government, but it is and should be kept for them. Luckily there exists in the Children's Hospital suitable accommodations and care for the relief of the suffering little ones, and in the Columbia Lying-In Hospital proper care for delicate women. In the face of these naked facts, what profits, in the mind of the poor man, lost in the practical, in the necessities of to-day, all your devotion to magnificent distances and correspondingly magnificent structures? A commanding shot tower would look far lovelier in his eyes than Washington's shaft, for the shot tower would indicate a manufactory where work could be obtained, and where care for the sickness of the workmen could be reasonably presupposed.

But this project for a memorial hospital does not appeal alone to the pauper class. Washington is filled during the session of Congress with those who lead a hotel and boarding-house life,—legislators, and office and amusement seekers,—many of whom seek and find an entrance into society; and the freedom with which wine is used at dinners and suppers, to those unaccustomed to such a life, and to the restraints which refined society imposes upon those to whom she seems to give most freedom, or to the broken-down man of business, soured with the world and seeking employment at the clerk's desk, results in many an attack of so-called *malaria*, for which Washington is of late becoming quite too notorious. For such cases, when they pass into a condition requiring temporary restraint, there is no other resort than the insane asylum, and comment upon this fact is unnecessary.

A due regard for the æsthetic can, moreover, be readily engrafted upon the memorial hospital plan. A well-built, ornamental administration building, as a centre for the modern hospital wards, with prettily laid-out grounds, and adorned with an allegorical statue, if one likes, and with mementoes of Garfield and his martyrdom, in a healthy, commanding situation, would give ample room for the display of the artistic and beautiful.

The interest which Mrs. Garfield has expressed in the project by her published letter, which Secretary of State Blaine has taken by his personal efforts, and which United States Treasurer Gillfillan has shown by accepting the care of the subscription funds, should be enough to stamp it as a national movement, and the present uncertain state of the project should be attrib-

uted to the fact that sufficient time has not yet elapsed in which to make a proper appeal to our people. There is always some hesitation in making subscriptions of any amount, as so many projects have been started, subscribed to, failed, and the collected funds gone no one knows where; certainly not back to the original subscribers in many cases. This can be readily avoided by putting the matter on a proper basis, and securing guarantees from responsible custodians for the return of the money in the event of failure.

GEORGE ELIOT AS A MEDICAL NOVELIST.

SINCE George Eliot's death, the usual posthumous accession of fame has come to her. Every magazine of literary pretension has contained its article, more or less discriminating, in regard to her. Many of these notices have dwelt at length upon the accuracy with which she described the daily lives and emotions of the different classes of people of whom she wrote. Her stories of clerical life were at first considered evidently the work of a clergyman. Her country scenes in her early stories were so faithful a description of the village in which she had passed her girlhood that the place was recognized, and it seemed absolutely certain that they were written by some resident. A man was fixed upon as the only possible author, and seems to have been himself persuaded by his friends that perhaps he was in some mysterious way the writer of the stories in question. It is claimed that a practical carpenter can find no fault with Adam Bede; his work is as well described as if done by a man bred to the bench; and of Daniel Deronda it is said that it shows a fullness of knowledge in regard to the Jews which even a Hebrew of the Hebrews might envy but scarcely hope to excel.

The crowd of notices of this singularly gifted woman have already nearly ceased, and we have watched in vain for some similarly appreciative remarks upon her medical characters. The industry with which she studied Jewish history and clerical character must have been almost equaled by the fidelity with which she applied herself to medical history and traditions.

It is natural, perhaps, that the faithfulness of her medical portraits should be less widely appreciated than other, but so far as the present writer has seen, it has been entirely unmentioned. Leaving out of view other characters, *Middlemarch* is the story of a physician, young, enthusiastic, proud, and self-reliant, well educated in his profession, but with little practical knowledge of the ways of getting bread and butter. His small inheritance nearly exhausted by the expenses of a Parisian education, he is dependent upon his profession while bent upon doing many things, highly praiseworthy from a scientific point of view, but not specially calculated to secure a good income. He goes into a country town where he excites the jealousy and hatred of the older practitioners, adds to his burdens by a marriage that proves uncongenial, becomes involved in suspicion over a case that terminates unfortunately, and ignominiously fails. Many of the

matters involved are so purely English that it is hardly possible for an American to judge of them, but the young doctor's experience, on the whole, contains much that is common in the life of most young physicians who are obliged to make their own way in the world.

Now, doctors figure in novels frequently enough, though they are generally the dimmest of shadows so far as their professional character is concerned, and many an otherwise good novel is completely spoiled for a medical reader by the author's exhibition of profound ignorance of everything pertaining to medicine except popular superstitions. The really good physicians of novels, with whom the living physician sympathizes, might almost be counted on the fingers.

George Eliot's Dr. Lydgate talks and acts as a medical man would do; he makes grave mistakes in dealing with brother-practitioners and ignorant patients, but they are natural mistakes for an untried physician of his temper, and the medical reader finds nothing improbable. Lydgate is undoubtedly, something of a prig, fond of comparing himself with great men whose lives are landmarks in medical history; ambitious above all to contribute something toward enlarging and strengthening the firm scientific basis of his profession, and to do so he would "keep away from the range of London intrigues, jealousies, and social truckling, and win celebrity, however slowly, as Jenner had done, by the independent value of his work."

Authors seldom attempt to follow physicians in their intercourse with their fellow-practitioners, for medical etiquette is a fearful thing to the laity, even at the present day. Lydgate's first complication with a medical brother is too matter-of-fact to be a work of the imagination. Fred. Viney, ailing for a few days, called in his regular attendant, Mr. Wrench, who found no well-marked symptoms, made general remarks about his being run down, and departed, sending round later certain powders, whose contents proved black and drastic. Next day the patient sat and shivered by the fire, and was evidently worse. Mr. Wrench, not appearing, was summoned, and was found to be away in a neighboring village; piqued at the neglect, and anxious about her boy, Mrs. Viney discusses the propriety of calling in another physician, and finally calls Dr. Lydgate. Dr. Lydgate listened to the mother's story, a narration in which Mrs. Viney insisted on every point of minor importance, especially upon what Mr. Wrench had said and what he had not said, and on examination of the patient found little difficulty in recognizing typhoid fever. He promised to write to the regular attendant, and, at the request of the mother, to meet him in the evening. The family was an important one, and he was naturally anxious to make a good impression, and, worse yet, he had seen Louis, and followed his demonstrations of the difference between typhus and typhoid, and, naturally felt somewhat superior to his elder brother on the subject; his manner in consequence was not specially conciliatory; the impolitic words of the self-important father, who was elated with recent political success, complicated the situation, and the sensitive

Dr. Wrench declined further attendance. Lydgate, with many regrets, but with a clear conscience, entered upon the full charge of the case, and at the same time upon troubles which ceased only with life itself.

It is by no means our desire to follow the course of Lydgate's series of mistakes and misfortunes, but simply to express our admiration of the genius that created him, and our appreciation of the sympathy manifested for the trials of a high-minded physician, and of the difficulties that beset his path.

It is perhaps needless to say that the story is a sad one, George Eliot's books have always an element of sadness; the picture of Lydgate's failure is so forcible and so life-like, it might so well be the biography of an actual physician, that one reads it with a feeling of actual bitterness.

The study bestowed upon the medical portion of the book we have already alluded to; it must have been prodigious, to borrow Dominic Sampson's favorite expression, — study of books, very evidently, but study of men also. It is evident that she had at some time in her life opportunities of watching very closely the sayings and doings, and even the manner of thought, of medical men.

Undoubtedly much of this study was done during the five years that intervened between the production of *Felix Holt* and *Middlemarch*. It was evidently, however, much more than a magnificent piece of cram. Much of her insight into the peculiarities of country practitioners was, without much doubt, the result of her girlish observation in her native town. Her study of physicians also included their patients and their afflicted families. The sympathizing relatives of one of Dr. Lydgate's patients afford Milner Fothergill a text for a long dissertation on nurses in one of his entertaining letters from England.

Many of the wise sayings might well be quoted: we have room only for a single quotation, which reads like a commentary on recent events: "Beware of too great readiness at explanation; it multiplies the sources of mistake, lengthening the sum for reckoners sure to go wrong," and "Even Lydgate's proud outspokenness was checked by the discernment that it was as useless to fight against the interpretations of ignorance as to whip the fog."

It is by no means the intention to add a moral, but the story of a faithful but unsuccessful life is fittingly closed by the closing words of the story originally applied to other characters of the book, "The growing good of the world is partly dependent on unhistoric acts, and that things are not so ill with you and me as they might have been is half owing to the number who lived faithfully a hidden life, and rest in unvisited tombs."

— A medical work, on an obstetrical subject, written in Italian and English, and very handsomely illustrated from frozen sections, fell under our eye the other day. On the title-page we found the following in Italian: "*Evoluzione Spontanea Sorpresa in Atto Mediante La Congelazione*," which was thus rendered into English: "Spontaneous Evolution Caught in Act through Corpsy Congelation."

OBITUARY: DR. THOMAS B. CURTIS.

WITH deep regret we have to record the sudden death, at the early age of thirty-nine years, of a very valued member of the editorial staff of the *JOURNAL*, Dr. Thomas B. Curtis. Dr. Curtis' connection with the *JOURNAL* in an official capacity had not been of long duration, and a recent absence from the country of several months had still further limited his immediate contributions to our editorial department, but his varied knowledge, good judgment, and really extraordinary learning in medical literature have always been freely at our disposal, and when he did take up his pen, what he wrote was always sure to be attentively read.

It is in the records of the Proceedings of the Boston medical societies, as they have appeared during the last six or seven years in the pages of the *JOURNAL*, that Dr. Curtis' name has become so familiar to our readers, and it is in these records that it will be so greatly missed in the future.

In the next issue of the *JOURNAL* we shall endeavor to give some details of the life of a man who, though young, was already remarkable, and who, had he lived, we think it may without exaggeration be safely said, would certainly have been very distinguished. To-day it is our duty simply to record the loss of a dear colleague.

MEDICAL NOTES.

— It is thought in some quarters that the quarantine establishment at the port of New York should be made self-sustaining, and testimony is now being taken before a committee of the State senate with a view to the practicability of attaining such an end. The fees of the health officer of the port now amount to between thirty-six thousand and thirty-seven thousand dollars per annum after deducting all expenses.

— A medical man in Toronto asserts that the results of the investigation made of several deaths of school-children which came under his observation were due solely to a too close application to books by scholars of nervous temperament and weak constitutions. He protests against a course of study so severe as to compel pupils, in order to keep up with their classes, to apply themselves to their books outside of school hours.

— At a late meeting of the Pathological Society of London, the president showed an ear of corn discharged through the chest. He saw a child with Dr. Massey, of Chamberwell, suffering from an abscess over the left supra-scapular region, the skin over it feeling boggy. No evidence of effusion of the chest. A grooved needle was passed in, and a puff of air and pus came out. Free suppuration occurred, and after a time an ear of corn was passed, and then the wound healed. On inquiry no history of how or when the ear got into the lung could be obtained; the child had not been ill. No doubt the ear of corn had been inspired. Watson mentions several cases of such bodies passing into a bronchus, but all ended fatally. A

similar case has recently been recorded in America, but with this exception Dr. Wilks knew of no other such case terminating in recovery. Dr. Goodhart remarked on the frequency with which foreign bodies get into the bronchi without causing acute symptoms. He had twice found gangrene of the lung associated with the impaction of a piece of bone in a bronchus, which had not excited any notice at the time of its inhalation. Mr. N. Moore suggested that the ear of corn should be referred to a skilled botanist, because possibly it was a species capable of a spiral movement, by which it worked its way to the surface. Mr. Eve mentioned a specimen, in St. Bartholomew's Hospital Museum, of an umbrella ferrule in the bronchus and abscess in the lung, in which there was no history to show how or when this large body entered, and the case had been regarded as one of simple phthisis.

— In his report of the Paris Night Service, for the quarter ending September 30th, as published in the *Gaz. des Hôpitaux*, Dr. Passant states that there were 1687 visits paid, or 18.3 per night. Of these, 676 (40 per cent.) were paid to males, 837 (50 per cent.) to females, and 174 (10 per cent.) to children under three years of age. Of these visits, 149 were for croup or other laryngeal affections, 201 for various affections of the lungs and heart, 369 for gastro-intestinal affections and other diseases of the abdomen, 11 for strangulated hernia, 13 for retention of urine, 114 for metritis, metrorrhagia, and miscarriage, 117 for labors, 393 for cerebral and other affection of the nervous system, 10 for insanity, 25 for alcoholism and delirium tremens, 24 for rheumatism, 49 for eruptive affections, 25 for typhoid fever, 89 for external or internal hemorrhage, 81 for wounds and contusions, 27 for fractures, dislocations, and sprains, four for burns, 13 for poisoning, two for asphyxia from charcoal, four for drowning, four for suicides. In 41 cases the patients were dead before the practitioners could reach them.

CHICAGO.

— The County Commissioners of Cook County have voted to turn over a part of the County Hospital to the homoeopathic profession, and have agreed to appoint seven homoeopathic physicians to attend to the work and to be known as the homoeopathic medical board, in contradistinction to the present board, whom the commissioners do not propose to disturb. Of the seven physicians to be appointed, the privilege is given to each of the homoeopathic colleges to nominate two. The remaining three will be elected by the board of commissioners without any nominations. One of these colleges has recently occupied its new building directly across the street from the hospital.

— As was expected, the cold weather has brought an increase of small-pox. It is breaking out in unexpected places and under remarkable circumstances. There must be a marked susceptibility to the disease on the part of our people. The health department has just restricted the west division (the largest) of the city, and has got a larger force of inspecting physicians. The work of vaccinating all the people in the neighborhood of cases of the disease is being

pushed, if possible, with more vigor; and renewed exertion is being made to compel those who have the care of cases of small-pox to keep in their houses and off from the streets.

Miscellany.

NINTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION AT SAVANNAH.

SECOND DAY'S PROCEEDINGS.

THE morning session opened with the election of new members and the appointment of various committees.

DR. J. J. SPEED, of Kentucky, read the first paper, on

INSIDE SOURCES OF DISEASE.

Proper attention to the stomach and appetites was urged as more important than external sanitary influences.

DR. A. J. MILES, of Ohio, presented a paper on

HISTORY OF SUNSTROKE MORTALITY IN 1881.

He stated that the total mortality rate per thousand in Cincinnati rose from an average during the past ten years of 181.77, in the months of July and August, to 280.99 in the same months of 1881; an excess of 99.22 per cent. The severest of the epidemic was from July 7th to 15th. The total mortality was 288; 95 were of American birth, nine colored. Only those deaths reported as directly from sunstroke were considered. With regard to the influence of humidity it was noted that 233, or 91.32 per cent., deaths occurred when the range was below 60, and that on cloudy days there were only 129 deaths, or 44.72 per cent. More than nine tenths of the mortality was on days when the air was dry; an observation contrary to generally received views. A marked decrease in the death-rate was obtained by erecting temporary hospitals all over the city, thus avoiding transportation. A clinical history of some cases was then given, showing that there were three distinct varieties of symptoms: (1) marked congestion of the brain, with bounding, incompressible pulse, and often convulsions; (2) somewhat similar to the above, except that the heart's action was very weak; (3) complete collapse. Immediate treatment was directed both to the extremely high temperature and the heart, the remedies and methods being those adapted to the same symptoms under other conditions.

DR. J. F. A. ADAMS offered the next paper, upon

MALARIA IN NEW ENGLAND.

Considering the period of prevalence, he said the disease was endemic for an indefinite period subsequent to clearing off the forests, then, disappearing entirely, it occasionally reappeared as an epidemic, lasting a few years. Since 1850 there have been a few cases always to be found in a low swampy region near New Haven, and from this district, in 1864, the disease began a northerly course through Connecticut, following the rivers, in 1877 crossing into Massachusetts, and penetrating to the extreme northwestern border of

the State. More than three fifths of the cases have been in Springfield, West Springfield, Holyoke, and Chicopee, cities near each other, two on the east, and two on the west bank of the Connecticut River. In high and dry places the disease has been rarely seen, as it follows directly up the rivers. The largest number of cases was found where there were swampy, muddy banks subject to periodical overflow, and, except these places, reservoirs for water-power were the most fertile sources of the poison, probably because large tracts of land, overflowed in the spring, were exposed as the ponds were drawn down during the summer; in fact, there seemed to be a direct relation between the amount of swampy bottom thus exposed and the prevalence of malaria. Eleven of the eighteen towns reporting more than six cases were in Hampden and Hampshire counties, and the remainder in Berkshire County, either near reservoirs or swamps. The disease did not advance steadily, but attacked places long distances apart, and subsequently the intermediate towns. With regard to the relation between malaria and typhoid fever, the reader found that, as malaria increased, typhoid decreased in the infected districts. He estimated that there were fewer cases of malaria this year than in 1880.

HON. ERASTUS BROOKS, of New York, offered a paper upon The Duties of the Citizen to the State in maintaining Public Health, showing the importance of individual aid in warding off contagious and infectious diseases.

AFTERNOON SESSION

a paper by DR. ALBERT C. GORGAS, U. S. N., on The Pernicious Effects of Tobacco on Youth, was read by title only.

DR. ISAAC JONES, of Pennsylvania, read a paper on School Hygiene.

The paper of DR. LOUIS A. FALLIGANT, of Savannah, upon Fraternity among Scientists, was read by title.

DR. C. B. WHITE, of New Orleans, presented a paper on

THE YELLOW FEVER EPIDEMIC OF 1878.

He stated that there was a preponderance both of the mortality and of the cases of adult males as compared with females. From an analysis of thirteen hundred fully reported cases he concluded that the actual greatest mortality was among four-year old males; that after that age the per cent. of recoveries was proportionally larger; that from seven to eleven years the death-rate was nearly uniform; that the smallest number of cases and deaths in 1878 was found at the age when the protecting influence of the epidemics of 1867 and 1870 would be most felt. He advanced no thoroughly satisfactory reason for the greater mortality of four-year old males.

The next paper was by DR. A. R. WRIGHT, of Buffalo, on the Probable Cause of an Epidemic of Diarrhoeal Diseases in Buffalo, N. Y., in August and September, 1881.

DR. MOSES T. RUNNELS, of Indiana, followed with a paper on Impure Water and its Dangers.

DR. F. PEYRE PORCHER, of South Carolina, and DR. J. D. GATCH, of Indiana, representing the governors of their respective States, addressed the Association.

DR. L. C. DUNCAN, of Illinois, read by title his paper, The Atmospheric Element in Local Epidemics.

EVENING SESSION.

The first paper of the evening session was by DR. S. S. HERRICK, of Louisiana, on Railroad Sanitation. He urged the employment of experts to examine employees for physical defects.

DR. B. JOY JEFFRIES, of Massachusetts, gave an interesting lecture on Control of Defective Vision on Land or Sea, illustrating his remarks by practical experiments.

The last reader of the day was DR. ALBERT L. GIBSON, U. S. N., on Health the True Nobility. He advanced the usual suggestions as to the necessity of pure air, good food, and cleanliness.

THIRD DAY'S PROCEEDINGS.

DR. DANIEL M. BURGESS, of Havana, read upon PRACTICAL EXPERIENCES IN REGARD TO THE INFECTION OF VESSELS WITH YELLOW FEVER AT THE PORT OF HAVANA.

As a result of his investigations it appeared that vessels may become infected in the harbor of Havana; that they may carry the infection; that they are usually infected at and near wharves or near infected vessels in regard to locality; that under such circumstances they may become infected at any season of the year; that the crew may carry the disease abroad; that to sugar, tobacco, and baggage the germs of the disease may adhere, and thus infect the crew and vessel; and also that vessels may enter the harbor of Havana at any season of the year, discharge their cargoes in the open bay, removed from any infected vessel, permitting none of their crew to go near the shore, and sail away uninfected and dangerous to no port that they may enter. The disinfecting of vessels by sulphur and sulphate of iron he considered entirely satisfactory in preventing the development of the disease after leaving the harbor.

Reports and the appointment of committees closed the morning session.

DR. EZRA M. HUNT, of New Jersey, opened the evening session with a paper entitled The Sanitary Significance of the International Medical College.

EDWARD FENNER, Esq., of New Orleans, read a paper on the New Orleans Sanitary Association.

Papers by DR. H. B. HOOLBECK, of South Carolina, on Scarlet Fever as it affected the White and Colored Races in Charleston, S. C., in the Spring and Summer of 1881, and by DR. R. B. S. HARGIS, of Florida, on Prevention of Diseases of Infants commonly ascribed to Dentition, were read by titles only.

(To be continued.)

A CURIOUS ENDEMIC ON BOARD THE NELLIE SWIFT: WAS IT BERI-BERI?

MR. EDITOR.—In reading your valuable journal of October 27th last, I noticed a paper, read before the Suffolk District Medical Society, entitled A Curious Endemic. It was certainly curious. I can see no similarity in the cases described by Dr. Shattuck and trichinosis as suggested by Dr. Gannett. As Dr. Shattuck indulged in the hope that some reader might be able, either by experience or reading, to throw some light upon the source or nature of the disease, I will, from reading, respectfully refer him to the disease known as beri beri, a disease very common in India,

Hindustan, Ceylon, and other parts of Southern Asia. Dr. Shattuck will find his cases described very fully in Aitken's Science and Practice of Medicine, page 116, second volume, under the heading of Beri-Beri, or the Bad Disease of Ceylon.

Yours most respectfully,

J. F. COSTELLO, M. D.

VEVAY, INDIANA, November 10, 1881.

MR. EDITOR,—At the same time that I heartily thank your valued correspondent for his suggestion as to the true nature of the cases reported under the head of A Curious Endemic, I regret that I cannot adopt his view. It is true that the sickness which befell the unfortunate crew of the Nellie Swift bears a certain clinical resemblance to mild cases of the disease known in India, Ceylon, etc., as beri-beri, in Japan as kak-ke.¹ Some recent German writers think this disease to be an endemic pernicious anemia, as it were; and of late the attention of the medical world seems to have been somewhat widely awakened to its consideration. In the summer of the year 1880, the first and only cases of the disease ever observed in this country were admitted to the Marine Hospital in San Francisco from a Brazilian ship-of-war. A report of these cases is promised in the forthcoming volume of Marine Hospital Reports, and cannot fail to be interesting reading. It is stated that the surgeons of this ship-of-war protested before she left Brazil on her cruise that she was not properly provisioned for so long a voyage, and that the quarters were very deficient from a hygienic point of view. The ship sailed for Europe, touched at various points in the Spanish Peninsula and in the Mediterranean, passed through the Suez Canal to Aden, where the disease first appeared, and gradually worked her way to San Francisco. In the Pacific Ocean a great deal of rainy weather was encountered, with much of the time intense heat. An idea of the provision in the ship for the health of the crew may be gathered from the fact that the infirmary was in the bows of the ship, had no ventilator, and was so dark that a lamp was required in the daytime to see the patients.

It is more than ten years since it became at all generally known that beri-beri is far from uncommon in some parts, at least, of Brazil, and I have dwelt on these cases reported from San Francisco in some detail, first, because they are the only cases ever known to have occurred in the United States,—or even North America; and secondly, because their apparent etiology agrees precisely with that assigned to the disease by competent observers in India, Ceylon, Java, Japan, etc., all of whom lay special stress on air vitiated by great swamps or other causes, poor and insufficient food, and prolonged exposure to wet and damp.

Now the crew of the Nellie Swift came from regions in which neither beri-beri nor any disease resembling it has ever been known to occur; the provisions and quarters were quite as good as is usual on Bank fishermen; no great hardships were encountered, and the outbreak of disease which we described stands absolutely alone, as far as can be ascertained, in the annals of the nursing fleet. In short, the entire absence of the exciting causes which all those who have studied the disease are agreed in assigning as productive of the same, and the fact that the affection has hitherto been

strictly confined to tropical and semi-tropical countries, draw a wide distinction between beri-beri and the "curious endemic" of the Nellie Swift.

Yours very truly, F. C. SHATTUCK.

December 6, 1881.

THE VIVISECTION PROSECUTION.

To those aware of the actual facts of the case, the result of the magisterial inquiry into Dr. Ferrier's conduct during the meeting of the Congress was a foregone conclusion. Whoever first instigated the prosecution was evidently suffering from the blinding effects of prejudice, and his excess of zeal in a foolish cause has had its usual and well-merited result. If the treatment to which Dr. Ferrier has been exposed is a fair sample, it is evident that these short-sighted and false friends of animals have determined to show towards those who make vivisectional experiments, and those who try to learn from those experiments, not even the commonest courtesy and fair play. Without the slightest intimation of their intention, the Society for the Protection of Animals from Vivisection, through Mr. Waddy, publicly accused Dr. Ferrier of breaking the law, and, not content with asking for a summons against him in a quiet manner, attempted by an *ex parte* statement to damage his reputation. By this aggressive action of the anti-vivisectionists, the question of the immense value of the experimental method as applied to living animals is once again raised. The issue is not one to be feared or avoided by the profession. In this country, at any rate, experiments on living animals have always been conducted by only a limited number of the most eminent members of the profession. Their object has at all times been clear, and the results attained have been so important and of such lasting benefit to men that we have a complete answer to give to any who, carried away by a feeling which is most praiseworthy when rightly directed, would challenge, on the ground of its uselessness, our right to "vivisect."—*Lancet*.

DISEASED MEAT AND OVERCROWDED TENEMENTS IN LONDON.

At a late meeting of the City Commission of Sewers, Dr. Sedgwick Saunders, the Medical Officer of Health, reported that during the preceding week over six tons of diseased meat had been seized at the slaughter-houses and markets. Public attention having been directed to the alleged overcrowding of houses in Windsor Street, and other streets in Bishopsgate, a night inspection had been made, and, while the result did not justify the charge of overcrowding, it was impossible to exaggerate the dirty condition of the premises, owing to the filthy habits of the inmates. In Windsor Street there were 12 houses with 103 rooms, in which 359 people dwelt; in Widegate Street, 7 houses, 48 rooms, and 88 persons; in Sandy Row, 6 houses, 49 rooms, and 124 persons; and in Catherine Wheel Alley, 3 houses, 16 rooms, and 73 persons. No persons were found sleeping in the basements; and the allegations freely made by irresponsible persons, that large numbers of persons occupied these rooms in the night alternately, had not been borne out. The structural condition of the majority of the houses would not justify any attempt to demolish them, although it must be

¹ *Boston Medical and Surgical Journal*, September, 1880, page 140.

admitted that the habits of the occupants were not conducive to health, morality, or decency. The disposal of the refuse of the city was also discussed, and it was proposed to conduct, at an expense of over £9000, experiments on a patent process for consuming it; the subject was ultimately adjourned, in order that the court might obtain counsel's opinion upon matters involved.

The *Medical Times and Gazette* thinks it is to be regretted that the magistrates generally will not combine in an effort to put down the disgusting traffic in bad and unwholesome meat which is still openly carried on in England, and that the only method to effect this would be to abolish fines and inflict imprisonment in every case.

THE POSITION OF THE EMBRYO IN THE FOWL'S EGG.

In a short article on the Position of the Embryo in the Fowl's Egg, communicated to the *New York Medical Record*, Dr. J. C. Dalton says:—

During the last summer I opened one hundred fowls' eggs, from the first to the third day of incubation. Of these, in four instances the embryo was longitudinal in position, with its head once toward the pointed end of the egg, and three times toward the round end; in twelve it approximated the position described by Foster and Balfour, namely, with its right side toward the round end and its left side toward the pointed end of the egg; while in the remaining eighty-four its right side was toward the pointed end and its left side toward the round end. But, among the last-mentioned cases there were only fifty in which its position was exactly transverse in regard to the egg. In thirty-four it was more or less oblique; the head being inclined in twenty-six cases toward the pointed end, and in eight cases toward the round end. In the twelve cases, furthermore, where the embryo lay with its two sides in the position described by Foster and Balfour, it was exactly transverse in only five, being more or less oblique in the other seven.

The position assigned to the embryo by Kölliker is therefore correct for the large majority of cases (eighty-four per cent.); except that it is not so rigidly transverse as might sometimes be inferred from the language of the books, but presents an occasional obliquity, most frequently toward the right. An increased deviation in this direction may shift the position of the embryo, in different cases, around the entire circle. But, notwithstanding this variation with respect to the exterior form of the egg, the relation of the embryo to the yolk and the embryonic spot is not necessarily altered. As the globular yolk is already fecundated at the time of its exit from the ovisac, and receives its envelopes of albumen and egg-shell afterward, the various positions of the embryo in the egg may be due to the manner in which the yolk is received into and transported through the oviduct. The egg receives its ovoid form in the oviduct, from the unequal deposit of albumen in front and rear of the advancing yolk; and the segmentation of the cicatricula (the first step in the formation of the embryo) goes on within the oviduct, and is nearly or quite complete in the new-laid egg. The position of the embryo on the surface of the yolk is determined by the mode in which segmentation takes place in the cicatricula; and this is very possibly the same in all cases.

But the yolk may vary its position in the fully formed egg, according to the way in which it entered the oviduct and there received its albuminous envelopes. Consequently, the embryo may vary from its usual position with regard to the two ends of the egg, without any change in its relation to the yolk or the cicatricula.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 3, 1881, TO DECEMBER 9, 1881.

MURRAY, ROBERT, colonel and surgeon, medical director, Military Division of the Missouri. The leave of absence granted him in S. O. 100, October 5, 1881, Military Division of the Missouri, extended two months. S. O. 272, A. G. O., December 2, 1881.

SUMMERS, JOHN E., lieutenant-colonel and surgeon, medical director of the department. Granted leave of absence for twenty-five days. S. O. 123, Department of the Platte, December 1, 1881.

WRIGHT, J. P., major and surgeon. The leave of absence granted him in S. O. 229, November 8, 1881, Department of the Missouri, extended twenty days on surgeon's certificate of disability. S. O. 123, Military Division of the Missouri, December 2, 1881.

PERLEY, H. O., captain and assistant surgeon. At the expiration of his present leave of absence to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 274, A. G. O., December 5, 1881.

TAYLOR, A. W., first lieutenant and assistant surgeon. Assigned to duty at Fort Supply, Indian Territory. S. O. 246, Department of the Missouri, November 29, 1881.

JOHNSON, RICHARD W., first lieutenant and assistant surgeon (recently appointed). To report by letter to the commanding general, Department of Dakota, for assignment to duty. S. O. 272, C. S., A. G. O.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the Society will be held on Monday evening, December 19th, at eight o'clock, at the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Lawrence. Subject, Phonic Paralysis, with Rapid Respiration.

M. H. RICHARDSON, M. D., Secretary.

BOOKS AND PAMPHLETS RECEIVED.—On the Poisonous Properties of Quinine. By William O. Baldwin, M. D., of Montgomery, Ala. With Remarks by J. Marion Sims, M. D. (Reprint.)

A System of Surgery, Theoretical and Practical, in Treatises by various Authors. Edited by T. Holmes, M. A. Cantab. First American, from second English edition, thoroughly revised and much enlarged. By John H. Packard, M. D., assisted by a large Corps of the most eminent American Surgeons. In three Volumes, with many Illustrations. Vol. II. Philadelphia: Henry C. Lea's Son & Co. 1881.

The Use of Hot Water in the Local Treatment of Diseases of the Eye. By Leartus Connor, M. D. (Reprint.)

The Practice of Medicine by Women in the United States. Emily F. Pope, M. D., Emma L. Call, M. D., C. Augusta Pope, M. D. A Paper read before the American Social Science Association at Saratoga, Wednesday, September 7, 1881.

Chronic Club-Foot successfully treated without Tenotomy by continuous Extension and Stretching. By James S. Green, M. D. (Reprint.)

A New Gynecological Table. By W. A. B. Sellman, M. D. (Pamphlet)

Transactions of the Michigan State Medical Society for the Year 1881.

The Prevention of Stricture and of Prostatic Obstruction. By Reginald Harrison, F. R. C. S. London: J. and A. Churchill.

The Physician's Daily Pocket Record, comprising a Visiting List, many Useful Memoranda, Tables, etc. By S. W. Butler, M. D. Sixteenth Year. New and thoroughly revised Stereotype Edition, with Metric Poological Table, etc. Edited by D. G. Brinton, M. D. Philadelphia: Published at the Office of the Medical and Surgical Reporter. 1882.

The Nurse and Mother. A Manual for the Guidance of Monthly Nurses and Mothers. By Walter Coles, M. D. St. Louis, Mo.: J. H. Chambers & Co.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 3, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	708	192	28.53	16.38	9.60	2.26	2.54
Philadelphia.....	846,984	355	102	—	4.22	9.30	3.97	—
Brooklyn.....	566,689	269	105	29.37	14.87	14.50	1.12	1.49
Chicago.....	503,304	—	—	—	—	—	—	—
Boston.....	362,335	177	51	17.51	10.73	7.90	3.39	2.82
St. Louis.....	350,522	139	45	28.78	12.23	5.76	6.47	4.31
Baltimore.....	332,190	178	73	—	—	—	—	—
Cincinnati.....	255,708	100	37	18.00	17.00	5.00	4.00	5.00
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	73	30	9.72	22.00	4.11	1.36	—
Pittsburgh.....	156,381	109	39	47.71	7.34	4.59	6.42	.92
Buffalo.....	155,137	69	26	43.50	11.60	13.04	4.35	1.45
Milwaukee.....	115,578	40	17	20.00	10.00	5.00	2.50	2.50
Providence.....	104,857	36	12	33.33	19.44	19.44	—	2.78
New Haven.....	62,882	19	3	21.05	10.53	10.53	10.53	—
Charleston.....	49,999	37	12	18.92	16.22	2.70	2.70	8.11
Nashville.....	43,461	27	11	22.22	7.41	3.70	14.82	—
Lowell.....	59,485	28	6	10.71	3.57	7.14	3.57	—
Worcester.....	58,295	13	6	15.38	15.38	7.69	7.69	—
Cambridge.....	52,740	20	7	15.00	15.00	10.00	—	—
Fall River.....	49,006	17	6	23.53	5.86	11.76	11.76	—
Lawrence.....	39,178	10	5	—	—	10.00	—	—
Lynn.....	38,284	6	1	—	—	—	—	—
Springfield.....	33,340	8	2	12.50	12.50	12.50	—	—
Salem.....	27,598	17	3	23.53	11.76	11.76	—	5.88
New Bedford.....	26,875	6	2	—	16.66	—	—	—
Somerville.....	24,985	9	3	—	44.44	—	—	—
Holyoke.....	21,851	17	5	53.00	11.76	5.88	11.76	11.76
Chelsea.....	21,785	3	0	53.33	—	—	33.33	—
Taunton.....	21,213	4	1	25.00	—	25.00	—	—
Gloucester.....	19,329	8	5	12.50	50.00	12.50	—	—
Haverhill.....	18,475	9	1	11.11	11.11	—	11.11	—
Newton.....	16,995	4	2	25.00	—	—	—	—
Newburyport.....	13,537	3	1	33.33	—	—	—	—
Fitchburg.....	12,405	7	3	—	28.60	—	—	—
Twenty Massachusetts towns.....	153,477	46	10	13.04	10.88	6.52	—	—

Deaths reported 2571 (no report from Chicago and New Orleans); 824 under five years of age; principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 661, consumption 359, lung diseases 320, diphtheria 239, scarlet fever 115, typhoid fever 85, small-pox 54, diarrhoeal diseases 41, malarial fever 36, whooping-cough 25, puerperal fever 16, cerebro-spinal meningitis 15, erysipelas 10, measles five, typhus fever one. From *scarlet fever*, New York 67, Brooklyn 20, Philadelphia and Pittsburgh nine each, Buffalo four, St. Louis three, Cincinnati two, Baltimore, Milwaukee, Providence, Charleston, Cambridge one each. From *small-pox*, Pittsburgh 28, Philadelphia 14, New York and Holyoke three each, Cincinnati two, Brooklyn, St. Louis, Baltimore, Buffalo one each. From *malarial fever*, New York 14, St. Louis nine, Brooklyn eight, Buffalo three, Baltimore two, District of Columbia, Milwaukee, Nashville one each. From *whooping-cough*, New York eight, Baltimore two, Brooklyn, Boston, District of Columbia, Buffalo two each, Philadelphia, St. Louis, Pittsburgh one each. From *puerperal fever*, Boston three, New York, Brooklyn, St. Louis, Buffalo two each, Charleston, Salem, Holyoke, Newton one each. From *cerebro-spinal meningitis*, New York and Philadelphia three each, Pittsburgh, Buffalo, Milwaukee two each, Providence one. From *erysipelas*, New York and Buffalo two each, Boston, St. Louis, Pittsburgh, Providence, Worcester one each. From

measles, New York three, Buffalo, Providence one each. From *typhus fever*, New York one.

In 37 cities and towns of Massachusetts, with a population of 1,610,359 (population of the State 1,783,086), the total death-rate for the week was 19.80 against 18.40 and 18.06 for the previous two weeks.

For the week ending November 12th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 22.4. Deaths reported 3264: acute diseases of the respiratory organs (London) 433, scarlet fever 142, measles 112, fever 76, whooping-cough 73, diarrhoea 39, diphtheria 34, small-pox (London 27) 28. The death-rates ranged from 11.9 in Leicester to 39.5 in Hull; Sheffield 21; Leeds 21.7; Birmingham 21.9; London 22.3; Bristol 23.4; Manchester 24.6; Liverpool 28.5. In Edinburgh 21.9; Glasgow 23.1; Dublin 21.3.

For the week ending November 5th in the 21 chief towns of Switzerland, population 479,934, there were 16 deaths from pulmonary consumption, diarrhoeal diseases 15, acute diseases of respiratory organs 10, typhoid fever eight, diphtheria and croup four, whooping-cough three, measles one, puerperal fevers one. The death-rates were, Geneva 22.9; Zurich 20.3; Basle 13.4; Berne 23.4.

NOTE. — The other foreign reports have been delayed by rough weather and long passages. — Ed.

Original Articles.

ADDRESS DELIVERED BEFORE THE MASSACHUSETTS MEDICO-LEGAL SOCIETY.

BY ROBERT AMORY, M. D., OF BROOKLINE, PRESIDENT OF THE SOCIETY.

GENTLEMEN of the Massachusetts Medico-Legal Society.—It is now four years since the medical examiners' law went into effect, and upon this fourth anniversary of the organization of our Society I desire your attention to a review of its operation, but first let me preface my remarks. The abuse of the old principle of a coroner's jury led, as you are well aware, to the present change in the system of legal inquiry into the cause and manner of suspicious death, and an attempt has been made by the legislature to divide this inquiry between two officers; and placed first in order of inquiry was the determination of the medical cause of the suspicious death, and, second, the juridical exposition of the responsibility for this death. Our duty as medical examiners being concerned in the successful operation of the present law, we should, from time to time, endeavor to ascertain whether the object provided for in the first-named division is constantly and properly carried out.

Can a correct explanation of the cause of death in cases of supposed violence be as well obtained under the present as under the old system of investigation? Our able associates have informed us that, theoretically, the answer to this question is affirmative, but its practical proof is better known to us than to others, and is sufficiently attested by an appeal to the annual returns of our own active members, which have been duly summarized in turn by your executive committees, and now are deposited in this medical library.¹

The statute requires that the medical examiners must be "able and discreet men, learned in the science of medicine," and "shall be liable to removal from office at any time by the governor and council for cause shown." Consequently, any one holding this commission cannot plead inability to ascertain any cause of death which is now familiar to the best pathologists; hence, if upon simple view of a dead body he has a reasonable opinion of the cause of death, whether by natural means or by violence, he may immediately take appropriate action, and if by the latter he shall then state his opinion in a communication to the trial justice; but if he cannot thus readily satisfy his own mind the law provides that the medical examiner may, after obtaining proper authority, examine the corpse post mortem. Thus it would seem as if every means were placed in the hands of the medical officer to form, so far as human skill will allow, a correct judgment of the cause of death. Yet we must not forget that our present knowledge of the causes of death is very far from complete, and that some cases will arise, and even have already arisen, as most of us who have had any practical experience in these affairs will confirm, wherein even medical science fails to elucidate the doubt. Unfortunately the community expects more knowledge from the medical practitioner, not only of the causes and cure of disease, but even of the causes of death, than we have any right to pretend to. Now, under the old law it would, at first sight, seem just to expect that a jury of medical men, under the

authorized investigation of the coroner, would more correctly arrive at a definite conclusion of the cause than would the present medical examiner by his own unassisted inspection and judgment. This is, however, a fallacy, because, in the first place, it was very difficult for the coroner to get an intelligent medical jury, and so most usually the jury was composed of some men who were educated in medical knowledge and of some who had none of this knowledge, hence the verdict was confusing and perplexing. Again, it must be admitted that medical men differ in judging similar circumstances, and hence sometimes a jury composed of medical men only would give a misleading verdict. Now, however, the medical examiner may form his judgment without interference from others. As this judgment of facts and results from inspection must be reduced to a written opinion it is susceptible of review and criticism, and hence will require care and truthfulness in its preparation. Having to form an opinion of the cause of death only, and not of its human agent, no technicalities of law come between him and his own conclusions.

Practically we must admit the wisdom of the principle of this legislation, for its workings and processes are simple, and are concerned with matters about which the medical practitioners of to-day should be thoroughly familiar. In brief, then, the medical examiner has simply to put into practical operation the faculties of observation which he employs daily, while he has nothing to do with learning upon whom the responsibility of criminal accountability may lie.

The brief synopsis I have thus given leads to the natural inference that the means offered by law for the correct explanation of the cause of death by supposed violence has proved an incalculable benefit to the community in general on account of the substitution of positive knowledge for speculative doubt. I might also cite the advantage that the present quiet and dignified method of procedure has over the now obsolete excitement caused by the coroner and the impanelled jury; the medical examiner privately examines and privately communicates the result of his examination. Moreover, the increasing amount of information obtained by the careful and close attention required throughout the State from those who investigate and report the diagnosis of the cause of death, is a benefit to medical education.

When the new law was first put in force, undoubtedly many cases were reported to the medical examiners which need not necessarily have been examined by them, for though the deaths were mysterious, the mystery was concerned only with natural causes, and not with those of violence; yet society required the medical examiner in these cases to certify as to the cause of death, and oftentimes he was unable to do this without a post-mortem investigation. Our more recent experience shows that many of the cases which were at first, owing to this cause, included in our annual returns should never have been reported to the medical examiner. In these cases the fact must not be overlooked that it was wiser to err in cases of doubt upon the side of too much rather than too little investigation.

But just here let me call the attention of this Society to a fact of which many of you are apparently ignorant. In our archives is stored a very valuable amount of material for pathological study, as related in the reports of cases which are carefully indexed and arranged for

¹ At 19 Boylston Place, Boston.

easy reference. These cases should be examined and read for the information of our various members, who will learn much that is interesting to them in their official capacity, even if no mention be made of the advantages they possess for the medical practitioner. If many of these cases were known to you, much of the questioning made at our meetings as to the methods and conduct in certain unexpected official perplexities would appear to you superfluous, and very much that is interesting to scientific research would receive the attention of members who now rarely join in discussion. If the future of this Society is to be an important link in forensic medicine, more energy and active zeal is required from the county medical examiners, before whose eyes I am sure many interesting pathological questions have been brought, and from whom much valuable information can be obtained.

No one would hesitate to pronounce, from the knowledge we have gained in the practical study of the causes of death by supposed violence, that justice under the present process of our law is greatly facilitated in the acquisition of the actual determination of the causes which led to the death of the victims of crime. The picture which has so often been brought to the view of the individual members of our Society, in which is discovered the corpse of a person who apparently has met with a violent death, either from his own hands or that of others, is peculiarly vivid. Instead of hurriedly convening a jury from a gaping and curious crowd around the scene of recent violence, the medical examiner is hastily summoned, and rapidly proceeds to take charge of the body and to remove it quietly and decently to a secluded place; during the time that his application for an autopsy is being surveyed and considered by the proper authorities, he has time to summon two competent witnesses, who when practicable should always be physicians; then with locked doors he calmly and carefully makes the autopsy, reduced to writing by the aid of a qualified clerk, and from this record he draws up a clearly defined report which is immediately forwarded both to the trial justice and to the district attorney. Here end the functions of the medical examiner. It thereupon becomes the duty of the trial justice to make inquest as to the responsibility of the violent death, if it is shown in the aforesaid report that it was caused by the agency of man. After he has held an inquest the judge, or trial justice, gives his verdict, which is the first public announcement since the medical examiner was first summoned. Can anything be simpler? There can be no conflict of opinion, because on the one hand the medical examiner pronounces the medical causes of death, and on the other hand the judicial officer determines whether this cause implicates a problematical criminal responsibility. In order to fix the individuality of the responsibility, the district attorney lays the whole matter before the grand jury, which may or may not return a bill of indictment.

I hope the Society will pardon me for speaking thus in detail of matters which are as familiar to its members as they are to its president; but it is important that we should keep these facts always in plain view. I doubt very much whether our present reformed legislation would have waited so long for the law of to-day, if the coroners of the State had met together as often as has this Society, and thus have probably brought about the same reform as now exists. When we were first commissioned, we were all aware that the success of the medical examiner's law depended upon the abil-

ity and competency of the officers commissioned to carry out its provisions, and, being unacquainted with our new duties, naturally we met together and organized this Society. Does any one of its members for a moment realize that the success of the present law is assured? Do we not all of us, and each one, know that if we cease to exist as a society the influence we now exert upon the community will be seriously weakened, and the mutual benefit derived from interchange of views will be lost to us, and that future appointments to be made by the executive might be selected which would depreciate the qualifications of our successors? Do not understand me to impugn the character of the present, or any other chief executive of our State; but we all know that the appointments of county officers, and medical examiners are county officers, have been in more than one instance relegated to the councillor of the district, and the appointment issued upon his nomination. For this, even if for no other reasons, it becomes the duty of this Society to make its influence and power felt, not by scheming for successors to office, but by establishing a name for probity, earnestness, careful scientific research, and for the collection and storing of valuable information obtained by each one of its members. Nor let the work stop here; material facts and earnest work are of no great value, unless each one of us endeavors to increase our knowledge, not by questioning and answers only, but by earnest discussion of cases coming under our personal knowledge, or of those reported at our various meetings.

I have spoken of the advantage to the community and to justice in the present law concerning medical examiners. The advantage to the medical profession is also great. An authorized autopsy in case of a sudden death by supposed violence presents a means of study in pathological science which is invaluable. I do not wish to insinuate that in the new law the facilities for post-mortem investigations are any easier than under the old coroner's law; indeed, experience shows that the facilities for unnecessary dissection are not so great, but are only allowed for the better advance of the ways of justice, and needless autopsies are checked; yet the medical officer must examine carefully and deliberately, for his own reputation, and even still further, for the better guide to his written opinion, for which he alone, unsupported by a jury, must prepare himself. The result of all this is the collection of a very valuable series of post-mortem observations in many cases of death which have been caused by natural lesions; because there are many cases of death in which violence is suspected which are proved by the autopsy not to have resulted from the hand of man. I doubt whether the autopsies held by coroners under the old law were as carefully conducted, because here the coroner had simply to charge his jury with such information as he deemed essential to their minds, which generally were not educated in medicine, and his jury gave its verdict, which was a brief summary of a preliminary examination to a charge of murder, or else simply a statement that the deceased came to his death by natural disease or by the hand of Providence.

It seems to me that the practical operation of this law has also relieved the district attorney of the weighty responsibility of deciding whether the coroner and his jury had sufficiently examined the medical aspect of the case, and in a way to assist him in his preparation for the court; while, again, he cannot help being

satisfied with the verdicts rendered by the magistrate. Our associates, the district attorneys, can inform us, if they wish, whether or not, under the present law, the statement is not warranted that the facts of the crime and the cause of death are more truly set forth at present than in the old coroners' time. From what little has passed under my own observation I feel confident that these officers go into the investigation of their cases now with more satisfaction than was their wont six years ago. They feel pretty sure whether the victim came to his death naturally or by the hands of another. I cannot, however, forbear to mention, in this connection, that but few of these officers have lent much active help to our Society, and I regret that the professional demands upon their time and attention have apparently robbed us of their counsel at our meetings. From the little we have heard from them, I feel confident that we are being continually deprived of very valuable assistance which they could give to us if they would attend our meetings.

One great boon to the State, resulting from the medical examiner's law, will be duly presented to you in the report of your executive committee: This is in relation to the costs to the counties of inquests under the coroners' law, and under the new statutes. As this was the main argument which led to the abrogation of the old statute, and to the institution of the new law, I think you will be much interested in the material facts which we have been able to obtain from the various county commissioners. I will not forestall your interest in this portion of our review, but will simply say that the figures of costs, for three years, bear out the fact that the new law has been more economical than the old statute.

Thus we can claim for the advantages of our new legislation, after four years of its experience: (1.) That the investigation of the cause of death after supposed violence is unattended with the disagreeable and harassing circumstances of partial publicity which were necessary under the old coroner's system. (2.) A more certain and definite knowledge of the cause of death. (3.) An inquest under a magistrate who presents his verdict without the inconvenience of a jury. (4.) A written and detailed account, from both medical and judicial examiners, which forms a more convenient record for use by the district attorney in presenting the case before the grand jury. (5.) A financial saving to the treasury of the counties. (6.) An opportunity for study of pathological science.

I cannot refrain, moreover, from expressing a summary of the work which your Society can accomplish. (1.) A mutual exchange of opinions which will serve to increase the educational knowledge of the medical examiners. (2.) The elevation of the office of a medical examiner so that competent persons will be desirous of appointment. (3.) The collection of a valuable record of autopsies and statistics for reference by the general practitioners of medicine as well as by the medical examiners. (4.) The establishment of a discussion in forensic medicine among our profession, the lack of which has suffered this subject to be neglected in our State. (5.) The establishment of concerted action under the influence of which future appointments to office will insure competent men. (6.) A censorship under whose censure incompetent officers shall be removed from their office.

I need not say that the maintenance of this Society and its objects requires much sacrifice of time and de-

votion to its interests on the part of its members, and it should be the duty of the officers of this Society to influence you individually and collectively to exertion and active zeal to promote these objects.

I owe you, gentlemen, an apology for myself in resigning my commission, and thus being deprived of lending an active support to this Society, but you must be aware that my absence from the State for nearly a quarter of each year would render me liable to the criticism that I was derelict in duty, and hence I felt obliged to vacate my commission, and at the same time to resign an active membership in your body; and, moreover, I deprive myself of the honor of being your president.

I cannot retire from this chair without expressing my thanks for the honor you have conferred upon me, and for the courtesy you have always extended to me, and hope that my successor in office will enjoy as much as I have done the work of conducting your meetings, as well as of maintaining the organization which my predecessor and myself first conceived soon after our commissions were given us. I shall always give you what support I am able, and shall always look with pride upon the written work which may be stored in your archives.

A CASE OF UNITED CHILDREN OR DOUBLE MONSTROSITY.¹

BY JOSEPH STEDMAN, M. D.

Mrs. A. B., age thirty-five years, mother of three children; labors normal; first only three hours; ceased to menstruate March 28, 1880; commenced to be very uncomfortable, and suffered a good deal in May following with pain in the right side, apparently at first of the abdominal muscles, for which soothing lotions and a bandage was applied. About September 20th so much pain and distress was developed in the region of the liver and right side of the abdomen that it was impossible for her to be comfortable in any position, sitting, moving about, or reclining. Thinking that continued rest in bed for a series of days would be beneficial I directed her not to rise from the recumbent position for a week, for any purpose whatever. Although she strongly objected to this, it was persevered in and after three days she experienced considerable relief. At this time I made careful examination by auscultation and otherwise, thinking it might be a case of twins, but could not satisfy myself on this point. After ten days' rest she was allowed to sit up a portion of the day, and during the remainder of her pregnancy was much more comfortable although she could not move around without great pain and discomfort, and spent the most of her time in a Wilson reclining chair. Labor pains commenced November 28th and were regular and of good character. I saw her at nine p. m. and found the os dilating well, a vertex presentation, first position.

The pains continuing and dilatation being well accomplished, and not much progress being made, I ruptured the membranes and the head descended into the pelvic cavity. After the liquor-amnii was evacuated, there being a large amount of it, I made an external examination and found another head above the pubes which could not be felt before. I now supposed I had twins to deal with, and as the pains were vigorous

¹ Read before the Boston Obstetrical Society.

and no further progress seemed to be made, after a half hour's delay I applied the forceps and delivered the head. The body not following I made an examination and found another head in the pelvic canal. Still supposing I had twins I made some slight effort to push the second head up so to allow the body of the first child to come down; not succeeding readily I made more careful examination, and although I could not determine any union of the children I felt quite sure I had a monster to deal with, and decided to deliver the other head by the aid of the forceps. This I did after some careful manipulation without any injury to the mother. The delivery of the body was soon accomplished after the heads were delivered, and I found it to be a case of double monstrosity, still-born.

I have the pleasure of exhibiting the specimen to the Society, together with a written report of the examination very carefully made by Dr. W. F. Whitney.

The patient made a good recovery and her strength and general tone is as good as after the birth of her other children.

The monstrosity is represented by the union from clavicle to umbilicus of two otherwise well-formed male fetuses, face to face. Condition known as thoracopagus.¹

The weight, without the placenta, was 4970 mgm. One fetus, which will be called A, was 47 cm. in length, the other, called B, was 48 cm. Each head measured 33½ cm. in circumference, and was well covered with long hair. A single testicle could be felt in each scrotum. The nails did not reach to the ends of the toes.

The placenta was single, and weighed 680 gm. The cord was short, and carried two arteries and two veins.

The umbilical cord entered the abdomen at one edge of an oblong slit, eight cm. in its longest diameter, which had been covered at one time by an extremely thin membrane, remnants of which were still adherent to the edges. From this opening coils of small intestine protruded.

The right hypogastric artery from each fetus furnished an artery to the cord, while the left could be traced but a short distance above the bladder, where it ended as an impervious string. The umbilical veins remained closely united but distinct, and entered the liver together in a deep fissure.

An incision was made along the line of union on one side, and the integuments dissected back, when it was found that each sternum had failed to unite along its own middle line, but that the lateral halves had joined those of the opposite fetus, and in this way was formed a common thoracic cavity. The union of the integuments as far as the umbilicus formed a common abdominal cavity to that point. From there the abdominal cavities were distinct but communicating.

The internal organs which presented any marked peculiarities were the hearts, the liver, and the intestinal tract below the diaphragm.

The hearts lay in a common pericardial sac. The auricular portion presented no external line of separation, while the ventricles, which were slightly raised upward and tilted to the right, so that the base of A was close to the apex of B, were distinct but slightly adherent to each other by a narrow, firm band of connective tissue.

Upon opening, the auricular portion was found to consist of a single cavity, in which were partial folds and incomplete septa, marking, first, the line of separation between the two hearts, and then between the right and left auricles of each heart.

The line of separation between the heart of A and B was simply a slight folding or constriction of the wall of the sac at its central portion.

The portion of the sac which was thus marked as belonging to A was partitioned off by a muscular septum reaching through two thirds of the height of the sac. This septum was perforated by a large circular opening (Eustachian valve) allowing still further communication between the two portions. Into the portion which would correspond to the right auricle there opened the inferior and superior vena cava and the pulmonary veins, and from it there was a passage into the right ventricle closed by the valve. From the right ventricle, which was quite small, the pulmonary artery was given off as usual, and from the left branch of this the ductus Botelli, which was rather long and slightly twisted, passed to the aorta.

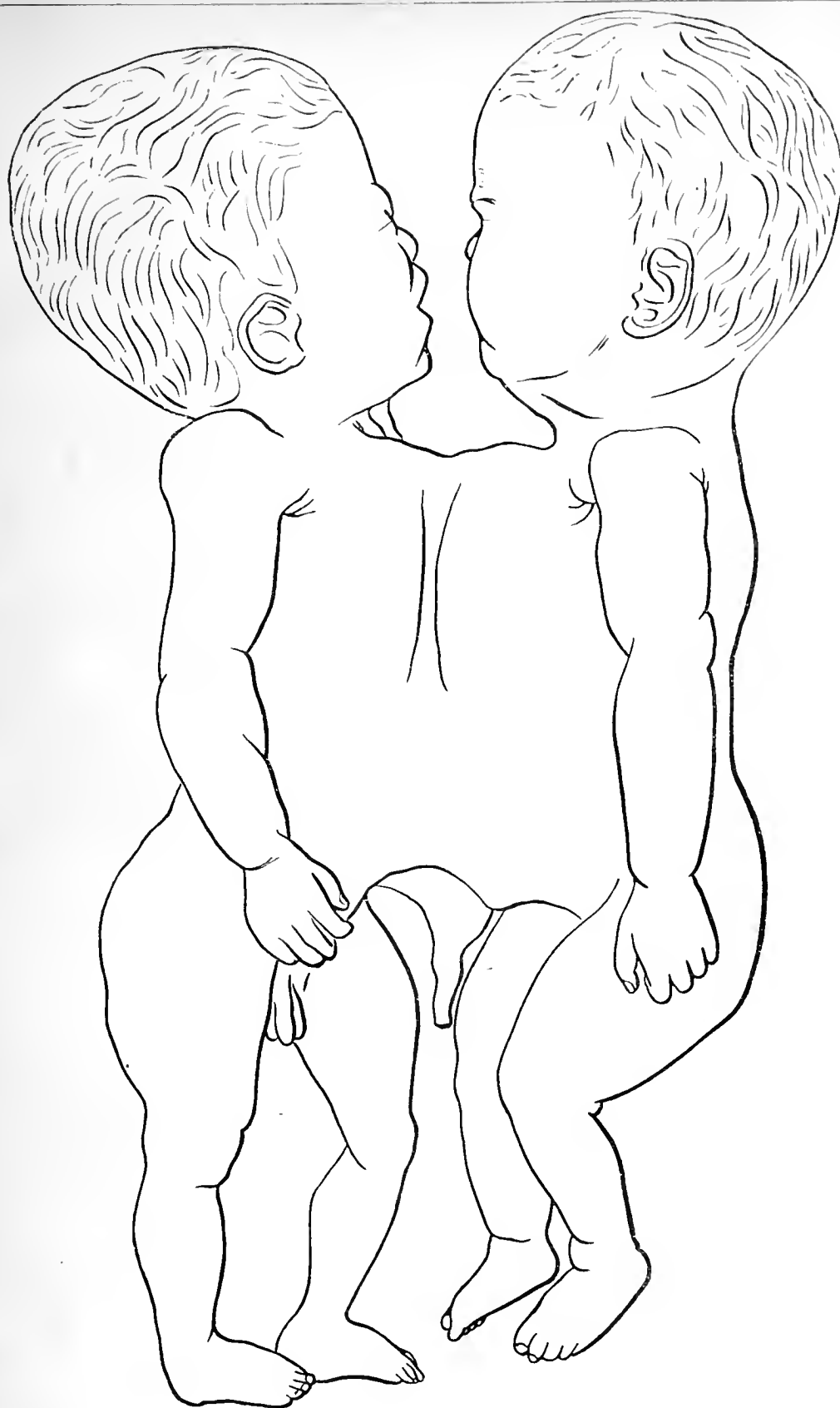
The portion of the sac which would correspond to the left auricle communicated freely with the right auricle of B, and had a passage into its own left ventricle, from which the aorta was given off in the normal manner.

The portion of the sac which represented the auricular parts of the heart of fetus B was also subdivided by a septum, which was much lower than in the case of A, and was imperforate. The portion, then, which would correspond to the right auricle communicated on the one side with the left auricle of fetus A, and on the others with its own left auricle, but there was no opening into the right ventricle, nor did it receive any vessels. The part corresponding to the left auricle received the superior and inferior vena cava and the pulmonary veins, and opened in the usual manner into the left ventricle, from which the aorta was given off. Upon cutting into the right side of the ventricular part of the heart a cavity was found connecting with the pulmonary artery. This latter was filled with a friable, reddish clot to the bifurcation, the ductus Botelli being given off from the left pulmonary artery close to that point. The supply of blood to the lungs must, then, have been furnished from the aorta through the ductus Botelli.

There was a double set of all the abdominal viscera except the liver, which was a large, deeply and irregularly fissured mass, in which no line of separation could be distinctly traced. The only indication of a gall-bladder was a dark discoloration in a fissure on the under surface of the organ, opposite where the pancreas joined the intestine. In fetus A the vena cava inferior was completely surrounded by a lobe of the liver for a short distance. In fetus B the relation was normal. In neither case was there any trace of the ductus venosus.

The stomachs in both were rather small but normal in position, and passed normally into the duodena. These extended for a distance of from six to nine cm. when they terminated with a flaring mouth, as if the intestine had been cut across obliquely. Lying in close proximity to these were two sacs of about the size of a small orange, in each of which was an oblong slit three to five cm. in extent opening freely into the abdominal cavity. These sacs contained a considerable quantity of discolored mucus. On the same side with

¹ Foster. *Medical and Surgical Monographs*.



the slits, and at a short distance from them, there passed off the continuation of the small intestines, which in the rest of their course were normal, as were the large intestines.

The remaining organs were normal in position, number, and form.

In brief, then, the monstrosity is one of thoracopagus, having a cord carrying two arteries and two veins, the ductus venosus entirely wanting, the auricular portions of the heart united into a common cavity, with no right auriculo-ventricular opening in the case of fetus B, and in consequence the lungs receiving their blood from the aorta through the ductus Botelli. The livers fused into one mass, with an absence of gall bladders, the duodena opening freely into the abdominal cavity, and the small intestines recommencing again with two large ampullae, also opening into the abdominal cavity.

RECENT PROGRESS IN OTOTOLOGY.

BY J. ORSE GREEN, M. D.

A NEW ROUTE FOR THE EXTENSION OF MASTOID INFLAMMATION TO THE NEIGHBORING TISSUES, AND THE NECESSARY TREATMENT IN THESE CASES.¹

It has fallen to the fortune of Bezold to explain satisfactorily, and apparently to prove experimentally, the pathology of some of the complications of mastoid inflammation, which have undoubtedly been seen by all who have had much to do with ear disease. Reference is made to those cases where inflammation of the mastoid is followed by extensive inflammation of the tissues of the neck and by deep-seated suppuration, often ending fatally from simple exhaustion or from involvement of some of the important vessels in the neighborhood. Beginning as a purulent inflammation of the tympanum, with or without perforation, the mastoid is soon involved, tender on pressure, and showing a slight œdema, which, however, does not go on to fluctuation. A decided inflammatory infiltration of the upper posterior osseous meatus is always present. After weeks, or even months, suddenly a new complication sets in, namely, swelling and tenderness just below the point of the mastoid at the insertion of the muscles. This swelling rapidly extends along the muscles, then forwards to the fossa retro-maxillaris and downwards along the large vessels of the neck, the swelling becoming as "hard as a board." There may be now a rupture of pus into the meatus at the junction of the cartilaginous and osseous meatus.

The swelling may cease at these limits or may gradually extend backwards and downwards over the whole side of the neck, and finally show indistinct fluctuation at the anterior edge of the trapezius muscle. The swelling may extend upwards to the superior curved line of the occiput and far down the muscles of the neck. If rupture has occurred into the meatus, or if the mastoid cells have already been opened by operation, an upward pressure on any part of the swelling evacuates pus from these openings. Incisions in the swollen tissues only reach pus when they are made very deep. As the swelling passes backwards severe pain is complained of in the occiput.

It is deep incisions and thorough drainage are used recovery may slowly result. In many cases, however, death results from exhaustion, from involvement of the

vertebræ, from œdema of the glottis, or from pus burrowing into the thorax. One case is given where there was paresis of both upper extremities, stiff neck, difficulty of swallowing, and death from œdema of the lungs.

The explanation of this series of symptoms is considered by Bezold to be an extension of the mastoid inflammation into the digastric groove either through an inflammatory perforation or through a natural porosity or dehiscence of the bone at that point, favored by the thinness of the bone and the large number of small vessels perforating it at that spot. The pus once penetrating the groove it is prevented from showing itself externally by the digastric muscle, the broad tendon of the splenius capitis, and trachelo-mastoid, and by the sterno-cleido mastoid; it also is now in close contact with the occipital artery. The anterior edges of the splenius and trachelo-mastoid are connected by connective tissue with the fascia parotidea-masseterica, and backwards the tendons of the sterno-mastoid and splenius spread out like a fan and connect with the tendon of the trapezius. The pus is thus confined between the deep muscles and fasciæ of the neck and burrows along them and along the sheaths of the vessels, especially along the occipital artery, a branch of the external carotid.

Bezold tested experimentally the course of fluids injected into these parts by boring through the mastoid into the digastric groove and then forcibly injecting colored gelatine, at first a swelling of the insertion of the muscles of the mastoid was produced, then a swelling in front and behind, which gradually extended to the fossa retro-maxillaris, and then to the chin; finally the injected mass passed backwards, forming an extended swelling as far as the median line and downwards one third of the neck. Dissection then showed that the gelatine had passed along the belly of the digastric muscle, under the parotid, and along the sheath of the occipital artery to the carotid; the artificial infiltration was confined to the upper part of the neck. Backwards the gelatine passed along the occipital artery, and was found in three successive strata between the deep muscles, namely, between trapezius and splenius, splenius and complexus magnus, and the largest quantity of all was between the complexus and the short deeper muscles of the neck, running down even to the second dorsal vertebra.

For the treatment of such cases Bezold recommends perforating the digastric groove through the mastoid cells, entering the cells at the lower part of the mastoid process and extending the opening into the incisura mastoidea. One case is given of the disease treated in this way which was healed in fourteen days.

DISPLACEMENT OF THE AURICLE FOR REMOVAL OF FOREIGN BODIES FROM THE MEATUS.²

After narrating a case of his own where a pebble was deeply impacted in the meatus and could not be removed by any of the common methods, although tried faithfully, and was finally removed by the above operation, Moldenhauer discusses the three different methods which have been proposed for opening the meatus after displacement of the auricle. Entering through the anterior and lower wall he condemns on account of the necessary wounding of blood vessels, injury of the parotid gland, and of branches of the facial, the close neighborhood of the articulation of the lower jaw, and

¹ *Tr. B. Soc. Med. Wochenschrift*, No. 28, 1881.

² Moldenhauer, *Archiv für Ohrenheilkunde*, vol. xviii., p. 59.

from the fact that the anterior lower wall is usually very convex towards the meatus, this curvature thus constituting a natural obstruction to the use of instruments and to the removal of the body.

The objection to opening the upper wall is that it is necessary to cut through such a depth of soft tissue that both light and space are small for getting at the body. All of these objections are avoided by opening the posterior wall, which gives a short, straight, and large passage, directly to the body, and the only possible objection to this method is the probability of cutting the posterior auricular artery, in itself of no consequence whatever.

In a note to Moldenhauer's paper, Schwartze says that he has performed the operation of displacement of the auricle, not only for removal of foreign bodies, but also for the extraction of large sequestra, and for the removal of exostoses in the deeper osseous meatus. In every case, he says, since he began to use Listerism he has obtained healing by primary intention.

ARROSION OF THE INTERNAL CAROTID ARTERY, THE RESULT OF CARIES OF THE PETROUS BONE.¹

In a case of caries of the petrous bone produced by chronic suppuration of the tympanum, the patient had a sudden and enormous hæmorrhage from the internal carotid artery, which was fatal in a few minutes. The few similar cases which have been reported being scattered in medical journals and scarcely referred to, even in text-books on the ear, Hessler has compiled and analyzed as follows:—

He divides the cases into three classes, the first containing thirteen cases in which autopsy confirmed the fact that the hæmorrhage came from the carotid; the second containing six cases where the confirmation by autopsy was wanting, but the diagnosis was in all probability correct; the third three cases where, although there was no hæmorrhage, an autopsy showed that the osseous carotid canal was destroyed and the artery itself was surrounded by pus.

An analysis of the first class, the only one which can be regarded as scientifically complete, shows that the age of the patients varied between nine and fifty years; two were about ten, two about twenty-two, and five between forty and fifty years of age. It occurred eight times in men and three times in women. In eight of twelve cases the rupture occurred eight times in the left and four times in the right carotid. The duration of the suppuration of the ear, the cause of the carious destruction, is given as nine, eight, seven, eleven, and nine years; in two cases as several months, and in one case, that of a syphilitic person, as only short.

The hæmorrhage generally occurred very suddenly, without warning and without any reason, such as violent exertion; it varied in degree, in some cases was slight, in others severe. When slight it could be checked by a tampon in the meatus, when severe it required long continued digital compression in the neck. In most cases it kept recurring daily. In three of the twenty-two cases there was one single enormous hæmorrhage which was fatal in a few minutes.

Ligature of the carotid was performed in three cases, namely, those of Baizzan, Broca, and Pilz. In the first the left common carotid was ligated but the bleeding recurred at the end of twenty-four hours and was fatal, by three repetitions, in the course of the next three days. In the second the right internal carotid

was tied and the bleeding checked entirely, the patient dying two months after from tuberculosis of the lungs. In the third case the right common carotid was ligated by Billroth, and there was no bleeding for nine days; it then began again from the ear, mouth, and nose, and although checked by compression kept recurring till, on the fourteenth day, the left common carotid was tied; three days after this a severe hæmorrhage from the ear, mouth, and nose ended fatally.

Hessler, in his discussion of the treatment of these hæmorrhages, and from a consideration of the anatomy, and especially of the anastomoses of the vessels, concludes that in severe arterial hæmorrhages from the ear the common carotid should be ligated, although even if this is done, a collateral circulation through the *circulus arteriosus Willisii* may renew the bleeding.

REPORT ON INSPECTION OF FOOD AND DRUGS.

BY B. F. DAVENPORT, M. D.

ON account of the exaggerated assertions of some that our food and drink are well nigh universally adulterated it is very gratifying to learn, through the investigations of the Boards of Health, both the National and those of the several States, what are the real facts of the case. They have been found not to be nearly as bad as reported. Most of the adulterations and substitutions in the staple articles of food, with the exception of milk, are but commercial frauds against the consumers' pocket and not on the public health, and they can mostly be easily avoided by such as are willing to pay for a finished manufactured product a fair advance upon the necessary cost of good crude materials to the manufacturers themselves. In the case of drugs, however, the results are more serious if we do not get the necessary therapeutic action of the true, good drug. Health may truly suffer in an emergency as severely from the fact of want of proper activity in a drug as from over or even wrong action. The mere fact of a manufactured food or pharmaceutical preparation being offered at a low or even lower price than the claimed ingredients are known to cost in their crude condition, if of fair quality, ought to be enough to excite, even in the most trusting minds, at the least, a suspicion of all not being quite right, while anything short of a fair advance should do so in all others. Suspicion once excited the real facts are usually easily ascertainable. The investigations have vastly multiplied since the reports of Dr. Hassall, of the Analytical Sanitary Commission, were first published in the *London Lancet* of 1851. The progress of sanitary legislation is in no respect more marked than in the enactment of the laws to prevent the adulteration of food or drugs recently passed by the States of New York and New Jersey. These are based upon the report prepared by experts appointed by the National Board of Trade to award prizes in a competition for the draft of the best law to prevent food adulteration, and are largely framed upon the experience gained under the English Sale of Food and Drugs Act of 1875. The text of the New York law is given on page 117 of this volume of the JOURNAL.

The most important recent American publications have been Supplement No. 6 to the National Board of Health Bulletin for July 17, 1880, containing the re-

¹ Hessler, *Archiv für Ohrenheilkunde*, vol. xviii., p. 1.

port of Prof. C. Lewis Diehl on Deteriorations, Adulterations, and Substitutions of Drugs, and R. C. Kedzie's (President of the Michigan State Board of Health) report on the Adulteration and Deterioration of Food, the Supplement No. 11, of January 1, 1881, containing the report of an Investigation to Determine the Prevalence of Adulteration in Food Supplies, by Dr. Charles Smart, U. S. A., and the Supplement to the *Sanitary Engineer* of December 1, 1880, containing the report of the Committee appointed by the National Board of Trade for the purpose of awarding prizes for the best act, accompanied by an essay, designed to prevent injurious adulteration and to regulate the sale of food and drugs.

The first really useful adulteration act passed the English Parliament in 1872, while Canada passed its similar act in 1874. The present German act is since 1879. The Swedish is the most comprehensive, and provides against the coloring of wall-papers and other decorations with arsenic, the use of aniline or other injurious colors in fabrics for clothing, and the sale of pigments of any injurious character. Its provisions are exceedingly stringent. By a local law of Frankfurt-on-the-Main, a milk inspector perambulates the market and dips a pointed stiletto into each can of milk exposed for sale. If from the way in which the milks runs off from the polished surface of the steel he suspects it to be adulterated, he simply lets the stiletto fall back into the can, thereby punching out a hole for the milk to flow off.

For such articles of food as naturally vary in their constituents the Society of English Public Analysts have fixed the following limits: Milk shall contain not less than nine per cent. by weight of milk solids not fat, and not less than 2.5 per cent. of butter fat. Skim milk not less than nine per cent. of milk solids not fat. Butter not less than eighty per cent. of butter fat. Tea, dried at 100° C., not more than eight per cent. of mineral matter, of which at least three per cent. shall be soluble in water. The tea as sold to yield at least thirty per cent. of extract. Cocoa at least twenty per cent. of cocoa fat. Vinegar at least three per cent. of acetic acid.

Dr. Charles Smart's report shows that American wheat flour is not mixed with alum, but that the bakers use it. Our sugars are clean, but we have glucose admixtures. Our coffees are good from the custom of grinding it before the purchaser at the time of sale, while that sold in ready-made packages shows a tendency to debasement. Our ground spices, such as pepper, cloves, and mustard, are as bad as the English at the time official attention was directed to them. But fortunately with such exceptions as the alum in bread and baking materials, the gypsum which often replaces cream of tartar in household baking, the debasement of milk by dilution, and the poisonous pigments used for coloring confectionery, the adulterations in foods are not seriously injurious to the public health.

If it is assumed that the consumption of fresh milk averages one hundred and twenty quarts per capita per annum, this would amount to forty-two million quarts for a city of as many inhabitants as Boston. The value of this at six cents per quart amounts to \$2,520,000. Were this watered to only the common amount of twenty per cent. it represents a sum of \$504,000 paid a year for this needless adulteration. Bearing in mind that milk has been found adulterated with equal parts of water, it appears what large sums

might be unwittingly paid out in this manner for a single article of food in a single large city.

Professor Diehl finds the American drug market, although offering too many instances of deteriorations, impurities, and contamination, adulteration, or sophistication and substitution, to be unqualifiedly fair. That is to say, that those who really desire to obtain articles of standard quality have very little difficulty in doing so, and as a general rule can be suited by respectable dealers throughout the country. On the other hand, ignorant persons or those regulating their purchases by the prices rather than by the quality, and being consequently indifferent as to the character of the dealer, are very likely to meet with low grade and adulterated goods, or at best are frequently supplied with goods of an indifferent character. As an instance of this last may be noted the fact, published in a recent article by Dr. R. V. Mattison, that four fifths of the so-called commercial red cinchona bark of the market is bark which has been rejected by the quinine manufacturers as being nearly or quite devoid of crystallizable alkalis, and beyond what tonic qualities may be expected from the cincho-tannic acid present, is quite devoid of any virtue as a medicine. This explains why the older physicians do not seem now to obtain as much benefit from their old well-tried remedy, Huxham's tincture of bark, as they did in earlier years of practice. This bark, sold by the bark importers of New York at a usual price of five to ten cents per pound, goes to the general retail apothecary at prices varying from twenty-five cents to \$2.25, according to the extent of his ignorance or indifference upon the subject of "barks." The prevalence of sophistication in wines and spirits is too well known to need much comment. There have been soaps in the market that contained seventy-five per cent. water that externally could not be distinguished from that containing only twelve per cent. A late analysis of a solution of magnesia citrate sold by a New York manufacturer has shown it to be nothing else than sodium tartrate.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. GAY.

REPORTED BY R. A. KINGMAN.

CARIES OF THE ANKLE; AMPUTATION.

CASE I. E. G., female, seventeen years old, was admitted in May for caries of the ankle. Has had trouble with the ankle since she was two years old, two small pieces of bone having come away at different times. Dr. Ingalls removed the os calcis and scraped the astragalus on June 8th, before the Massachusetts Medical Society. The foot did not heal after this operation, but abscesses formed at various points, until the whole ankle was riddled with sinuses. September 19th the leg was amputated by Dr. Gay, without the spray, but with plentiful application of carbolic solution, and with other antiseptic precautions. The leg was then dressed with the regular Lister dressing, which extended to the middle of the thigh. Catgut ligatures and silk sutures were used, and a drainage tube inserted.

The dressing was changed daily until the 25th, when

the drainage tube was removed. Next dressing on the 28th, when a few of the stitches were removed.

October 30. All sutures removed. The wound has healed by first intention, except in the track of the drainage tube, and the discharge is very slight. Three days later the dressing was changed to cosmoline, and on November 11th the patient was walking about on crutches, the wound entirely healed, little or no sensitiveness remaining in the stump. The only complaint during convalescence has been of pain in the toes, which has entirely disappeared.

DISEASE OF THE KNEE-JOINT; AMPUTATION.

CASE II. P. J., thirty-five years of age, has been laid up since last December with disease of the knee-joint and femur. He was in the hospital at that time, and was advised to submit to amputation above the knee, that joint being disorganized in consequence of pulpy degeneration of the cartilages. He, however, refused operation, and left the hospital. August 16th he reëntered, and consented to any operation that might be thought necessary. His general condition was very poor; he had frequent and profuse diarrhoea, lack of appetite, slept poorly, and had a large bed-sore over the sacrum. The thigh was riddled with sinuses, which discharged copiously. He was immediately placed upon treatment preparatory to operation, and rapidly gained in strength and improved in spirits.

August 29th Dr. Gay amputated at a point a little above the middle of the thigh, choosing for his operation the transfixion method. This was done in order to save time, and thereby lessen the amount of shock. The tissues of which the flaps were composed were so infiltrated and hardened that it was with great difficulty that ligatures could be applied and made to hold. The method of conducting the operation and of dressing the wound were precisely the same as in the last case. After the operation the patient was placed in one of the small tents which have for several years formed an important addition to the wards of the hospital during the summer, upon a fracture bed, in order that the bed-sore might be more easily dressed.

The subsequent treatment consisted of free stimulation and nutrition, and frequent dressing with Lister gauze, at first daily and then less often. September 25th the dressing was changed to liquor sodæ chlorinatæ.

October 8th. Sat up. Stump all healed but a small sinus which traversed one of the flaps at the time of operation.

November 1st. Discharged, well.

MALIGNANT TUMOR OF THE HUMERUS; REMOVAL; SUBSEQUENT AMPUTATION.

CASE III. B. T., ten years old, born and brought up in Nova Scotia, was admitted September 17th, with a bony tumor on her left arm. It was situated on the outer aspect of the arm just below the head of the bone, of irregular outline, size of the child's fist, painless, did not impair motion. The mother said it had been there since the child was two years of age, but had lately begun to grow rapidly. She desired it removed merely because it was a disfigurement. The tumor was removed the same morning by Dr. Gay, who easily detached it with a chisel.

It was found to be composed of an irregular nodular mass of cancellous bony tissue infiltrated by a soft and partially disintegrated material, the whole of which

was covered with a layer of pearly-white cartilaginous tissue. The shaft of the humerus, at the point of removal of the tumor, consisted of the same loose cancellous tissue, which was easily broken down under the finger.

In view of the evident malignant nature of the tumor, it was apparent that the only way to eradicate the disease, and save the child's life, was to amputate at the shoulder-joint, but this the mother would not consent to.

The wound was packed with sponges, and bandaged firmly to control the hæmorrhage, and opiates were freely given by mouth and subcutaneously. This dressing was changed in two days to Lister gauze, and this was renewed daily. The wound discharged very freely an offensive serous fluid containing little pus. The temperature went up, and for six days remained between 101° and 103° F. She could eat little, and vomited almost constantly.

September 24th. Patient feels better to-day. Temperature 99.2° F. The wound is being distended by a mass of fungous granulations. Offensive serous discharge continues.

October 2d. After a consultation of the surgical staff to-day the consent of the parents was obtained to amputate the arm at the shoulder-joint, and this operation was accordingly done by Dr. Gay. In order to escape the tumor an outer skin flap was made, the humerus disarticulated, and then by transfixion an inner flesh flap was obtained. The vessels were secured with catgut, the wound was douched with strong carbolic solution, and the flaps were brought together over a drainage tube with silk sutures. Dressed with Lister gauze, to be changed daily.

After this operation the same difficulty was experienced as after the previous one, namely, vomiting and anorexia. Opiates had to be given for pain referred to the fingers of the amputated arm. Stimulants and nutriment were given by rectum for nearly a week.

October 5th. A slight hæmorrhage occurred from the wound, which stopped spontaneously. Evening temperature 104.5° F.

October 6th. Drainage tube removed. From this date patient began to improve, and steadily gained up to the time of her discharge. After October 8th the dressing was changed and the wound irrigated twice daily.

October 10th. Stitches all removed, the wound having healed, all but two small sinuses.

October 24th. Discharged, well.

RAILROAD INJURY; AMPUTATION AT THE SHOULDER-JOINT.

CASE IV. John D., fifty-seven years old, born in Ireland, was run over by a railway train September 28th, sustaining a crush of the left upper arm. The humerus from the elbow to the neck was completely splintered, merely the head of the bone being left intact. The surrounding soft parts were nearly severed from the body, and all the tissues as far as the scapula were severely lacerated and contused. The clavicle was also broken. The patient was etherized, and the arm was amputated at the shoulder-joint, the operation consisting merely in trimming off the lacerated tissues and removing the head of the humerus. The edges of the skin were approximated as nearly as possible over a drainage tube by means of silk sutures, and the wound dressed with Lister gauze. Brandy was given before and after the operation both by mouth and by rectum. During the first twenty-four hours after oper-

ation twenty-four ounces of brandy were given, the amount being then reduced to eight ounces *per diem*. Patient reacted well. The dressing was changed every morning, the discharge being free, but not excessive.

October 1st. Patient a little delirious during last night, but otherwise doing well. Champagne, one pint, in addition to brandy. Moved to one of the small tents.

October 5th. Has been very restless and noisy every night until last night, when he slept under the influence of bromide and chloral. Part of the sutures removed yesterday, when two small sloughs came away. Quinia, five grains, three times a day. Champagne omitted.

From this date patient continued to improve without interruption. The wound contracted to a small sinus, which was still discharging slightly at the time of his discharge, November 16th.

AMPUTATION AT THE ANKLE WITH HEEL FLAP.

CASE V. Harry C., three years of age, was run over by a railway train October 12th, and was brought immediately to the hospital. His right foot was found to be crushed, the ankle-joint being opened, and most of the tarsal bones being more or less injured. The amount of shock not being very great he was etherized at once, and the foot removed at the ankle-joint. The malleoli were cut off with a scalpel, ossification having not yet taken place. The os calcis was dissected out, and a posterior flap made of the skin of the heel. Dressed with Lister gauze daily.

Patient has had very little pain, and the amount of discharge has been small. Additional support has been afforded the flap by means of straps of rubber plaster. At the end of a month the wound has healed with the exception of a small sinus at the side and a small granulating patch in front. Not yet discharged.

SARCOMA OF THE FOOT; AMPUTATION.

CASE VI. Fanny M. entered the house October 25th with a tumor of the heel, which she first noticed eight years ago. At that time it was about the size of a filbert, and was not very painful. A year ago last March she had the tumor removed in this hospital, it being described as a tumor, size of a small orange, painful on pressure, firm, and not lobulated. It soon began to grow again, and at the expiration of a year she underwent another operation at the Massachusetts General Hospital. After the latter operation the tumor grew rapidly, and now involves the whole of the heel and part of the plantar surface of the foot. Large nodules of exuberant granulations are pushing out in all directions, and the intervening integument is marked by numerous veins, which ramify over the surface of the tumor. Her general appearance is that of extreme anemia, although she is not at all emaciated. The glands in the groin are not enlarged.

October 28th the leg was amputated in the same way and with the same antiseptic precautions as in Case I. The blood which was lost during the operation was extremely dark in appearance, and coagulated only after long exposure to the air. She rallied well after the effects of the ether had passed away, but complained of pain in region of heart. Gave morph. sulph. subcutaneously, one eighth grain, ordered brandy, two drachms, every hour. In the evening her stomach began to reject the brandy, and it was omitted. She was then given nothing but iced champagne by

mouth, brandy and milk being given by rectum every three hours.

The next day she began to reject the enemata, and several times she vomited the champagne.

October 30th another subcutaneous injection of morph. sulph., one eighth grain, was given on account of the same pain in cardiac region. The enemata were continued, but had to be kept in by manual pressure on the anus. At four P. M. she was given an intravenous injection of warm cow's milk, three ounces, Aveling's apparatus being used. This produced no appreciable effect, for she continued to sink until 5.55 P. M. when she died.

The tumor was accidentally destroyed so that no examination could be made, but the probable diagnosis was sarcoma.

A FATAL CASE OF POISONING BY GELSEMIUM.

BY WM. WATKINS SEYMOUR, M. D. (HARV.), TROY, N. Y.

I REPORT the following fatal case of gelsemium poisoning in the hope that it may bring out other cases which have occurred, and may draw the attention of experimentalists to the necessity of determining its proper antidotes and their indications. Since the termination of the case I have searched for everything I could find relating to the drug, and find only a single case of poisoning mentioned (a fatal one reported by Dr. Wormley). The case I report is the third which has come to my knowledge. One occurred in the consulting practice of Dr. Wm. L. Cooper, of Troy, then of Michigan, where, to a lying-in woman, her attendant gave by mistake for ergot a teaspoonful of the fluid extract of gelsemium. Ten minutes later Dr. Cooper saw the patient, who was extremely prostrated, almost pulseless, and the respiration failing. He administered mustard and ginger several times, and stimulants, and the patient recovered. A few years since a young lady, of this city, died in Saratoga from a teaspoonful of the fluid extract of gelsemium, administered by mistake for geranium.

My patient was a very muscular man, twenty-eight years of age, about five feet ten inches in height, and one hundred and eighty pounds weight. I was called by a relative to see him December 6th, at three P. M. The relative said he had been drinking more or less for several days, but on that day instead of drinking he had taken at intervals some drug, which the patient told him was gelsemium, to quiet his nerves. His condition finally became such that the relative called me, fearing that what he had taken might prove fatal. I found the patient with clothes on lying upon bed, dozing, and looking very much as if he had been upon a spree; he was easily roused, and talked intelligently; the face was pale; eyes flushed, pupils moderately dilated, and reacting to light, slight ptosis of both upper lids; pulse strong and full, about 100; no odor of alcohol about the breath; skin seemed normal to touch. At first the patient would not tell me what he had taken, but finally said he had taken three drachms of the tincture of gelsemium in twenty-drop doses, every four hours, had repeatedly taken such doses to quiet his nerves after drinking, and could stand any amount, saying he knew all about the drug, as he had studied medicine. Finally he said he had taken two ounces of the tincture. I talked with him some twenty-five minutes, and as the last dose had been taken suffi-

ciently long for its absorption before I saw him, and as there was nothing alarming in his condition, I advised detention in his room, watching, and at any sign of failure of heart or respiration, to give stimulants freely, and call me.

At four p. m. I was called by messenger, who said the patient had eluded his watcher a few minutes before, and had procured at a drug-store, a thousand feet distant, one half ounce of fluid extract of gelsemium, which he drank. I hastened with stomach-pump to his quarters, and could not find him. With his uncle I searched the hotel, top and bottom, as the watcher said he had not passed him, but in vain. After a twenty-five minutes' search we found him at a shop a couple of hundred yards distant. He was sitting in a chair, but had little control over his movements, the limbs were relaxed, face pale; he recognized us, and spoke, but said he would not take an emetic. I had him held, and while his head was thrown back I introduced a funnel into one nostril, and poured a solution containing twenty grains of sulphate of zinc into the throat. The patient was obliged to swallow, and copious emesis followed. He then voluntarily took plenty of warm water, and a second dose of ten grains of sulphate of zinc, and vomited it also. However, he became speedily unconscious; pulse 130, respiration 40, and entirely thoracic; pupils moderately dilated, but reacting to light. I gave two drachms of brandy subcutaneously, and an ounce by rectum. Then, as the condition did not materially improve, the lips being blue, and skin livid and cold, I faradized the diaphragm and intercostal muscles, applying the electrodes eighteen or twenty times a minute. The respiration dropped to 20, and became full and natural, the pulse became stronger, and the color of skin and lips became rosy. Such was his condition at seven p. m. that I went to get my dinner, and was absent fifteen minutes. When I returned he was breathing long and full; pulse about 130; color slightly blue. I then repeated the injection of brandy, one ounce, and the faradization of the respiratory muscles. With this treatment the breathing became better, but the capillary circulation was poor, there being a tendency to lividity and cold extremities and skin. Applied heat, gave one fortieth grain of atropia subcutaneously to strengthen heart and improve capillary circulation. Pulse and color improved, but did not last long. I tried inhalations of nitrite of amyl without effect. I then repeated brandy, one ounce by rectum, faradic current to diaphragm and spine, and gave carbonate of ammonia subcutaneously. At 9.15 there was a tendency to lividity, skin was cool, and the pulse 135, still I regarded his condition as such that I told his uncle he might go off for fifteen or twenty minutes to get something to eat (he not having eaten since morning), but proposed first that we should move the patient on the blanket on which he lay nearer to the fire, as the room was becoming cold. This was done by grasping the four corners of the blanket, and gently lifting him. Immediately after his face became pale, his lips blue, the respiration and heart stopped, and the patient, at 9.25 p. m., was dead. No autopsy was had.

In view of the lack of experimental authority I did not dare give large doses of atropia or digitalis, for I feared that to prove effective they would have to be given in doses so large as, under ordinary circumstances, of themselves to prove fatal. When I first used the faradic current (Kidder's one-cell battery) the reac-

tion was prompt and very satisfactory, but it seemed, later, to lose its power.

For a drug which is so much used there seems to be very little known about its toxic doses and antidotes. My father, Prof. Wm. P. Seymour, of Troy, who has prescribed it a great deal, particularly in gonorrhoeal inflammation, regards the doses usually given in the books as likely to give rise to all the disagreeable physiological though not toxic effects. Two minims of the fluid extract three times a day frequently affected sight so that a book-keeper could not write, and four minims three times a day frequently produced weakness of legs and staggering.

I am reminded of the toxic effects of another drug in popular use for criminal purposes, namely, tansy. This year I have seen two cases where the drug produced convulsions and delirium, and in one coma and dislocation of the jaw from convulsive action, and I am informed that in many cases it has produced dangerous and, in some cases, fatal inflammation of the bowels without any oxytoxic effect, and find that the books give little or no information regarding its antidotes or mode of destroying life.

DEATH FROM SUNSTROKE THIRTY-FOUR HOURS AFTER EXPOSURE. AIR OR GAS FOUND IN THE HEART.

AUGUST 7th, at 2.40 A. M., I first saw Marshall T. This was Sunday. On Friday preceding, an intensely hot day, he was exposed to the sun's rays for the greater part of the day. Returning home he ate a light supper, and retired, having made no especial complaint of feeling unwell. Saturday morning he rose, ate a light breakfast, walked to a neighbor's, who noticed nothing unusual, returned, and immediately went to bed, where he remained until death took place. About six p. m. Saturday he complained of "feeling sick," and between eight and nine became wholly unconscious. They had given him about fifteen grains chloride of ammonium, which was the only medicine he had taken.

The most persistent questioning elicited only these meagre facts. He appeared to have made so little complaint that he was left almost wholly alone for nearly twenty-four hours.

No history of nausea, and no vomitus found.

When I saw him, six hours after he became unconscious, he was lying on his back, motionless, skin burning hot and dry, temperature 109.1° F., pulse 132 and feeble, respirations 24; no stertor; pupils about normal size, irresponsive to light, conjunctivæ slightly congested; respiration shallow, moaning with nearly every expired breath; tracheal râles. Patient had had a large involuntary defecation. I drew off eight ounces of urine of a strong, peculiar odor, in which, afterward, a trace of albumen and a few granular casts were found. The man was evidently dying, and lived only fifteen minutes after I saw him.

The autopsy was made twelve hours after death, under the direction of Dr. Geo. B. Twitchell.

Rigor mortis slight. Peripheral vessels in the head very much congested. Considerable congestion of the pia mater. More serum than normal in the left lateral ventricle. The whole brain substance was softer than normal, but nothing more pathological was seen. Extensive and firm pleuritic adhesion around both lungs.

The lungs themselves were so congested as to yield an almost solid resistance on palpation, and incision showed the congestion to be uniform nearly throughout. The aortic valve of the heart was slightly insufficient, kidneys granular, the left more so than the right. On opening the left ventricle of the heart *in situ*, quite a large number of air bubbles rushed out. None were seen in the right ventricle. The left ventricle contained considerable blood in a fluid state, the right but little. No coagula found. The blood was strongly acid in reaction.

The congested state of the membranes in the head, the intense congestion of the lungs, the general fluid condition and strongly acid reaction of the blood, all confirmed the diagnosis made from the ante-mortem symptoms, that is, sunstroke, notwithstanding the time elapsing between exposure and death, but how to account for a large number of air bubbles intimately mixed with the blood in the left heart cavity was a question evolving explanatory theories which would perhaps hardly bear publication. The only wound found on the body was a small ulcer of the leg. The air or gas had no odor.

Dr. R. H. Fitz, to whom I referred the question, kindly answered as follows: "Decomposition is apt to occur very early in cases of death from sunstroke, and the ante-mortem temperature of your patient was so high that an acceleration of ordinary cadaveric changes was likely."

I remember two cases in Boston during the early summer, where death resulted from an air embolus entering the circulation through the uterine sinuses, as shown by autopsies. GLO. H. BRIDGMAN, M. D.

KELNE, N. H., October 8, 1881.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

MEDICAL SECTION.

H. C. HAVEN, SECRETARY PRO TEM.

OCTOBER 22, 1881. Meeting called to order at eight p. m., Dr. H. I. BOWDITCH in the chair.

Dr. W. F. WHITELY presented a communication entitled Four Cases of Disease of the Pancreas, of which the following is a brief abstract.

CANCER OF THE PANCREAS.

This case occurred in the practice of Dr. I. F. Giddons, of Lynn, who furnished the following clinical notes. The patient was a widow, fifty-five years of age, naturally of a weakly constitution and thin in flesh. On October 11, 1880, he first saw the patient, who was suffering from severe pain in the abdomen, diarrhoea (the discharges frequent, liquid, and bloody), and vomiting. The diarrhoea lasted two weeks and was followed by persistent constipation. The pain in the epigastrium was severe and continuous, accompanied by throbbing. The food was often regurgitated several hours after ingestion.

Nothing was detected by physical examination until January 15, 1881, when a hard, pulsating tumor, without thrill or bruit, was felt in the left hypochondrium below the lower edge of the ribs.

The patient died February 23, 1881. The autopsy,

made on the 26th, revealed a firm mass lying just below the stomach and adherent to the adjacent parts. The liver was studded with white nodules from the size of a pea to that of a nutmeg. The further examination showed that the mass consisted of a body the size and shape of the pancreas, but much firmer, and was surrounded by hard lobulated bodies, evidently enlarged glands. The pancreatic duct was found and a fine probe could be passed its entire length. Under the microscope the normal pancreatic structure was seen to be replaced by moderately large, rather cubical, epithelial cells, arranged in alveoli, which were close together in some parts while in others they were widely separated by dense connective tissue. The structure of the enlarged glands as well as of the nodules in the liver was similar to the more cellular portion of the diseased pancreas. The case was evidently one of a gland-celled cancer, more nearly approaching scirrhus in parts.

HEMORRHAGE INTO THE PANCREAS; THREE CASES.

The three following cases are closely associated as illustrating the different ways in which hæmorrhage may affect the pancreas.

The first case has already been reported by Dr. F. W. Draper,¹ who has kindly allowed the specimens to be exhibited which were prepared at that time. In this, which represents the most acute form, fresh blood is found extravasated everywhere into the interstitial tissue throughout the whole organ. Death followed so quickly that there was no time for secondary changes to have taken place.

The next case is one where the hæmorrhage was more localized, and secondary changes more marked. The case occurred in the practice of Dr. Charles D. Homans, who has kindly given the following history: "The patient was a robust man, past middle life, who had been seldom ill enough to stay at home. He had had at times attacks of 'colic,' the result, apparently, of indigestion, and usually easily relieved. In 1880 he had an attack of what was called 'jaundice,' lasting from the middle of February until the first of May. He was very yellow, had no appetite, great disinclination to move about, and some epigastric pain. During the greater part of the time he was able to come into the city and attend to business, but would, from time to time, be confined to the house during a day or two. He seemed to have recovered perfectly from this attack and never appeared better than just before his fatal illness.

"On February 24, 1881, he came to town at his usual hour in the morning complaining of some pain at the pit of his stomach. He kept about his occupation during the day with more or less pain, but was finally obliged to go home several hours earlier than usual. He was seen the next morning, when he had, apparently, symptoms of peritonitis attended with great prostration. He gradually sank and died about fifty-four hours after the first complaint of pain. At the autopsy, made by Dr. E. G. Cutler, the peritoneum was found to be generally reddened; in the other organs, except the pancreas, there were no changes worthy of note."

The pancreas, which I had the opportunity of examining, presented the following appearances: It measured twenty cms. in extreme length. Upon section the color was found to be in general of a dirty red. The interlobular tissue was of an opaque white,

¹ Vide JOURNAL, vol. ciii., p. 615.

as if a crayon of nitrate of silver had been lightly passed over it. Near the centre of the organ and extending completely through it, from above downwards, was a wedge-shaped nodule, brownish-black in color, mottled with the same opaque white. The nodule measured 4.5 cms. at one side and tapered to 1.5 cms. on the other, and was slightly softer than the surrounding tissue, and also projected above the surface. There were several spots similar in appearance, measuring from one to two cms., situated in the head of the pancreas, and one near the opposite extremity. The microscopic examination showed that the color of the nodules was due to the presence of diffused blood-coloring matter in the tissue, while there were to be seen scattered clumps of amorphous blood-coloring matter in the interlobular spaces, the white discoloration being caused by the presence of vast numbers of short staff or spindle shaped crystals in the fat tissue. The outline of the pancreatic cells was lost, and their nuclei were indistinct and failed to take coloring matter, but osmic acid, aside from turning the whole section of a uniform dark brown, failed to reveal the presence of a fatty degeneration.

The third case was one in which an extensive purulent infiltration was found about the pancreas with sloughing of the organ and thrombosis of the splenic vein, the whole probably resulting from hemorrhage. The case occurred in the practice of Dr. J. C. Harris, of Arlington, who has furnished the following account: "Mrs. M., past middle life, was of her usual health until September, 1879, from that time until December 20th complained only of an uncomfortable feeling at the pit of her stomach and general debility. This did not prevent her from attending to her customary household and social duties. At this latter date she was suddenly attacked by severe pain in the epigastrium, accompanied by vomiting. These symptoms continued till her death, which occurred December 25th, and were only partially relieved by large doses of morphia and ether. The vomitus was very abundant and consisted of a dark-green viscid fluid: the stools frequent and similar in appearance to the fluid vomited. The temperature was about normal during the five days of her illness. She slept little until the last day and then only at long intervals."

At the autopsy, which was made thirty six hours after death, there was noted marked lividity of dependent portions of the body, with the formation of large blebs filled with a bloody serous fluid. The head was not opened. The peritoneum was moderately injected. The heart was distended with a considerable amount of dark liquid blood. Spleen small, capsule slightly wrinkled; on section it was found to be extremely soft, follicles not to be distinguished. The kidneys and liver were in an advanced stage of decomposition, bubbles of gas issuing from both organs upon pressure. The pancreas was large and firmly adherent to the adjacent parts, which were infiltrated with a discolored purulent fluid. A section showed the entire substance of the gland transformed into a dark, slaty-colored, stinking mass from the end of the tail to within about three cms. of the point of attachment to the intestine, where was a distinct line marking the boundary between this and the more healthy remaining portion. The splenic vein, where it was in contact with the pancreas, was filled with a dark, soft clot, slightly adherent to the walls of the vessel.

These three cases represent the changes which may

be found in the pancreas after hemorrhage into that organ.

In the first case, where death occurred within fifty-four minutes, there was found simply fresh blood in the interstitial tissue. The whole amount could not have exceeded forty to fifty grammes, and it is difficult to accept this as a sufficient mechanical cause of death. It is much easier to conceive of the hemorrhage as the accompaniment of some lesion, as yet overlooked, of the central nervous system, and standing in the same relation to it that the subserous ecchymoses and pulmonary extravasations do to injuries of the head, or else consider with Zenker that it is the cause of profound changes in the nervous centres through reflex action of the sympathetic.

In the second case, where the patient lived about fifty-four hours, the seat of the hemorrhage appeared to be localized at several points in the organ. There was also evidence of peritonitis found in this case, which may be regarded as a sufficient cause for death, but in what relation it stood to the hemorrhage there is no means of determining.

In the last case, in which death occurred at the end of five days, the purulent infiltration and necrosis which appear to have followed a previous hemorrhage (as shown by the slaty discoloration) are an obvious and sufficient cause for death.

DR. C. D. HOMANS said that at the time of the autopsy of the patient spoken of as having been under his care, he had believed death to be due to peritonitis, and the appearances seemed to him to justify that belief; moreover, the clinical history of the case seemed to indicate the existence of peritonitis as the principal cause of the most marked symptoms, namely, the swelling and tenderness of the abdomen.

DR. PRINCE suggested that in these cases death might be due to shock.

DR. WHITNEY said that Zenker explained death by reflex influence on the heart from pressure on the semilunar ganglion or pneumogastric nerve. He thought the word shock did not express any recognizable condition, and that it was quite as easy to suppose a primary disease, possibly of the brain, which manifested itself by the hemorrhage into the pancreas; this was of course the merest supposition, but it had occurred to him as a possible explanation. We have a condition somewhat analogous in head injuries with the resulting subpleural extravasations.

DR. PRINCE reported the case of a man where there had seemed to be a hemorrhage into the pancreas. The clinical history, in brief, was as follows: When first seen, he was in extreme collapse, pulseless and very restless, cold sweats, abdomen tender and swollen. He was sent to City Hospital; seemed to rally after intravenous injection of milk, but died later of secondary peritonitis.

Autopsy by DR. GANNETT, who stated that there was found only a small part of the head of the pancreas lying in a pool of pus; there was evidence of recent hemorrhage, probably from pancreas; there was also peritonitis, gluing together the coils of intestine.

DR. BOWDITCH asked if the pathological process seemed to have been of recent origin.

DR. GANNETT replied that there was at the time no means of ascertaining.

In reply to a question as to the previous condition of the patient, DR. PRINCE stated that for some weeks

before the patient had been in jail, and apparently perfectly well; about one week before the attack described, however, he complained of severe abdominal pain immediately after turning a somersault.

DR. GANNETT spoke of two cases of cancer of the pancreas; the first primary, where the head was a mass of scirrhus disease, the rest of the duct being dilated; the ductus choledochus and hepatic duct were involved; in the second case the middle portion of the pancreas was affected, and it was impossible to decide if it or the omentum was the original site.

DR. KINNEAR asked if there was any record of traumatic injury of the pancreas causing death by shock.

DR. WHITNEY knew of none such.

DR. KINNEAR said that in cases of so-called shock the skin was pallid, the pulse feeble, and all the symptoms pointed to internal congestion. It therefore seemed to him fair to assume that the base of the brain would become suddenly congested, and give rise to the condition known as that of shock.

DR. T. B. CURTIS said that the discussion in regard to shock and peritonitis had reminded him of what Professor Guillot calls peritonism. Gosselin also describes patients dying of strangulated hernia without any strangulation, there being a failure of nervous force. Baille Legendre describes three kinds of shock: (1.) Inhibition of respiratory nerves. (2.) Inhibition of cardiac nerves. (3.) Inhibition of nerves governing nutrition.

DR. BLODGETT asked, in relation to the first case reported, what was the path of infection from the pancreas to the retro-peritoneal glands; was it a direct propagation, or the result of irritation, or, again, entirely independent?

DR. WHITNEY replied that the microscope showed cancer of the glands mentioned, and they, being in immediate connection with the pancreas, presumably became affected through contiguity.

DR. BLODGETT asked the time intervening between death and autopsy in the case reported by Dr. Gannett, who replied that he could not state exactly at present, but that no other organs showed any signs of digestion. Dr. Blodgett thought that the loss of substance of the pancreas might have taken place suddenly, although the presence of pus showed that the process had existed a certain length of time.

DR. BOWDITCH insisted on the great importance of knowing the previous history in forming a judgment upon such a case; we were often led into error by a too summary record. He also recalled that formerly, in quite an extended pathological experience, he had met with but one case of hemorrhage into the pancreas, and even then Dr. J. B. S. Jackson insisted that he had not got the pancreas.

DR. J. B. AYER read a paper on

THE TREATMENT OF DIPHTHERIA.¹

DR. T. B. CURTIS said that, as a result of his experience while interne with Roget, he had grown very skeptical in regard to treatment. He agreed with Jacob in not annoying the patient, and in relying on food rather than medicine.

In regard to tracheotomy, an early operation and careful nursing give the best results; the operation should be done as soon as there is a paroxysm of suffocative dyspnea.

In regard to the identity of croup and diphtheria, French writers now generally accept the view that the membranous disease is one and the same, sometimes local, sometimes septic. Dr. West, formerly regarded as the great opponent in England of their identity, now declares his conversion to the opposite view.

DR. BLODGETT mentioned a case of post-diphtheritic paralysis, which in spite of the best of care had grown steadily worse and was apparently incurable and would soon eventuate in death, inasmuch as the paralysis is gradually ascending. The reflex function had not been disturbed, even below, where voluntary motion is abolished.

DR. KINNEAR mentioned pilocarpin, and cited a case where the drug seemed to exercise a favorable influence.

DR. LYMAN spoke of the value of Dovers' powder and of stimulation; he thought it a blood poisoning, and that there was no specific treatment.

DR. J. AYER thought the question as to the affection being systemic or local was of little moment. He relied mostly on food, and gave Dovers' powder to induce sleep.

DR. LYMAN believed in the existence of a separate membranous croup, and recalled the first cases of diphtheria reported in Boston by himself in 1851.

DR. S. L. ABBOT reported a case of Rheumatic Chorea.²

Adjourned to December 3.

—The *Lancet* gives a very interesting account of the misfortunes of Dr. Adolph Rasch, of Finsbury, one of the physicians to the German Hospital, Dalston, who has been in the enjoyment of a large obstetric practice in the East End of London. The doctor accidentally poisoned his finger while examining a child suffering from pyæmia, some seven months ago. Shortly afterwards inflammation of the lymphatic vessels of the right hand and arm set in, accompanied by high fever, the temperature running up to 106° F., and the doctor's life being placed in the greatest danger. Although the immediate danger was averted, yet a long train of painful symptoms, indicative of blood-poisoning, followed, which must have gradually worn out a sufferer endowed with less vital energy and fortitude than Dr. Rasch. An abscess formed in the prostate, which eventually broke into the urethra and the rectum; there was embolism of the left central artery of the retina; and finally inflammation of the left knee-joint set in, which resulted in a large abscess, involving the lower half of the thigh. For a considerable time this showed no tendency to heal, and it was therefore decided to amputate the thigh. This operation was performed by Dr. Lichtenberg, in the presence of Sir James Paget and others, on October 18th. Dr. Rasch's case adds another to the long catalogue of medical men whose health has been sacrificed in the pursuit of their professional duties, who have borne their sufferings with exemplary courage, and been ready as soon as sufficiently recovered to again confront the same dangers of practice which had nearly proved fatal to them.

¹ Vide Journal of December 1st, page 513.

² Vide Journal of December 1st, page 512.

Recent Literature.

Eczema and its Management: a Practical Treatise based on the Study of Two Thousand Five Hundred Cases of the Disease. By L. DUNCAN BULKLEY, A. M., M. D. etc. New York: G. P. Putnam's Sons. 1881.

Monographs, to be of value, should emanate from recognized specialists of large experience and of undoubted ability. Dr. Bulkley, late vice-president of the American Dermatological Association, and editor of the Archives of Dermatology, is one of the most industrious and prolific dermatological writers of America. The treatment of eczema demands "the highest and best qualities of medical art and science" from one who must be an "accomplished physician," and an "able surgeon." These words of Sir Erasmus Wilson show the need of such a treatise as Dr. Bulkley has written, while its merits speak for themselves and are such as would have been expected from its author. It is a work to guide the general practitioner to the recognition and management of eczema; to which end practical difficulties have been met and minute directions given. It is compiled largely from separate essays written at intervals, but worked over and put into proper shape for study and reference. It shows the inherited bias of the writer in favor of the conservative, if not antiquated, views of the English school of dermatology of the last generation, but is none the less valuable, in these days of violent reactions, upon that account. Nor has he escaped the cacoëthes classificationem faciendi, proof of its existence bobbing up metastatically here, where, on general principles, it should be least expected, namely, in a special treatise. The advisability might also be questioned of giving a longer lease of life to the vast assortment of miscellaneous terms applied at different periods of the world's history to the various forms of eczema.

The chapter upon diagnosis and prognosis gives very fully and ably the differential diagnoses between eczema and other diseases of the skin, each separate disease being considered by itself in accordance with the plan employed by Dühring in his Diseases of the Skin. The dissimilarity of prurigo, the disease, from pruritus, a symptom, is recognized. The writer also says, what all must concur in, that "there is little or no tendency in eczema to a spontaneous cure; its natural course is to persist indefinitely, and even to defy treatment in many cases." "The eruption cannot be driven from one locality to another." "A striking-in of the eruption is unknown to scientific or practical medicine." "No harm comes from curing a long standing eczema." "An eruption caused by the internal administration of mercury is exceedingly rare, if it ever occurs, and never takes a form resembling eczema." "Tobacco if used at all in excess has a most harmful effect in eczema." "There is not, and never can be, any specific for eczema, nor simple remedy, nor course nor plan of treatment effective in every case, nor yet in the same case under every circumstance." "Arsenic in many cases is useless, and in many others does actual harm." "Iodide of potassium is seldom of value, and often very harmful in eczema." "Prurigo is an exceedingly rare disease in the United States, not over two or three undoubted cases having been thus far observed and recorded by those occupied with this branch." "In a majority of

cases the solid rubber bandage is unexcelled for the management of eczema, and also of eczematous and varicose ulcers of the lower extremities." Such remarks as are here quoted, though not of startling originality, are very greatly needed, the medical profession, as a body, needing rather to digest the truths it has, than to acquire more, and the authority of the writer will have great weight in spreading at large these and other truths long known to the special few. The book abounds in them and we have quoted a few merely as examples. Attention is also called to the fact that itching is a symptom, which often yields only as the disease yields and is made worse by remedies, such as morphine or opium, especially directed towards the pruritus alone. So also to the fact that early acute eczemas require soothing, old chronic ones, stimulating, treatment, diametrically the reverse of each other; and too stimulating treatment of the early stages of an acute attack often ingrain what, if let alone, would have recovered of itself. The harmful effects of soap improperly applied are mentioned; the great injury done by "cure-alls"; the stimulating and drying action of glycerine; the dangers from sponges, greases, and poultices; the connection of eczema of the anus and genitals with pruritus itself, depending upon glycosuria, and the necessity for an examination of the urine; the bad results from the use of ale, beer, or spirits in an eczema which is at all general, etc.

Perhaps the best chapter of all is the one upon the "diet and hygiene of eczema." No item which can conduce to the physical welfare of the patient is beneath the notice of the medical man who would successfully treat eczema. Diet and hygiene represent a large share of the elements of human existence, and are often, or rather always, more potent for health or ill health than what are commonly known as medicines; and what is true of the general economy is still vitally true in regard to one of the most important emunctories of the body, namely, the skin." Under "therapeutics of eczema" is given a large number of such formulæ as Dr. Bulkley has found of value in practice, and an alphabetical index concludes a volume which cannot fail to prove interesting as well as instructive to the medical reader. Especially is this true of the chapter upon *Ætiology*, a most valuable one. Whether, finally, eczema is constitutional or local depends rather upon the comprehension and use of words than upon real disagreements as to pathological conditions, and the question need not be here considered. Bostonians must also admit that their attempt to make even otherwise good writers recognize the distinction between *shall* and *will* is becoming every day, apparently, more and more hopeless. But, as a writer of to-day, Dr. Bulkley might at least have used the Metric System.

E. W.

The Practice of Medicine and Surgery Applied to the Diseases and Accidents Incident to Women. By W. H. BYFORD, A. M., M. D., etc. Philadelphia: 1881.

Professor Byford's work, in its former edition, is well and favorably known to the profession throughout the country; but this issue of the book has been so thoroughly revised, and the treatment of new subjects, and the changed methods of treatment which are required by the advance in gynecic science, have been so carefully attended to, that we come to its consideration as to a new work. The author frankly states

that he has expressed opinions and counseled practice which differ from the teachings of the last edition.

Professor Byford has conscientiously gone over the functional and organic diseases of the female organs of generation. It is a satisfaction to observe the discussion of certain topics which are often neglected by writers, notably of the sympathetic symptoms of organs apparently disconnected with the uterus, for which he will receive the thanks of the younger members of the profession.

Another topic, very widely treated, is that of constipation in its relation to uterine diseases. His first and strong point is the *demand* which should be made on nature, at definite and fixed times daily, without which no system of diet or drugging can be of avail.

All the other topics which should have a place in a work of this kind have been fully and properly treated. The disorders of menstruation, displacements, cancer, and ovariectomy have received due consideration.

We cannot fail to note the evenness and clearness of writing which mark the book, and, moreover, the evident intent to meet the wants of the every-day practitioner. There is, at the same time, a certain authority, running through its pages which shows the master's hand. It is no compilation, but the ripe experience of an actual worker in the profession. With a careful consideration of, and well expressed opinions on all new topics and methods, there is a proper sense of conservatism which gives confidence.

No truer sentence is contained in the book than this: "There must be a right and a wrong side to every disputed question; extremists are wrong."

The Prescriber's Memoranda. Published by Wm. Wood & Co., New York, 1881. The name of author is not given.

This little anonymous work gives quite a summary of therapeutical information derived from recent literature, and would serve as a pleasant handbook of reference, but, like all the condensed and abbreviated literary productions, it will be more useful to the experienced than to the inexperienced practitioner, because many of the recommended formulae are suited to a limited class of the cases for which it would seem to be a specific remedy. This book is rather an illustration of an ephemeral method of practice, and would hardly rank as a classical therapeutical memoir.

A Treatise on Bright's Disease and Diabetes. With especial Reference to Pathology and Therapeutics. By JAMES TYSON, M. D. With Illustrations including a Section on Retinitis in Bright's Disease, by WILLIAM F. NORRIS, M. D. Philadelphia: Lindsay and Blakiston. 1881.

The positions which Dr. Tyson occupies as professor of pathology in the University of Pennsylvania and physician to the Philadelphia Hospital, and his long devotion to the study of the subjects of which he writes, undoubtedly justify his cultivating a field which has already been pretty thoroughly worked over, and we do not think that those who consult his book will regret that he should have seen fit to add another book on renal disease to those of Roberts and Dickenson.

The book is a crown octavo of three hundred and ten pages, with a good index printed in good type on excellent paper. The illustrations, which are clear, accurate, and numerous, are drawn from various sources, and among them are some original ones on the histology of the kidney from the pencil of Dr. George C. Piersol. A short though full chapter on retinitis in Bright's disease by Dr. W. F. Norris adds to the value of the book.

Practical Anatomy. A Manual of Dissections. By CHRISTOPHER HEATH, F. R. C. S. Fifth Edition. With 24 Colored Plates and 269 Engravings on Wood. Philadelphia: Presley Blakiston. 1881.

So well-known a work as this one does not call for a minute review. Its popularity seems well established, and is, we think, likely to be increased by this edition. There are twenty-four reduced copies from Macleise's Atlas, with the arteries and veins colored, which will commend themselves to students. The wood-cuts are of unequal merit. Some are fresh and others are shabby from wear. It seems to us a mistake to introduce minute anatomy into a work of this description. What there is is not enough to take the place of a treatise on histology, and it adds to the bulk and expense, but not to the value of a practical guide in the dissecting room.

The Anatomist. Being a complete Description of the Human Body, intended for the use of Students preparing for Examination at the Royal College of Surgeons and other Medical Bodies. Second Edition. By G. M. H. HULLES, formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, etc. New York: G. P. Putnam's Sons. 1881.

This is a very good compendium of anatomy. It is small and compact, but appears to contain all that can be expected in a work of this kind. It has one hundred and twenty-two illustrations, most of which, indeed, are very familiar, but others are not. The arteries are very nicely represented in red in semi-diagrammatic figures, and the nerves by white lines on a black ground. The arrangement of the book is decidedly peculiar. It is that neither of descriptive nor topographical anatomy. First come the muscles and the viscera of the different regions, then the fasciæ, then the vascular and nervous systems, then the bones, ligaments, and joints, and last of all the organs of sense. We are always glad to welcome anything like originality in methods of presenting anatomy, but this arrangement is beyond our comprehension, and the author does not offer us the slightest explanation.

— We have just received Walsh's Physician's Handy Ledger for 1881. "Handy" is the word which fitly describes its character. On a single page may be kept the record of an entire family, no matter what the nature of the cases, for one year. In addition, on the same page are debit and credit columns. We cannot conceive of a more ingenious plan of saving time and keeping a clear record. Its companion, the Physician's Call-Book and Tablet, is equally concise and convenient in its arrangement.

Medical and Surgical Journal.

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EXPERT FEES IN COURTS OF JUSTICE.

A CASE of interest to the medical profession was tried in the Superior Court at Boston last week before Judge Aldrich. Dr. Thomas Dwight, of Boston, brought an action on a promissory note made by Byron A. Osgood and his wife, who defended the suit on the ground that there was no legal consideration for their promise to pay. Messrs. Russell Gray and Henry W. Swift appeared for the plaintiff and Mr. Rodney Lund for the defendants. It was proved at the trial that Mrs. Osgood met with an accident and was severely injured in consequence of a defect in a street in Lynn, and was attended by Dr. Dwight. She afterwards brought a suit against the city, and recovered heavy damages, after a long contest involving no less than four trials. At three of these Dr. Dwight was called as a witness, and was examined not only on his knowledge of the facts in the case, but also as an expert on the anatomy of the part injured, the probable results of the injury, and the prospects of the patient's recovery, and was consulted on these matters by the plaintiff's counsel before the trial. He was paid only the ordinary witness-fees, and, objecting to give his professional opinion as an expert without being paid as such, Mrs. Osgood and her husband gave him the note now sued on. The defense set up on their behalf was that a medical man is bound to testify to anything he may happen to know relevant to a case in court, whether it is a matter of fact in the particular case or of general professional knowledge or opinion; and that he cannot lawfully require for giving his opinion any greater fees than an ordinary witness is entitled to; and that, therefore, a promise to pay such extra fees is a promise to pay for doing a thing which the law requires to be done without payment, and cannot be legally enforced. The court, however, disallowed this defense, and ruled that a physician is not bound to give his professional opinion for nothing in court any more than elsewhere; that he may require to be paid for testifying as an expert; and that the giving of such evidence, or a promise to give it, is a good consideration for a promise to pay by the party at whose request it is given. Under these rulings the jury found a verdict for Dr. Dwight for the full extent of his claim.

This decision, not being made by the highest court of the State (which has never passed on the question), does not conclusively settle the law; but it affords a precedent which will probably be followed, and is

doubtless in conformity with the general opinion of lawyers in Massachusetts. In other States of the Union, so far as the question has come up, there is a conflict of authority.

TIMIDITY IN THE USE OF THE NITRITE OF AMYL.

A NEW YORK medical journal recently remarked: "General Burnside died of angina pectoris, and was not properly treated for it." What the remedy should have been the journal does not state, but the remark quoted suggests our subject, one which has frequently been forced upon us by the too general timidity in the use of the nitrite of amyl, the remedy *par excellence* for angina pectoris. Danger is supposed to attend its use simply because of its sudden, often somewhat startling effects, but, with one exception, we have never heard of a case in which it caused any harm. The exception was a young lady, who, inhaling the drug during the menstrual period, experienced some distress of a transitory nature. Between her catamenia it was administered to her without discomfort.

It were simply inhuman to allow a patient to endure the agonizing pain and the "sense of impending death" which render angina pectoris so dire, when we can offer a form of relief, in the majority of cases, nearly instantaneous. Yet a case has just come to our knowledge in which, though it was requested by the patient himself (he having previously experienced its benefit), the remedy was withheld through the timidity of the attending physician. In consequence the patient suffered the distress which for several days is apt to follow an attack of this painful disorder, unless it be checked at the outset.

Why physicians fear to use the nitrite of amyl is somewhat mysterious. There are no authenticated cases in which it has done harm. Indeed, in a selected case, when the physician has fairly assured himself of the dose required, he may safely leave it in the hands of the patient, of course with proper instructions.

It may alarm the patient if he have not been prepared for its almost electric effects. We have seen such cases. It does frequently create a headache, but if the patient have been prepared for the rush of hot blood to the skin and head and for the rapid increase in the cardiac pulsations, no mental disturbance will occur. As for the headache, which arises only semi-occasionally, it is of no consequence in view of the relief we are giving the patient.

But angina pectoris is not the only complaint in which the nitrite of amyl is a valuable aid. In the chill stage of malaria, the symptoms being extreme, we have checked the chill in forty seconds, the drug relaxing the spasm of the cutaneous vessels, and admitting warmth to the surface of the body. The febrile stage was correspondingly shortened. In the chill which often attends dysmenorrhœa we have heard it pronounced a "perfect blessing." In asthma, not always in old subjects, in whom it is apt to fail, but in cases under fifty years of age, it will clear up

riales, which can be heard twelve inches from the chest, within five minutes, and often they do not return." It will arrest spasm of the diaphragm. In all these cases, especially in angina pectoris, we have found it not only invaluable, but harmless. It is the remedy of all remedies for chloroform syncope. In partial drowning, indeed in any case of cardiac failure, it is the whip of whips for the flagging heart. In the convulsions of strychnia poisoning, in tetanus, in the early stages of epilepsy, in short, in spasm of any nature, this drug is capable of accomplishing great good. If physicians would but use it in appropriate cases they would soon see that it can be easily controlled, and, moreover, that it can be used with impunity. It is necessary only to watch the pulse and the face, and so soon as the former reaches 130, or when the nasal flush appears, stop the inhalation. It sometimes happens that the nasal flush does not at once show itself. In such an event the pulse is a reliable guide. When used with even ordinary care the drug never causes insensibility. As to the dose, two drops would be the quantity for an adult as a beginning. If this dose should prove ineffectual it should be increased boldly, especially as the specimen used may have lost strength. In another recent case of angina pectoris this drug was pronounced a delusion because it failed to relieve the patient, when the truth was that the specimen was stale. The drug may flush the face and yet not relieve the pain. This is an indication of its weakness. A fresh, strong specimen would flush the face and relieve the pain as well. It is impossible to keep the drug on hand and expect it to do its legitimate work unless it be sealed with the greatest care. It would be better to procure a new specimen for each case. Again, the remedy fails because the quantity inhaled is insufficient. Each patient is his own law in regard to the dose necessary to relieve his particular case. A drachm has frequently been administered without harmful effects. But it should be borne in mind that some individuals are more easily affected than others by equal doses. At the outset, therefore, the dose should be small, and increased until the desired result has been reached.

A convenient form of administration is a pledget of cotton-wool, upon which the liquid may be dropped. It may then be held between the patient's teeth until the characteristic effects appear.

The pioneers in the use of nitrite of amyl, Lauder Brunton, Telford Jones, Richardson, Anstie, Sydney Ranger, and others recommend it in positive terms, and Dr. Balfour in a late article¹ says: "Foremost in all our modern appliances for the relief of this dreadful breast-pang (angina pectoris) we must place the nitrite of amyl; it is perfectly safe, and may be entrusted to the patient with the certainty that he will not injure himself by its use." This is the course we have followed for some years, and in no instance has there ever been cause to regret it. Indeed, there are cases which can be managed in no other way.

As an example we may mention a gentleman who for many years had suffered several *daily* attacks of an-

gina pectoris. In this case we advised that the patient should procure a small tin box (salve or percussion-cap box), fill it with cotton-wool, moisten the wool with the drug before leaving the house, and if pain came on that he should inhale from the box. He was directed to follow the same course in case of attacks at home. A short trial of this plan proved its efficacy. In any case of frequently recurring attacks of this disease, the remedy should be kept in the house of the patient, or be procured at once when need is, and administered by some member of the family while waiting for the physician. Valuable lives might thus be saved.

We sincerely hope these facts may influence physicians in favor of the nitrite of amyl. At present it is a neglected drug.

THE MAYOR-ELECT OF BOSTON, DR. SAMUEL A. GREEN.

It is not often that a physician is chosen by the votes of his fellow-citizens to manage the municipal affairs of one of our large Eastern cities as its mayor. In electing Dr. Samuel A. Green to this office last week Boston has departed from the usual custom of selecting such an official from the ranks of the lawyers, the men of business, or the politicians pure and simple. In taking this unusual course there is every reason to believe that our citizens will not find they have made a mistake, and that Dr. Green's administration of the trusts about to be confided to his care will fully justify their action. Certainly no man could be better fitted by the experience of his past life, and a knowledge of the details of various departments of the city government for the discharge of the duties incumbent upon the mayor than is Dr. Green. For ten years the City Physician, he has as such become practically acquainted with the management of the Board of Health, of the various reformatory and eleemosynary institutions, with the *personnel* of the Fire and Police Departments. For a number of years he served upon the School Committee and as a trustee of the Public Library, of which he was at one time the temporary librarian.

And if we may predicate of Dr. Green wide and thorough acquaintance with the details of the present condition of the city of Boston, we may with even greater assurance claim for him an almost unequalled knowledge of all the minutiae connected with her past history, as his labors in the Historical Society amply attest. This varied experience and information in regard to local affairs are at the service of a sound judgment and personal independence of character. We believe all classes feel in regard to the mayor-elect that the interests of rich and poor alike are safe in his hands.

As our readers well know, it is neither the habit nor the duty of the JOURNAL to meddle with political matters; but many of the public interests of a large city do fall directly within the legitimate scope of our criticism and, though, unfortunately, it cannot be said that these always are, at least they certainly always

¹ Edinburgh Medical Journal, March, 1881, page 769.

ought to be, far removed from political influences. We therefore feel that we do not go outside of our proper sphere in congratulating our fellow citizens as well as our professional brother upon the result of the recent municipal election.

MEDICAL NOTES.

—The thirtieth annual meeting of the Iowa State Medical Society will be held at Des Moines, January 25 to 27, 1882.

—There are at present four cases of small-pox at the hospital. No new cases have occurred in the city of Boston for the last fourteen days.

—A great zoölogical rarity is now on view at the Jardin d'Acclimatation, Paris, in the person of a fertile mule. It is an African female mule, named Catherine. In 1874, this animal, together with a Barbary stallion, Caïd, and their offspring, Constantine, were about to be sent to the Vienna Exhibition, when they were all three purchased for the Gardens in Paris. Since then, Catherine has given birth to an offspring (Hippone), by a horse, in 1874; to two others (Salem and Othman), the sire being an ass, in 1875 and 1878; and, quite recently, she has produced a fifth (Kroumir), the issue of the same horse as her first two offspring. It is very interesting to compare together the members of this family, unique in origin. The fact of the mule being fertile positively disproves the Arab proverb: *N'har t'ouled et braia entsa out redjel outo entsa*: "When the mule produces offspring, women will become men, and men will become women." Salem and Othman are regularly used for the cars on the miniature tramway which unites Port Maillot to the Garden of Acclimatation.

PHILADELPHIA.

—Dr. E. S. Keyes, of New York, read a paper on the Treatment of Syphilis, on December 16th, before the Philadelphia County Medical Society, which tendered him a reception.

Miscellany.

DR. THOMAS B. CURTIS.

DR. THOMAS B. CURTIS, whose sudden death on Sunday, December 11th, we were called upon to record in the last issue of the JOURNAL, when we promised our readers further details of his full and well-spent life, was born in Boston, July 19, 1842, and was consequently but thirty-nine years old at the time of his death. He graduated at Harvard College in the class of 1862, and almost immediately went abroad to rejoin his parents, who had been residing in Paris for a number of years on account of the health of his father, a victim to asthma.

The first two years after his arrival in Paris were passed in a somewhat desultory manner, cultivating the language, with which he was already familiar, having as a boy attended school in Switzerland, enjoying the many opportunities afforded him for hearing good music, of which he was always fond, and in which he had

a critical taste, and even modeling somewhat in clay at the studio of his uncle, Mr. Richard Greenough, the well-known sculptor. He evinced no little natural aptitude for artistic pursuits, without deceiving himself as to the intrinsic value of these early attempts.

He began to study medicine at the Paris School in December, 1862; at first in a rather irregular way, preferring the library and the lecture-room to the laboratory and the dissecting room, and dividing his time and thoughts among many pursuits as well as going much into society. It was not for another year, when we saw him in Paris, that he had begun to acknowledge a pleasure in his medical work. To one, however, with Curtis's physical vigor and active mind dilettantism, even in Paris at the brilliant period when he was there, could scarcely prove satisfying; the love of perfection, moreover, was in his nature, and appears even in his reply as a mere child to praise bestowed upon a little drawing he had made: "Do you mean it is really good, or only good for a little boy?" He was fortunate in making the acquaintance of an advanced fellow student and *interne des hôpitaux*, now le docteur Ollivier, by whose encouraging suggestions and stimulating advice he soon sought and, in 1864, gained a position as *externe des hôpitaux*, thus becoming fairly launched on his student life. At the expiration of his service he entered the *concours* for the *internat*.

As the result of the *concours* Dr. Curtis narrowly missed being named first among a large number of applicants, and easily obtained the second position, thus gaining second choice among the hospital services. His service as *interne*, which began in 1867 and lasted the full possible time allowed, till 1872, was perhaps the happiest part of his professional life.

Among other hospitals he was on duty at the Hotel Dieu, the Loinreine, the La Ribosière under Verneuil, the Charité, the Enfants Malades where he passed two years under M. Roget, and the Necker under M. Guyon. It was during this period that he gained his very extensive and varied experience in medicine and surgery, and laid the foundation of that wide, accurate, and available acquaintance with the literature of our profession for which he was so remarkable.

At the outbreak of the Franco-Prussian war, Curtis inscribed his name upon the staff of the first ambulance to be sent to the front, but withdrew it on account of the uncertain state of his father's health, though greatly to his own disappointment. During the siege of Paris, when still at the Hôpital des Enfants Malades, he was attached to the service of M. le docteur Lannelongue, at the Palais de l'Industrie, and subsequently assisted M. le Professor Daremberg on an ambulance especially devoted to fever patients. At the close of the first siege, repairing to Versailles he offered his services to M. Delaroche, President of the Society for Aid to the Wounded at Versailles, and was under fire at the skirmish at Châtillon, and later was stationed for six weeks at Puteaux, attached, as surgeon, to an ambulance. After the suppression of the Commune, he returned to his duties as *interne*.

In his last year but one he competed with his colleagues for the silver medal, sharing with another, if we remember rightly, the first place on the list. During his last term of service as *interne* he carried off the Prix Civile, a money prize established by the celebrated Civiale, open to competition among the *internes* of the hospitals, and awarded, we believe, every four years. Curtis's thesis "*Du Traitement des rétrécisse-*"

ments de l'urèthre par la dilatation progressive" was based upon seventy cases observed at the Hôpital Necker in the service of M. Guyon, and upon these he formulated ratios of mortality and drew certain general rules as guides for operating upon urethral strictures, given various local and general conditions. This thesis, after being "crowned" by the judges, served Curtis, according to our memory, for his graduation thesis, and was published by Baillière in 1873. It was praised by the journals at the time of its publication. We were in Paris and saw much of Curtis at this period, when we may say he was at his very best, and recall with admiration the vigor, keenness, and activity of his mind.

A little later he went to England, and there made the acquaintance of Sir Henry Thompson, profiting still further by his skill and teaching in the particular branch of surgery to which so much of his recent attention had been devoted. Returning to Paris, Curtis translated two of Sir Henry Thompson's lectures for the *Gazette Hebdomadaire*, and also contributed to the same journal an account of the death from the administration of a mixture of ether and chloroform which occurred here in Boston at that time.

He took his degree in November, 1873, and about this time was elected a member of the Anatomical Society of Paris. It was now eleven years since Dr. Curtis began to frequent the medical school and lecture-rooms of Paris, and of this time he had spent at least nine years in serious, laborious, and successful study. He was thirty-one years of age, with a fine head and handsome figure, of very engaging and at the same time dignified manners, charming in conversation, and as a physician *teres atque rotundus*, at least as far as it was in the training of a famous medical centre and of the hospitals of a great city to make one so.

The death of Dr. Curtis's father in 1874 decided the family to return home to Boston, and he himself, notwithstanding the temptations which his education and position offered to establish himself in Paris, preferred to come home with them. He accordingly came back to Boston in September, 1874, after an absence of twelve years, realizing that he had again to *faire ses preuves* and begin his professional career at the bottom of the ladder.

His life since his return is better known to our readers. He was appointed as surgeon to out-patients at the Massachusetts General Hospital in 1875, and in October, 1875, was married to Miss Lovering, the eldest daughter of Mr. J. S. Lovering, of Boston. Almost immediately after his return home, in September, 1874, Dr. Curtis was appointed by the Boston Board of Health upon a committee to examine and report upon the causes and prevention of the high rate of mortality which had prevailed in the city for some years previously. The committee, which consisted of Drs. Buckingham, Ellis, Hodges, and Green, chose Dr. Curtis as its secretary, and the report handed in a year later, on November, 1875, was, as the other members of the committee state in an accompanying letter to the Board, the work of Dr. Curtis alone. It is unnecessary to dwell upon the remarkable ability and clearness of this extended report, as it was widely read at the time of publication by those immediately concerned, and is even now in occasional demand from distant cities.

Dr. Curtis became a member, and a very active one, as their proceedings show, of all the prominent medical

societies of Boston, as well as of the State Medical Society, — among these we may mention the Society for Medical Improvement, the Observation Society, the Society of Medical Sciences, — and also of the American Statistical Association; as was mentioned he was a member of the editorial staff of this journal; he was a trustee of the Eye and Ear Infirmary; he had a considerable and excellent private and consulting practice; was greatly in demand as a member of many social clubs and organizations; and in all his family and domestic relations was most happy and fortunate.

Last winter Dr. Curtis began to feel already that his accustomed capacity for work was deserting him, and to miss his old elasticity of mind and body. He suspended all his occupations, sailing for Europe in May. He revisited the scenes of his former triumphs in Paris, and attended the International Medical Congress in London. Both in Paris and London he was received by old and new friends in a way most gratifying to him and which would have been likely to turn the head of a man of his age with less modesty than his.

After a delightful summer he came home refreshed, and, as all hoped, to renewed activity. But in this his friends were destined to be disappointed; the spring had been bent farther than they knew, or, perhaps, than he himself at first suspected. He found himself utterly unable to grapple with his work or to fix his thoughts upon his tasks. In a moment a cloud passed over the fine mirror of his mind, and he was lost to us.

Those who knew Dr. Curtis personally know what the loss is to his friends and to our profession, and to those who had not the good fortune of his acquaintance the bare recital of the chief events of his life will give a sufficient indication. Though a good practitioner and a wise consultant he was essentially a scholar in medicine, and as such we know of no one to fill his place. His knowledge was not merely varied and profound but it was available, and to it was added a too rare facility in the use of choice and graceful English, which made it not only an instruction but a pleasure to listen to him.

Resolutions of respect to his memory were passed at a recent meeting of the Society for Medical Improvement, of which he was the first president since its reorganization; these, with the remarks made at the meeting, are to be found in another column. At the same time a committee was appointed to consider the form to be given to a suitable memorial.

Dr. Curtis leaves no children, and by his will, made before sailing for Europe, his medical books are left to the Boston Medical Library Association. Among these are many of great value, and the value of all is greatly enhanced by the copious notes and references with which their margins are profusely annotated. To another generation these will be the best memorial of his intelligent industry, but neither these nor any other thing can represent the man just as it was our privilege to know him.

GRATUITOUS MEDICAL SERVICES.

MR. EDITOR, — A few days ago one of our daily papers reported that the Boston Lying-In Hospital intended to extend its work by sending young physicians to attend all the poor women of the city in confinement at their homes without charge.

"Angels and ministers of grace defend us!" ARE

the young doctors to have another apparition to haunt them and cheat them of their just dues?

There are hosts of young doctors in this city well qualified for their work, and content to work faithfully for moderate fees among people of moderate means. But their good intentions are defeated by the excessive amount of free advice and other services given at the public institutions. "Unable to pay" means, in thousands of cases, "we will not pay for what we can have as well for nothing."

I do not believe a single practitioner in this city will deny that there is too much free (not gratuitous) medical service. I earnestly protest against any extension of our charities; on the contrary, they should be more strictly limited to the deserving poor.

Your obedient servant, EDWARD L. PARKS.

SPECIAL MEETING OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT, COMMEMORATIVE OF ITS PRESIDENT, DR. THOMAS B. CURTIS.

At a special meeting of the Boston Society for Medical Improvement, held December 14, 1881, Dr. Francis Minot, in behalf of a committee appointed at the preceding meeting, and consisting of Drs. Minot, J. Collins Warren, and George B. Shattuck, presented the following.

RESOLUTIONS, COMMEMORATIVE OF THE DEATH OF DR. THOMAS B. CURTIS.

Resolved, That the Boston Society for Medical Improvement, in recording the death of its President, Dr. Thomas Buckminster Curtis, desires to express its sense of his high standard, both moral and professional; his eminent culture and ability as a medical practitioner; his varied accomplishments; and the charm and refinement of his manners, which endeared him to all who were brought into personal relations with him.

Resolved, That we regret the loss of a presiding officer who was always prompt, efficient, and courteous in the discharge of his duties, and whose extensive and ready knowledge, remarkable memory, and facility of expression enabled him to contribute very greatly to the interest and value of our proceedings.

Resolved, That we would respectfully offer to Mrs. Curtis, and to the immediate relatives of Dr. Curtis our heartfelt sympathy in their bereavement.

DR. HENRY W. WILLIAMS moved that the Resolutions be adopted, as most admirably expressing the sentiment of the Society regarding the loss it has sustained. All who knew the unequalled attainments of Dr. Curtis, and observed the readiness of intellect which enabled him to make instant and fit application of his great knowledge, felt that he was destined to be a leader in the profession. We, of this Society, had especial opportunities for perceiving the nicety of his judgment as to the values of facts and theories, and had learned to rely, with ever-increasing confidence, on the correctness of his modestly expressed opinions.

When to these high qualities was added the dignified and graceful courtesy which adorned all his relations with his professional brethren, and which made association with him always a privilege and pleasure, we may well deplore the sudden blighting of our hopes

that many years of honor and usefulness might be allotted to him.

DR. J. C. WARREN said: As a life-long friend of Dr. Curtis I am perhaps able to state some of the peculiar features of his student life, with which many of the members are not familiar. As a school-boy and as a college student his quiet, gentle manner and studious habits did not interfere with his social relations or his popularity with his classmates. His departure for Europe on leaving college separated us for many years, and it was not until the close of my career as a medical student that, after completing a course of study in Germany, I arrived in Paris to find Curtis at the zenith of his fame as a medical student. The system of teaching in the Paris school, although not essentially different from that of other countries so far as the ordinary curriculum is concerned, has this peculiarity, that hospital appointments and other honors are open only to those who are successful in the *concours*. American students have little comprehension of the ordeal which it is necessary to endure to achieve success. The most varied qualities, both of mind and body, are brought into play in these trials of strength which are ingeniously varied to bring out the weak points of each competitor. I remember attending one examination where the student was required to deliver a public lecture on diseases of the popliteal space before professors and a public audience. Ten minutes' preparation were allowed to take notes, from memory of course, in an adjoining room. The student was then ushered into the amphitheatre, seated at a table on which was placed a piece of clock-work which required but ten minutes for the dial to complete the circle. A spring was touched by the servant as the young man took his seat and the hand began to revolve. It was not only necessary to occupy this brief space of time with remarks bearing upon the subject, but each particular department of it had to be touched upon at proportionate lengths. Too much time must not be allotted to diagnosis at the expense of pathology, and so on. At the time I have mentioned Curtis was about to compete with a few other well known stars for the silver medal which is, if my memory serves me right, awarded to *internes* in their last year but one of service. A preliminary examination, to weed out the weak ones, consisted of a written essay on some subject, three hours to be given in which to prepare it. It was not a question with these men of filling up the time, but to so drill themselves by rapidity of writing and special mental training as to deliver themselves of the maximum amount of work within the given period.

The subject selected on this occasion was the Iris! a task which Curtis, however, seems to have had no difficulty in mastering, for he distanced all his competitors and came out at the end of the series even with another man at the head of the list. In one of these examinations, that intended for competition for the internat in a list of one hundred and fifty names, his was second. Dicalafoy, whose name is well known to us all in connection with the aspirator, was one of his colleagues, but his name was no more familiar to the thousand medical students of Paris at that time than that of Curtis. Coming suddenly upon him, as I did at this period of his career, I remember well the powerful impression produced upon my mind. His highly polished manner, the modesty with which he bore his honors, his genial intercourse with friends, combined to form an ideal type. It was a privilege to

the medical profession of this city to receive such a man into its ranks. Although he has been with us but a few years, his peculiar gifts have not been without their influence upon all of us, both young and old. I shall not attempt to point out what his future might have been had he lived; we all know what benefits would arise from contact with a man who seemed to give a new meaning to that old phrase, "The scholar and the gentleman."

REMARKS ON SURGICAL CASES IN BERLIN AND VIENNA.¹

BY DUDLEY P. ALLEN, M. D.

THE cases of which I had hoped to write from Berlin were those of Dr. Hahn, of the Friedrichs Hain Hospital. In one case of movable kidney he had made an opening posteriorly, found the kidney, and stitched it to its original position, hoping thus to relieve the difficulty, and at the same time to avoid the loss of the organ by removal. The second case was one of syphilis of the rectum with very extensive ulcerations. To relieve this he made a left-sided colotomy, and by thus relieving the lower part of the intestine of its contents, and simultaneously washing it out and syringing thoroughly with iodoform, he thought he had completely cured the syphilitic ulcerations, and was about to close the artificial fistula which he had made, and allow the feces to pass per rectum. When I saw these cases he had two other similar operations, which he invited me to see, but for some reason the operations were delayed until after my departure from Berlin; so, not having seen the operations performed, and only having seen these two patients after operation, I thought it was not best for me to attempt to describe the cases, since I dislike describing anything incorrectly.

I find much to interest me in Vienna in the way of special courses, which help me to subjects I have not previously understood, and of which I think it desirable to know something. Of course I have visited Billroth's operations frequently. The chief subjects of which one hears there are "resection of the stomach," "excision of the tongue" and "thyroid gland," and the beauties of iodoform. Billroth has been exceedingly successful in his excision of the thyroid, operating with a single incision, following the anterior border of the sterno-mastoid muscle, and if the tumor is double-sided crossing the median line horizontally at the lower extremity of the incision, thus: []. By this cut on the right side he removes a double tumor without making any further incision on the left side, and without tracheotomy. He presented in the clinic eight or ten cases on which he had operated, and from the cases drew the conclusion that the operation should only be performed when the tumor was malignant or pressed upon the trachea, since the appearance of the patient was not improved.

The excisions of the tongue he performs, if one-sided, by ligating one lingual artery, or, if complete, by ligating both lingual arteries in the submaxillary triangle, and then cutting out the tongue close down to the epiglottis with scissors. I have seen the operation several times performed without difficulty, and the patients have almost all recovered. He ascribes his success to his subsequent dressing, which is to pack

the floor of the mouth full of dry, absorbing gauze, which is thoroughly filled with powdered iodoform. This first dressing may remain in place from eight to ten days, and does not become offensive. At the same time the patient is fed per rectum.

I think the resection of the stomach occupies more attention, kills more patients, and does less good than any other one operation at present. I can't give the exact status of the operation, but a short time since only one patient was living out of all those operated upon. Some have survived the primary operation, but have died of a secondary growth. They now have a new method of procedure when the tumor is found to be immovably bound down by adhesions, and that is to cut a hole in the most dependent part of the greater curvature of the stomach, and another in the jejunum, and thus enable the contents of the stomach to pass into the intestine, and also not interfere with the secretion of bile. One patient operated by this method lived and one died.

The fact that the patients die has the advantage that the operators are able to show the specimens, and demonstrate how nicely the parts are stitched together.

Iodoform is used in all dressings, and carbolic spray and dressings are wholly discarded; carbolic is only used for washing. Whether quite a number of cases of erysipelas that have recently occurred have anything to do with this method I do not know, but I presume not. I have seen Billroth use the iodoform in cold abscesses, to inject into the joint in white swelling, in caries, and in all acute cases operated upon; but so far as I have had opportunity of observing, the dressing succeeds better in excision of the tongue and rectum and cases where there is a fetid discharge than in cases of clean, fresh wounds.

Two boys have recently been operated for stone by an attempt at Professor Bigelow's method, which, by the way, is credited here to Dr. Bigelow, and not to Sir Henry Thompson. Both boys died. I only know the particulars concerning the last boy. He was ten years old. The evacuation was wholly impossible from the small size of the tubes, and the boy was sent to the ward with his bladder full of stone, and without cutting, and soon died.

TRANSACTIONS OF THE INTERNATIONAL MEDICAL CONGRESS.

It is announced in the *Lancet* that the three volumes of the Transactions of the International Medical Congress will be published and ready for distribution at the beginning of December. To non-members the price of the work will be thirty shillings, and the volumes can each be bought separately. The first volume will contain the list of members, accounts of the general meetings, the general addresses, the description of the specimens exhibited in the museum, and the transactions of the sections of Anatomy, Physiology, Pathology, and Materia Medica and Pharmacology. Volume II. will contain the transactions of the sections of Medicine, Surgery, State Medicine, Military Medicine and Surgery, Obstetric Medicine and Surgery, and Diseases of Children. Volume III. will contain similarly the transactions of the sections of Ophthalmology, Mental Diseases, Diseases of the Skin, Diseases of the Throat, Diseases of the Ear, and Diseases of the Teeth. Orders for the work will be received by J. W. Kolekman of Langham-place.

¹ Extracted from a private letter.

COD-LIVER OIL JELLY.

COD-LIVER oil jelly can easily be prepared in the following manner:—

℞ Cod-liver oil	5 fluid ounces.
Best isinglass	2 drachms.
Sugar (white powdered)	1½ ounce.
Oil of bitter almonds	4 drops.
Oil of allspice	4 "
Oil of cinnamon (Ceylon)	2 "
Water	1 fluid ounce.

Having placed the cod-liver oil, isinglass, and water in a suitable vessel over a water-bath, apply sufficient heat to melt the isinglass, then add the sugar, the essential oils having been mixed with it by trituration, and remove from the fire, stirring the mixture as it cools until it thickens. When it is cold a firm jelly will result, which will keep without spoiling for any length of time if put up in corked bottles. The consistence of this jelly is such that it may be taken in water, milk, or wine without tasting the oil. — *Pharmaceutical Journal*.

BERKSHIRE MEDICAL SOCIETY; RESOLUTIONS ON THE DEATH OF WILLIAM WARREN GREENE.

At the November meeting of the Berkshire Medical Society the following resolutions were adopted:—

Resolved, That by the death of William Warren Greene, of Portland, Maine,—who was at one time a Fellow of this Society,—we have lost a brother whom we honored for his great ability and genius, and loved for his large, kindly heart and courtesy alike to his patients and medical brethren.

Resolved, That while it is a public loss to all it will never cease to be a tender regret to many who knew him best, and long will he be mourned by his Fellows and friends of the Berkshire Society.

Resolved, That a copy of these resolutions be sent to his family as a token of our sincere sympathy, and may the God in whom we trust have them in his keeping.

Resolved, That a copy of these resolutions be printed in the town papers and also sent to the Boston Medical and Surgical Journal for publication.

Resolved, That these resolutions be placed upon the records of the Society.

A. M. SMITH,
F. K. PABBOCK, } *Committee.*
J. E. A. ADAMS, }

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 10, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	686	311	27.69	17.06	8.45	1.16	2.62
Philadelphia.....	846,984	356	103	18.54	5.90	6.46	3.65	—
Brooklyn.....	566,689	278	122	28.41	17.98	14.03	.72	1.08
Chicago.....	503,304	209	88	31.10	11.00	7.15	3.35	1.43
Boston.....	362,535	159	55	11.95	17.61	6.88	—	3.77
St. Louis.....	350,522	118	47	27.96	5.93	5.09	5.93	3.39
Baltimore.....	332,190	161	65	28.57	4.97	24.22	1.24	1.86
Cincinnati.....	255,708	110	35	25.45	13.63	9.09	6.36	2.72
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	78	25	11.54	15.38	3.84	1.28	—
Pittsburgh.....	156,381	83	27	37.35	3.61	1.20	4.81	2.41
Buffalo.....	155,137	59	24	49.15	10.17	27.10	1.69	1.69
Milwaukee.....	115,578	47	22	27.65	14.89	10.63	2.13	—
Providence.....	104,850	31	4	19.35	6.45	9.68	3.23	6.45
New Haven.....	62,882	24	14	—	16.66	—	—	—
Charleston.....	49,999	28	—	3.57	—	3.57	—	—
Nashville.....	43,461	18	4	5.55	16.66	—	—	5.55
Lowell.....	59,485	20	5	10.00	10.00	5.00	5.00	—
Worcester.....	58,295	16	7	43.75	12.50	18.75	6.25	6.25
Cambridge.....	52,740	19	8	10.53	15.79	5.26	5.26	—
Fall River.....	49,006	27	11	25.90	3.70	25.90	—	—
Lawrence.....	39,178	11	3	45.45	—	9.09	18.18	—
Lynn.....	38,284	17	3	23.53	11.76	17.64	5.88	—
Springfield.....	33,340	15	3	13.33	19.19	—	6.66	—
Salem.....	27,598	9	2	11.11	—	—	—	11.11
New Bedford.....	26,875	8	—	25.00	—	12.50	—	—
Somerville.....	24,985	8	3	12.50	—	12.50	—	—
Holyoke.....	21,851	13	5	92.30	7.69	15.38	—	15.38
Chelsea.....	21,785	11	2	18.18	—	9.09	—	—
Taunton.....	21,213	9	2	44.44	—	33.33	—	11.11
Gloucester.....	19,329	8	4	—	—	—	—	—
Haverhill.....	18,475	6	—	16.66	—	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	6	—	16.66	—	—	16.66	—
Fitchburg.....	12,405	2	—	—	—	—	—	—
Twenty Massachusetts towns.....	177,158	62	13	12.88	8.05	3.22	4.83	—

Deaths reported 2712 (no report from New Orleans): 1017 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 677, consumption 396, lung diseases 324, diphtheria 256, scarlet fever 109, typhoid fever 65, small-pox 95, diarrhoeal diseases 51, malarial fever 27, whooping-cough 14, puerperal fever six, cerebro-spinal meningitis 17, erysipelas 14, measles twenty, typhus fever two. From *scarlet*

fever, New York 59, Brooklyn 21, Philadelphia six, Pittsburgh four, Milwaukee four, Buffalo six, Boston, Chicago, St. Louis, Baltimore, and Holyoke one each, Worcester two. From *small-pox*, Chicago 33, Philadelphia 20, Pittsburgh 15, New York 12, Cincinnati seven, Holyoke four, Brooklyn, Buffalo, Milwaukee, and Lawrence one each. From *malarial fever*, Brooklyn and St. Louis nine each, New York seven, Cincinnati and District of Columbia one each. From *whooping-cough*, New York five,

Brooklyn and Chicago three each, District of Columbia two, Pittsburgh one. From *puerperal fever*, New York two, Chicago, Baltimore, Pittsburgh, and District of Columbia one each. From *cerebro-spinal meningitis*, St. Louis five, Philadelphia three, New York two, Chicago, District of Columbia, Pittsburgh, Milwaukee, Lawrence, Springfield, and New Bedford one each. From *erysipelas*, New York two, Holyoke three, Boston, Brooklyn, Philadelphia, Pittsburgh, Buffalo, Chicago, St. Louis, Haverhill, and Chelsea one each. From *measles*, New York 15, Buffalo three, Pittsburgh, and Milwaukee one each. From *typhus fever*, New York two.

In 35 cities and towns of Massachusetts, with a population of 1,010,359 (population of the State 1,783,086), the total death-rate for the week was 21.61, against 19.80 and 18.40 for the previous two weeks.

For the week ending November 5th in 149 German cities and towns, with an estimated population of 7,879,026, the death-rate was 22.9. Deaths reported 3476; under five 1536; pulmonary consumption 477, acute diseases of the respiratory organs 292, diphtheria and croup 194, scarlet fever 130, diarrhoeal diseases 111, whooping-cough 64, typhoid fever 56, puerperal fe-

ver 24, measles and röteln 23, small-pox (Aachen) three. The death-rates ranged from 13.1 in Halle to 49.2 in Duisberg; Königsberg 22.5; Breslau 25; Munich 30.1; Dresden 26.7; Berlin 23.6; Leipzig 23; Hamburg 21.5; Hanover 22.9; Bremen 21.9; Cologne 25.5; Frankfurt 16; Strasburg 22.7.

For the week ending November 12th in 149 German cities and towns, with an estimated population of 7,915,940, the death-rate was 23.8. Deaths reported 3628; under five 1705; pulmonary consumption 480; acute diseases of the respiratory organs 320, diphtheria and croup 198, scarlet fever 134, diarrhoeal diseases 127, whooping-cough 61, typhoid fever 54, measles and röteln 30, puerperal fever 21, small-pox (Königsberg, Dresden, Berlin two, Aachen three, Essen) eight, typhus fever (Thorn) one. The death-rates ranged from 14.2 in Stuttgart to 35.5 in Frankfurt A. O.; Königsberg 22.9; Breslau 32.1; Munich 26.7; Dresden 23.6; Berlin 26.1; Leipzig 19.9; Hamburg 24.4; Hanover 16.1; Bremen 16.4; Cologne 25.9; Frankfurt 17.1; Strasburg 24.6.

The meteorological record for the week ending December 10th in Boston, was as follows:—

Date.	Barometer.	Thermometer.				Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.	
		Mean.	Mean.	Maximum.	Minimum.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Mean.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	7-23 A. M.	3-23 P. M.	11-23 P. M.	Duration, Hrs. & Min.	Amount in inches.
December, 1881																				
Sun., 4	30.348	38	40	33	85	82	65	77	SE	E	SE		12	10	13	O	O	F	—	—
Mon., 5	30.359	38	45	34	64	57	79	67	E	SE	S		8	6	3	O	C	C	—	—
Tues., 6	30.135	36	44	29	88	65	83	79	SW	S	S		4	4	9	F	O	O	—	—
Wed., 7	29.586	43	52	37	96	86	63	82	SE	S	W		12	6	14	O	O	F	—	—
Thurs., 8	29.864	33	41	29	67	48	56	57	W	W	W		17	15	19	F	C	C	—	—
Fri., 9	30.098	38	52	27	78	53	61	64	SW	SW	W		5	9	12	F	O	O	—	—
Sat., 10	30.304	24	38	14	88	41	76	68	NW	NW	NW		12	21	17	C	C	C	—	—
Means, the week.	30.099	35.7	52	14				70.6											12.40	.41

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; X., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 10, 1881, TO DECEMBER 16, 1881.

McClellan, Ely, major and surgeon. Relieved from duty at Fort McHenry, Md., to proceed to Fort Trumbull, Conn., and relieve Assistant Surgeon W. H. King. S. O. 224, Department of the East, December 15, 1881.

King, W. H., captain and assistant surgeon. When relieved by Surgeon McClellan to repair to Fort McHenry, Md., and report for duty at that post. S. O. 224, C. S., Department of the East.

Ladd, J. V., captain and assistant surgeon, McPherson Barracks, Ga., before complying with paragraph 3, S. O. 124, C. S., Department of the South, granted leave of absence for one month, with permission to leave the Department. S. O. 146, Department of the South, December 8, 1881.

Horr, J. V., R., captain and assistant surgeon. Granted leave of absence for one month. S. O. 222, Department of the East, December 12, 1881.

Perley, H. O., captain and assistant surgeon. Having reported in person at these headquarters, will report to the commanding officer, Fort Columbus, New York harbor, for duty as assistant to the post surgeon and attending surgeon at these headquarters. S. O. 224, C. S., Department of the East.

Grogan, W. C., first lieutenant and assistant surgeon. Granted leave of absence for one month, with permission to apply for

an extension of one month. S. O. 150, Department of Texas, December 3, 1881.

BOOKS AND PAMPHLETS RECEIVED. — The Opium Habit and Alcoholism. A Treatise on the Habits of Opium and its Compounds, Alcohol, Chloral Hydrate, Chloroform, Bromide Potassium, and Cannabis Indica, including their Therapeutical Indications; with Suggestions for treating various painful Complications. By Dr. Fred. Herman Hubbard. New York: A. S. Barnes & Co.

The Surgery of the Pericardium. By John B. Roberts, M. D., of Philadelphia. (Reprint.)

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Recent Progress in Surgery. Report to the Wisconsin State Medical Society. By N. Senn, M. D., of Milwaukee. (Reprint.)

Medical Expert Witnesses. Read before the Union Medical Association of Berkshire, Bennington, Rensselaer, and Washington Counties, at Hoosick Falls, N. Y., October 12, 1881. By John Lambert, M. D., Salem, Washington County, N. Y., Retiring President. Published by request.

Nihilism in Medicine. An Address delivered before the New Hampshire Medical Society, June 21, 1881. By D. W. Jones, M. D., of Portsmouth. (Reprint.)

Lectures.

A CLINICAL LECTURE.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, OCTOBER 12, 1881.

BY PROF. A. JACOBI, M. D.

WET NURSES; IRREGULAR DENTITION; DIPHThERIA; RACHITIS.

THIS woman is expected to take the place of a wet-nurse, and I have taken the opportunity of presenting her to you with her child, in order that I might say a few words on a very important subject. In choosing a wet-nurse one of the first things that you ought to do is to look at the baby of the woman who presents herself for the place. I will show you some changes in this baby which look suspicious. Hereditary syphilis is very common in a great city, and of course in case you were to discover it in the child you would not engage its mother as a wet nurse, for although the father might infect the child without the mother, yet the disease would be communicated to the mother afterward through the medium of the child. Hereditary syphilis usually develops during a period included between the fourth and eighth week of life, but its development is sometimes retarded until after the third month. One of the first symptoms of syphilis is roseola, or, if not that, a yellow discoloration of the skin attended by desquamation. Another very common symptom is the appearance of fissures around the mouth and anus, rhagades, as they are termed. One of the earliest symptoms, at birth or a few days after, is a pemphigus which affects the palms of the hands and the soles of the feet, also psoriasis occurring in the same localities. Such affections as these do not necessarily mean much in later life (unless they are palmar, when they may be attributed to syphilis). When they are general they are not of syphilitic origin. Even if after examining a child you were to find only what may have been the results of such local affections, such as a little discoloration and desquamation, you ought to be on your guard, for it may be that the child has had anti-syphilitic treatment, and has partly recovered. Now this baby has suspicious spots on the palms of its hands and some soreness there. The mouth and anus appear to be free from any appearance of rhagades, but there are spots of desquamation on the feet, although not so bad as on the hands. Now in the presence of such symptoms as these it is necessary to decide whether or not this child is syphilitic. If she is the mother cannot be recommended as a wet-nurse. The mother says that the child has only had these red spots of desquamation a week or two, and it is also reported that she has had little blisters over her body, prickly heat she calls it. The child has not been under treatment at all, and there appears to be no other symptom of syphilis except this peculiar appearance on the palms of the hands. There is no coryza nor roseola, nor has the child ever suffered from anything of the sort, nothing else besides these suspicious-looking spots and this desquamation. Is this syphilitic or not? It seems to me that it is not, because, as the child has had no treatment, if hereditary syphilis were the cause of these spots it would have given origin to other symptoms besides. There has been a great deal of solar eruption lately, and after that the skin is apt to

peel just as it has done here. As far as the hands are concerned the occurrence of such phenomena, then, are certainly suspicious, but remember that in the young infant and fetus the flexor muscles are far more active than the extensors, and the flexion amounts sometimes to almost a contraction. If you allow a child to take hold of your finger it grips it with an almost convulsive grasp. Now the nails of this baby are rather long, and when its flexors contract the nails are driven against the palm of the hand, and this has, I think, been the cause of the psoriatic appearance in this situation. I think that the long nails on what are also unusually long fingers account for this condition of things, and I conclude from the absence of any other symptoms that it is not of syphilitic origin, and it is accordingly safe to recommend this woman as a wet-nurse.

Here is a case which I have brought before you because it gives me an opportunity to say something to you about irregularities of dentition. This child is eleven weeks old, yet it has two molar teeth which were noticed before it was five weeks old. The mother says that she noticed the first molar tooth before the child was one month old. It appeared in the left upper maxilla, and the day afterward another molar tooth was found to exist opposite in the lower jaw. This is a very peculiar history. There is nothing else the matter with the child, the mother says, and all her other children are in a normal and healthy condition. Now you know that it is very uncommon to find molar teeth developing as early as they probably have in this case. Teeth will usually appear about the seventh or eighth month, but then it is the *lower* central incisors. You remember in the case of premature cranial ossification which we had the other day, I made the point that it was the upper central incisors which had appeared first, there being a closer connection between the skull and upper jaw than the skull and the lower jaw. Here the appearance of teeth at all at so early an age is quite abnormal, and it is quite probable that they were there before the mother noticed them. They may and probably have been congenital. Congenital teeth are very small, and occur very rarely. I myself, as I am in an exceptionally favorable position to observe such anomaly, have met with that anomaly perhaps twenty times. This is quite an unusual number, for there is many a practitioner who never met with a case. But a congenital molar tooth I have never seen, nor do I know of any that has been reported. There have been many cases of congenital teeth recorded, probably because of their rarity, and the history of congenital teeth is very old. Pliny the younger states that the celebrated Marcus Curins, consul of the Roman Republic two hundred and seventy years before our era, had a full set of teeth at birth. This was the reason of his being named Dentatus. The same author mentions two other instances of children who had their teeth at birth. Zoroaster, the Persian legislator, is reported to have had all his teeth at birth. Louis the Fourteenth of France was born with two teeth, as was also his secretary of state, Cardinal Mazarin. Richard the Third of England and Mirabeau both had congenital teeth. Haller has collected a list of nineteen cases of congenital teeth, and there are many other instances of this abnormality, besides these which I have mentioned to you, which are recorded both in ancient and modern literature. The journals of the last ten years continue to give a number of such

cases. These congenital teeth are usually small, ill-shaped, and have no root. They only hang in the gums. They differ from genuine teeth in that they are less firm and solid, their enamel is thin, and not formed at all in some places, and they are not inclosed in the dental alveolus. Such teeth often prevent the child from nursing, and cause the nipples of the mother to become very sore. They should then be removed, which can be done without difficulty. Often an ordinary dressing forceps will be sufficient for the purpose, or they may even be detached by the finger. When such teeth are removed the real deciduous teeth, as a rule, appear afterward. In a number of cases which I have followed up new temporary teeth have appeared, although it has been stated, erroneously, that no temporary teeth would appear at all previous to the eruption of the permanent teeth. These congenital teeth seem to be entirely supernumerary, and I regard them as an accidental connective tissue formation. The upper tooth here is too firm to justify an attempt to remove it at present. The lower molar I was able to remove with my finger. There is one fact about congenital or abnormal teeth which it is important that I should mention. The children are often not in good health. They are cases in which rachitis develops at a later period, and may usually be considered a symptom of a morbid constitution, which will require anti-rachitic or anti-scorfulous treatment for its repair. It is then an anomaly which is by no means welcome. Premature dentition, premature walking, and premature ossification of the cranial bones usually coexist.

Another variation in the appearance of teeth is their eruption at a period later than the normal one. One case is on record where a girl got her four temporary teeth when thirteen years old; another where a child of five or six years had only a few incisors; and there is a case reported by Smellie where the first tooth appeared in the twenty-second year of life. There are a very small number of cases in which the entire absence of teeth has been noted; also where certain of the teeth have been absent. Storch describes the case of his own daughter who had no canine teeth, and I myself have seen a lady with but two upper incisors, and lately a few children in the same family with the same anomaly. The molar I present here is very flat, its surface large enough, its depth very trifling; it shows four little prominences representing the diminutive roots. If you care to read more on the subject I refer you to my *Dentition and its Derangement*, New York, 1862, or the *American Medical Times* of that year.

Our next case is that of a boy five years of age who was attacked yesterday with vomiting and sore throat. His temperature, at present, taken in the rectum, is 101.5° F. He complains of some pain on swallowing. The left tonsil is slightly, the right considerably, enlarged, and there are a few little spots of whitish gray discoloration scattered over each. The question is What do they signify? The tonsil is not a uniform body, but is a conglomeration of ten or twelve follicles glued together by very dense connective and elastic tissue. The ducts of the follicles may be enlarged by former inflammation. Now in such a duct, a large amount of epithelium accumulates and fills up the duct instead of being removed, because the enlargement has transformed what was a duct into a bag, and as there is a tendency to suppuration in tissues which have been modified by disease, you may have as a result of the

mechanical pressure an abscess in the tonsil. Such abscesses occur frequently, and the same process may recur again and again in the same tonsil, though in different follicles. When suppuration does not take place and the contents of the dilated ducts are not expelled, they dry up and form cretaceous masses which have been called tonsil stones. Now it is of the utmost importance that this disease, which is local and occurs only in the follicles, should not be mistaken for a disease which is far more dangerous,—I mean diphtheria. To day there may be only these few white spots visible, but to-morrow, if the disease is diphtheria, they will have coalesced, and there will be membrane, therefore you should be very careful to make the distinction at once. If these spots are membrane then we have not to do with the local disease known as follicular tonsillitis, but diphtheria. There is one fact in regard to follicular trouble which is perfectly characteristic and will enable you to make your diagnosis with confidence. In that disease, if you take a fine probe, you will be able easily to run it into the dilated ducts of the follicles from one sixth to half an inch or more. In diphtheria you cannot. The spots there need not correspond with the follicles, and will not admit the probe, and you have no right ever to make a diagnosis of follicular tonsillitis unless you can run your probe into the ducts, which in that case will be very easy to do.

It is not possible to do that in this case and this boy has, therefore, diphtheria; not severe now, certainly, but it may be to-morrow. Every case of that disease ought to be looked on as severe. Cases which look well now may totally change in the course of a few hours. Those cases which are looked after from hour to hour, in the large majority of instances, get well, when they are neglected and not seen frequently their chances are much worse.

The lymphatics of the neck are enlarged only when the disease has invaded the nares or pharynx, never when the tonsils alone are the seat of the disease. Diphtheria of the tonsils is usually a mild disease, but needs, as I have said before, careful watching, as there is no telling where it may extend. This boy must be isolated. He ought to be in an upper story, because infection can be prevented more easily in that case, as the contagious principle of such diseases will go upward with the current of warm air. I should apply ice to the glands if they swell. Let him take a dose every twenty minutes of a prescription containing chlorate of potassa, tincture of the chloride of iron, glycerine, and water. It is important that he should have the benefit of the local application frequently and by giving it in this way you are constantly washing those infected tonsils with the chlorate of potassa and iron. In the night he ought to be waked up every hour for the medicine. A sleep of six or eight hours is too long, as in much less time diphtheria may develop into a serious and, perhaps, fatal attack. If he is awakened every hour he will fall asleep almost immediately after.

Here is a child which is two and one half years old, and which commenced to walk when it was eleven months old. It walked very well until three months ago, when the mother says that it fell frequently. She throws the left foot in front of the right and then trips over it. She cut her lower incisors at the age of six months and three months after the upper. The mother says that she had all her teeth at sixteen months, but that is not probable. When she was one year old she had an abscess under her jaw, but has never had any

continued illness. If you examine the lower limbs you will find, as I do, that the epiphyseal ends of the bones are thickened and their shafts curved. If you put the child's heels together you will notice that the knees do not touch, but spread widely apart. The femoral bones are curved outward and forward, and it is owing to this deformity that the child trips. The curvature of the bones causes the stumbling and is the result of rachitis. Rachitis is a constitutional disease, one of the symptoms of which is a softening of the bone, and an undue development of fat. It is also marked by a lack of muscular development, to which one symptom of the disease is due, obstinate constipation, concerning which you have often heard me speak. One of the first symptoms of rachitis is that which I am able to show you in this case—the diaphragmatic groove. It is this groove which you see around the lower part of the chest, and is a direct result of softening of the bones. Rachitis shows itself in all the bones, both long and flat, particularly in the occipital portion of the cranium. You remember, perhaps, a case of the kind in which the bone had been absorbed in numerous places until it seemed as if a firm pressure with the finger on the soft spots would penetrate into the cranial cavity. Often this absorption continues until the thickness of the cranial bones is no more than a sheet of paper. This absorption takes place usually on the occiput and the parietal bones, that being the portion of the head which rests upon the pillow. The question is, now, What can be done for this case? As a rule cases of this kind go on without attention until it is too late for treatment to be of any service. If they come before the irregularity is very great, and receive appropriate treatment, they have a chance of outgrowing the deformity, for a curve which is very marked when the bone is short will, as the bone grows longer, be much less in proportion to the length of the bone. This child should be well fed, and by that, I mean it should get plenty of beef, eggs, barley, oatmeal. For medicine, it ought to get some preparation of iron, as the iodide and the salts of sodium and calcium, in fair quantity. It ought to be regularly bathed and have plenty of air, for many cases of rachitis owe their origin as much to bad air as to bad feeding. At present, it is not the time for us to consider the propriety of surgical interference for remedying the deformity.

Original Articles.

RÖTHELN.

BY C. M. JONES, M. D.

AMONG the mooted points in nosology the *rötheln* question still remains conspicuous. Is there an independent exanthem which deserves this name or are all the cases which receive it more properly classed as hybrids or modifications of other universally recognized conditions? Many authorities, including the *Index Medicus*, do not admit it or refer to it. I purpose in this paper to report a few cases which have come under my observation, and then to consider wherein they may be distinguished from various allied forms of disease.

Case I. January 21st. Anna H., age twenty one, came to my office, having been well till yesterday, when she had a feeling of weariness, malaise, and want of appetite. Has had recently some diarrhoea, also

soreness of throat. To-day noticed that her face was quite red, and eyes swollen, and soon after there appeared on the forehead and face a rash which speedily extended over the neck and upper part of the body. This consists at the present time of thickly-scattered blotches, in shape rounded or slightly irregular, slightly but distinctly elevated above the surface of the skin, in color pale red, the centre darker than the periphery, the skin between unaffected, nowhere crescentic in arrangement, and suggesting measles only to a superficial glance. The blotches vary in size, nowhere coalesce into large patches; the throat is inflamed, both tonsils red and swelled, the right the most so; cervical glands enlarged on both sides; no cough or sneezing or any marked catarrhal symptoms; eyes feel weak, and are lightly injected; tongue coated; has had measles; pulse 120; temperature 102° F.

January 22d. The rash has extended itself quite rapidly over the body, and now appears to a moderate extent on the extremities; on the face it is diminishing. Patient is nearly free from fever, the throat improving, and the next day, the 23d, she was entirely well.

Case II. January 22d. Sarah T., age eighteen, rose yesterday with headache, and during the day had a feeling of weakness and discomfort. Slept well last night, and on rising this morning noticed for the first time a rash on the face, which consists of rounded, slightly elevated papules, in afternoon extending all over the trunk, and barely manifest on the extremities; here and there the blotches show a tendency to run into each other. Has had no cough, no coryza, no sore throat; no glandular swelling noted; thin white coating on tongue; had measles two years ago; pulse 119; temperature 101° F.

January 23d. The rash to-day more marked on the limbs and fading on the body; has no fever, and feels fit to work.

Case III. Mary D., age ten, has had cold and cough for some days, which has not grown worse; night before last she seemed rather feverish; has not had any irritation of the eyes; has a little running at the nose; does not complain of sore throat; there appears on face and body a rash similar to that already described, but more scattered; throat is reddened; glands not affected; had measles two years ago; pulse 95; temperature 99° F.

January 28th. The rash is general over the body, but the individual papules quite isolated, and the color throughout has been paler than in either of the previous cases. In forty-eight hours from the beginning of the eruption she retained only the symptoms of the cold from which she had been several weeks suffering, but otherwise was quite well.

Case IV. December 20th. Alonzo E., age ten, after a day of malaise, lack of appetite, and much thirst, woke up this morning with face suffused, eyes red, inclined to water, and a rather bright red rash, distinctly papular, varying in size from one fourth inch down to a pin head, generally round, the edges more or less irregular, and reddish lines here and there, extending from one papule to another, and many papules coalescent; tongue has a heavy white coat; throat not affected; occasional sneezing; no cough; skin burning; glands enlarged; pulse 120; temperature 102° F. Stays in bed, and looks and acts quite sick. The next day felt a little better. Temperature 100° F.; tongue clearing, tip reddened and papillated; rash on face

growing paler, on the legs still very bright, though nowhere so bright as in the face yesterday.

December 22d. Temperature 99° F.; remnants of rash in face still seen, and quite distinct elsewhere; feels comfortable except for weakness.

December 23d. Traces of the eruption could still be made out on careful examination. This boy had measles with unusual severity under my own charge two years ago.

Case V. February 11th. Herbert R., age thirty-two, was at his business yesterday in usual health. On rising to-day the mirror revealed an eruption on his face, but aside from this he complained of absolutely nothing; throat not affected; nothing but his face would suggest to him that he was not well; pulse 90; temperature 101° F. The course of this rash was similar to the others except that it remained visible one day longer; appetite was good throughout; would not have remained from his business had he not been so directed; had measles in childhood. His two children, aged seven and two, respectively, who were much in the room with him, and had never had measles, remained perfectly well, and took measles after a brief exposure five months later.

Case VI. Josie R., ten years, has been for some weeks ill of anæmia and chorea with mitral regurgitation; has not varied much in her condition till last night, when she became hot and sweaty, but was not chilly. This morning her cheeks and eyes were very red, skin hot, and soon after her mother noticed a bright red efflorescence all over the face and body, that on the face being most intense. The rash in the afternoon was made up of easily felt, distinct papules, thickly scattered, none exceeding one fourth inch across, mostly smaller; the delicate skin between is suffused; there is no coryza; no cough; some lachrymation and injection of the conjunctiva, and the eyelids and face seem somewhat swollen; throat hyperæmic and irritated; rather hoarse; tongue furred, tip red and papillated; had measles two years ago; has not had scarlet fever; pulse 125; temperature 102.6° F.

December 3d. Pulse 90; temperature 100° F. The general redness of face has disappeared, leaving the blotches, which are absolutely fainter, relatively quite as distinct; they run into each other at many points; on the body the eruption is brighter and confluent over large tracts, with islands of clear, white skin contrasting strongly with the duskiess of the efflorescence, the borders everywhere being quite abrupt; condition of arms and legs similar; has some vomiting and diarrhoea; inflammation of throat diminishing; the red and papillated condition of the tongue more marked.

December 4th. Pulse 85; temperature 101.8° F.; feels somewhat better, but has headache, and the diarrhoea continues; eruption for the most part has left the face, and elsewhere is fading rapidly; throat normal; choræic twitching said by mother to be frequent, but none seen at the visits.

December 5th. Pulse 85; temperature 102.1° F.; respiration lab; passed a sleepless night on account of headache and general soreness, which seems to be rheumatic in its nature; rash entirely gone; tongue red, coated.

December 6th. Pulse 115; temperature 100.2° F.; some vomiting; continues of pain in right elbow and back of neck; some tendency to cough.

December 9th. No fever; no pain; pulse 90; is now affected only as before the rash; no desquamation noticed.

Cases VII. to XII. December 25th I saw a girl of six years, who was the first of a series of six cases, all occurring in one family. The child was running round, not much disturbed, and the mother had sent, not because the symptoms demanded a physician, but there were sore throat and a strange rash, not looking like measles, and she wanted to know what was the matter.

One week later (VIII.) a brother of twelve and (IX.) a sister of eight, and two weeks from the first cases (X., XI., XII.), three sisters, aged respectively ten, four, and one, were taken. All these children went through about the same course. The cases were all mild; the elevation of temperature was not more than one and one half degree; all had sore throats; all had enlarged cervical glands; all had papular rashes of precisely the same type, in the scattered form, lasting from two to three days; none of them had cough or coryza, injection of face or eyes; none of them took to bed.

All of these children had had measles, three of them six years, one four years, and two six weeks before, and three had scarlet fever five years before.

These cases taken together have very little resemblance to roseola, as ordinarily defined, or to scarlet fever. In only one, No. VI., would there have been a possibility of confusion, and that only on the second day. Nor do I think that even then a mistake would probably have arisen unless the observation were careless or confined to a very limited portion of the affected surface. But they are similar in certain respects to measles, and it is from this that they are to be distinguished if at all.

At the outset, it may be asked why, if this is an exanthem *sui generis*, has it been so long overlooked or disallowed? To answer this question satisfactorily, we need only consider the nature of the disease and the mode of scientific development. The duration of the disease is short, its course is mild, and it seems of very little importance. It does not come to the hospital, it does not demand therapeutic interference, it does not summon the physician. An intelligent layman will recognize the novelty of the attack as compared with scarlet fever or measles, and may seek an expert diagnosis. But there needs no second call. Subsequent cases of uniform symptoms and uniform mildness pass unobserved, and hence it is either reckoned a mild case of measles, or regarded as a sporadic doubtful condition when, in reality, it may be but one example of an extended epidemic.

Further it is the characteristic of inductive reasoning, advancing slowly, to recognize new distinctions and to draw boundary lines more sharply. Formerly variola, scarlet fever, and measles were regarded as different manifestations of the same disease, and their complete differentiation has been the work of generations. And in the same way, when, a little more than a century ago, De Bergen first described *röthein* as an unrecognized exanthem, he found few followers. But the number of these has constantly increased till now the leading authorities in diseases of children and dermatology, both at home and abroad, are almost unanimous in accepting its individuality.

There are two laws of disease, conformity to which is sufficient to establish specific identity, first, the law of contagion, second, the law of immunity.

If exposure to a given disease is followed by a repetition of that disease, and not by any other, it has a distinct individuality. If the subject of a given disease is

thereby protected from a repetition of that disease and not from the attack of another, it has also a distinct individuality.

Both these dicta are in the main true of variola, measles, and scarlet fever, and I think we shall be able later to add röteln. Each of the first three propagates its own kind, and repetitions of each, though universally admitted, are relatively rare and by no means sufficient to contravene the general law. But if we subsume under the name measles all this large class of cases of which I have given a sample, we must give up this statement, and say that repeated measles not only is not rare, but rather to be expected. And while admitting secondary attacks of measles, as I do, I may be here allowed to express the opinion, that many cases which are so considered would, if more carefully examined and followed, be found to be cases of the sort herein described. Further, the observation in the epidemic form of a large number of such cases has demonstrated that the so-called röteln reproduces itself if anything, and never by any chance either measles or scarlet fever. And in this series, when we consider the activity of the measles contagium, we can hardly think that the children of Case V., with every possible exposure, would have escaped some form of the disease, if we really were dealing with measles. Their susceptibility is shown by their subsequent infection after a very limited exposure, and the same is true of children in the house with Case II., and in Cases VII. to XII. all the children had exactly the same conditions, developing one and two weeks after the first, and it is not reasonable to suppose that the peculiar type would have been so well defined in each case, that deviations from it, or approximations to the ordinary form, would not have occurred had these really been cases of measles.

These observations lead to the conclusion that the contagiousness of this particular form of disease, as compared with measles or scarlet fever, is slight, but it is undoubted, and the repetition in the same person has been seldom observed. Also measles and scarlet fever may precede this condition, or, according to one observation of my own, as well as many reported in the journals, may also follow it without any special modification. Neither affords any immunity from attacks of the others.

Cases VIII. to XII. give suggestions as regards the incubation, two coming down one week and three two weeks after the first. These would probably be the minimum and maximum periods of incubation. All these cases may have had other exposure except No. XII., the infant, for they were in school, and all the neighboring children were said to be similarly affected; but for the infant the time is definite, no other exposure being possible.

It remains only to point out the resemblances and differences between measles and röteln, which are near allied and most often confounded, for, as regards scarlet fever, there can hardly be much confusion.

RÖTELN.	MEASLES.
INCUBATION.	
About two weeks.	About ten days.
PRODROMATA.	
Often none. Patient may be well till the rash appears. Sometimes a feeling of malaise, now and then some nausea and sneezing. May have a slight coryza. Fever slight or none.	Usually well marked. Lassitude. Catarrh. Lachrymation. Dry, frequent cough. Hard, rapid pulse. High fever.

DURATION OF PRODROMATA.

If present, one or two days. Four days.

STAGE OF ERUPTION.

Erllorescence appears at once on the face and upper part of the body. Is abrupt and over a pretty large area. Extends rapidly.

Generally in small, quite distinct papules, irregularly rounded, varying in size from a pin-head to one fourth inch across. Skin between unaffected. More distinctly elevated to the feel. Never crescentic. Often confluent over a considerable area, which will be of even color, with islands of clear skin, with edges sharply defined.

Pale or rather bright red. The centre often darker than the periphery.

Fever with the rash, if at all. Often almost none; not so high as in measles. Rarely above 101° or 102° F. Temperature curve not characteristic.

Erllorescence more localized at first appearance on neck and face, and spreads gradually.

Generally red dots, at first separate, running together in a crescentic form, seldom confluent over a large area.

Color apt to be darker, in a severe case often becoming purple.

Fever before the rash, and increasing steadily till it appears; generally high. Never absent. Temperature curve in an uncomplicated case quite characteristic, having two maxima, one before the rash, and again in its florition.

DURATION OF RASH.

Fades in from twenty-four to forty-eight hours. Rarely lasts three days.

Fades on the fourth day.

ACCOMPANYING SYMPTOMS.

Sore throat frequent. Occasional hoarseness. Conjunctiva only slightly affected. Enlargement of the cervical glands quite general. Catarrhal symptoms slight. Bronchitis absent.

Severe irritation of the mucous membranes. Congestion of conjunctiva the rule. Bronchitis universal.

DESQUAMATION.

Generally absent.

Generally present.

SEQUELÆ.

None.

Diseases of the respiratory tract common; also affections of the eyes.

In conclusion, then, röteln deserves to be regarded as a specific exanthem:—

- (1.) Because of its contagious reproduction of itself.
- (2.) Because it does not afford immunity from any other disease, nor does any other disease afford immunity from it.
- (3.) Because of the peculiarities of the eruption.
- (4.) Because of the peculiarities of the temperature.
- (5.) Because of the absence of desquamation.
- (6.) Because of the absence of sequelæ.

And I may further add that in a personal experience of some seven hundred cases of measles I have seen none exhibiting such deviations from the normal type that I could fairly link with them the dozen cases I have reported to-night.

—The advertising columns of the *Lancet* give notice that the surgeons of the Royal Westminster Ophthalmic Hospital will attend daily at two P. M. to give instruction in the use of the ophthalmoscope to practitioners. The ophthalmoscope is becoming of greater value every year for the diagnosis of nerve and other diseases, and the *Lancet* hopes this effort to disseminate the knowledge of its use will be cordially responded to.

A CASE OF FRACTURE OF THE SKULL FORTY CENTIMETRES IN LENGTH, RESULTING IN DEATH FORTY-TWO DAYS AFTER, FROM ENCEPHALITIS AND PYEMIC INFECTION.

BY MARSHALL L. BROWN, M. D., BRIGHTON.

On the afternoon of December 18, 1879, J. A., a blacksmith weighing two hundred and sixty-eight pounds, while riding at a break-neck speed in an open buggy, collided with a coal cart, and was thrown out, striking the top of his head upon some part of the cart, producing a bruise upon his scalp, extending diagonally across the head from the left frontal eminence to the right parietal bone, a severe concussion and injury to the brain, and fracture of the skull.

He was found senseless, bleeding from the nose and mouth very freely, losing a large quantity of blood. He lay, quietly, where he had fallen, without moving save a slight spasmodic motion of the legs, and his breathing was scarcely perceptible. After a few moments he was taken into a house near by, and Dr. Hazelton, of Grantville, saw him. In the course of an hour he regained his consciousness so as to answer questions and soon after said he was cold. A suitable conveyance was procured and he was taken home, a distance of six miles. On arriving, with the assistance of a man at each arm, he walked from the wagon into the house, up a long flight of stairs to his bedroom. I was then called, saw and examined him with Dr. Hazelton. He was undressed, in bed, lying partially upon his left side, breathing somewhat noisily, and blood was trickling from his nose and running down his throat. There was a bruised line half an inch in width and four to five inches in length on the top of his head; the scalp in the vicinity of this bruise was swollen and the swelling extended to the eye, which was very much swollen, protruding, and black; blood had settled beneath the eye, and the bridge of the nose was also contused and swollen. He was in a half-conscious condition; on questioning him, he described the accident, and answered correctly all questions. He complained only of the back part of his head and neck when he was moved. Twelve hours after the accident he vomited nearly a quart of blood which he had swallowed.

The second day, January 19th, there was a higher temperature, quicker pulse, and later in the evening a flushed face and hot head; at 11.30 p. m. he had a very severe convulsion involving both sides of body; at twelve he had a second convulsion, lasting twenty to thirty minutes, from which he passed into a comatose condition. His pulse was full, hard, and bounding. I brought him quickly under the influence of veratrum viride, bringing his pulse down to eighty. Temperature was then 102.2° F. For the next ten days his pulse was kept near that number, and his temperature became normal. After the convulsions there was considerable difficulty in swallowing, the left side of the mouth was awry, the tongue pointed to the left, the left eye was immovable, the pupil constantly dilated and insensible to light, and the whole left side of the face presented the peculiar expressionless appearance indicative of paralysis. He called his milk cider, his broth whiskey, the sense of smell seemed much diminished if not wholly lost; and there was loss of hearing in the left ear. He continued in a semi-comatose state for sev-

eral days; could be roused from it, when he would for a few moments seem himself, would then relapse into a mild delirium and talk of his business or amusements.

On the sixth night after the accident, the nurse watching him said that twice during the night, while apparently sleeping quietly, he straightened out his legs and arms, and a slight trembling passed over his body; he made no noise, there was no difference in breathing that he noticed, and there was no increase of heat in the head, or any change of color in the face; both times the action was but momentary. The next morning I found the paralysis in the parts above named more complete, and for twelve hours he could not put out his tongue, or swallow anything, choking in an alarming manner if he attempted it. He had no control over his mouth, the fluids offered him would run out of the corners, and finally he refused to take anything. His left arm was also paralyzed. In the course of the following night and the next day he managed to swallow a little liquid, spilling most of it however.

December 26th, Dr. Z. B. Adams of Framingham was called in consultation and diagnosed a fracture of the base of the skull, and gave an unfavorable prognosis; but said "under certain conditions, there was a possible chance of recovery." Then was noticed for the first time a fetid odor coming from his nose and mouth. After the bleeding had stopped he had had a clear, almost colorless, fluid running from his nose requiring the constant use of a handkerchief. From December 24th to January 9th his pulse ranged from 80 to 100. Temperature did not vary much from normal, being 98.6° F. on the 9th. The 5th, 6th, and 7th he was more restless and delirious, and not as easily controlled. On the 8th both eyes were more injected; up to this time the left eye had been constantly dilated, and did not respond to light, the ball itself being perfectly immovable. January 10th, three weeks after the accident, pulse was 88 and feeble, temperature 98.6° F. Hands were cold, presenting a mottled appearance. For a few nights, 10th, 11th, and 12th, he had sinking spells; hands white and cold, pulse feeble and face pale, temperature below normal. Food, stimulants, and friction relieved these symptoms somewhat. January 13th. Pulse 88; temperature 97° F. He passed a very restless night, wanting to go home, asking for his pants, asking if he was in for life, etc.

January 14th to 16th seemed to improve, slept more quietly, and was more rational. On the morning of the 16th, pulse 100, he had had a very good night; after taking his breakfast, slept soundly all the forenoon. He awoke about two p. m. and was perfectly rational, called his wife to him, kissed his little daughter, arranged his business affairs, and then advised his wife what to do after he was gone. He was asked where he was going and replied: "Going from whence there is no return;" he then said his head felt very badly, and kept constantly putting his hand to it saying "no one could know the suffering he had in his head." I saw him soon after, found his pulse 120, reapplied the cold applications to his head, and advised that he be kept quiet. He soon fell asleep; during the night following became restless and relapsed into a delirious condition. Previous to this, for some days, it had been noticed that he appeared to be swallowing something, and he would occasionally strangle as when trying to eat. On the 18th his mouth was found to con-

tain a good deal of pus; his pulse was feeble, and he had a dusky look about the face. The muscles of his legs and arms were completely limp and flabby, showing a great loss of tone as well as of substance. Until just previous to this time, after the paralysis of the organs of deglutition had somewhat passed away, he had taken everything offered him very readily; after pus was found in his mouth his appetite failed, and he refused to take food or drink. His mouth and tongue, which had before been moist and natural, became red, dry, and parched, sordes collected on his teeth. Pulse 100 mornings, 104 at night. On the 20th of January, pulse 104, feeble, soft, compressible; hands cold; circulation sluggish; slept nearly all the day very quietly; in the evening pulse 100 and stronger, color of face and hands good, temperature, to the touch, seemed about normal. On the 21st he remained in a deep sleep all day, from which he could be readily aroused when he was required to take food or drinks. Pulse 102. Temperature 97.8° F. 22d, A. M., pulse 108. Pus again found in his mouth and nose, and he raised fetid matter from his throat. Condition of mind clearer than on the 20th and 21st. There had been a gradual improvement and lessening of the paralysis in the organs of deglutition and muscles of the tongue. January 23d, pulse 100, temperature 97.6° F. Pulse soft, compressible, surface cold, skin mottled, restless, talkative, delirious, groans, complains of "rheumatism in the knee." 24th, passed his urine in the bed for the first time, always calling for the urinal before, took nourishment readily, asked questions correctly. 26th, A. M., got up and had a natural evacuation of the bowels, would get up and sit upon a chair for that purpose. During the night evidently had another shock, as nurse said he trembled all over. On the morning following there was paralysis of the right side, right eye commenced to weep, the head sweat profusely, was hot, temperature 102° F.; pulse 130, feeble. He complained of soreness and pain, on motion, in the right knee joint. In the afternoon complained of pain and soreness in shoulder. Pulse 149, temperature 101.8° F. Flesh hot, face flushed, rested quietly most of the day, semi-conscious. Nine P. M., pulse 140, sweating very profusely from the face only. 28th, hurts him greatly to move either legs or arms. 29th, sweating of face continues; breathing through the mouth, takes no notice of any one, knows nothing, remained in this condition until about four P. M., when he had a slight convulsion, face and head became purple; there was no movement observable after this, other than that of the organs of respiration. He died at eight P. M., forty-two days after receiving the injury.

Autopsy twenty-four hours after death, section of the head only. On removing the scalp and calvaria a line of fracture was found to extend through both tables of the skull, from a point a little in front and to the left of the centre of the calvaria down to the orbital prominence, through both orbital plates, and along the line of junction of the frontal and ethmoidal bones through the sphenoid, terminating in the sphenoidal fissure. The length of this line of fracture was about forty centimetres or ten inches. The arachnoid was found adherent to the brain over nearly the whole left hemisphere, a large clot of blood just under the point of the skull where the force of the blow was received formed a mass covering nearly half the hemisphere, another mass was seen upon the right hemisphere in the temporal region, lines of pus were found extending along

the vessels and in the sulci between the convolutions of the brain which were of a yellowish greenish color. The interior of the brain presented nothing abnormal. The convolutions were somewhat flattened and softened.

Of eighteen cases of fracture of the skull from falls, reported in the Medical and Surgical History of the War of the Rebellion, thirteen were fatal, dying of encephalitis usually from the tenth to the fourteenth day. Of those dying of abscess of the brain, the average time was three weeks, chills and other phenomena of pyæmic infection being present. Of eleven cases reported of fracture involving the base of the skull the eleven died; of these, two cases only were accompanied by the peculiar colorless discharge from the ear, said to be indicative of fissure of the petrous bone.

It was observed that fissures or long linear fractures with little depression characterized the fractures of the skull from falls or railroad accidents.

RECENT PROGRESS IN SURGERY.

BY H. H. A. BEACH, M. D.

"SPONGE GRAFTING."

SURGEONS have long recognized the difficulty in removing sponges, unprotected by a fold of cloth, from raw surfaces to which they have been applied some hours before, as compressors to check hæmorrhages. Granulations shoot into the interstices with great rapidity and their rupture is necessary before the sponge can be separated from the fresh surface.

Dr. D. J. Hamilton¹ has made a careful study of the condition of the sponge and wound under these circumstances, and, with the aid of microscopical observations, determined that the sponge becomes vascularized, as in the case of a clot, and may become the medium for the construction of new material in the healing of wounds and ulcers. The paper is one of exceptional interest and is deserving of careful consideration and verification. He concludes with the following suggestions:—

"Having once recognized the principle that a porous body may become vascularized and be the medium for the construction of new tissue, the application of the method to various purposes naturally suggests itself. In applying any porous body with a view to this organization certain points must always be kept in mind. The porosity of the body must be such that all the canals freely communicate. Sponge is exquisitely suited for the purpose on account of the free anastomosis between its channels, but many other substances might be utilized in the same way. I have of late thought that charcoal or calcined bone might be employed in certain cases. For one purpose at least such a solid framework might be useful. Where it is desired to prevent contraction of the newly formed tissue when it cicatrizes, where it is of moment to retain the newly formed tissue of its original bulk, then a solid framework must be employed. A solid framework will, I feel sure, organize just as a sponge would, and will have the special quality of preventing cicatricial shrivelling. When once incorporated with the tissue it will not cause any more irritation than the calcareous matter of a bone does. A dead body of this kind is not of itself an irritant. It is the injurious application

¹ Edinburgh Medical Journal, November, 1881.

of it, or the septic matter which it may introduce, which gives rise to the mischief.

"Such a solid framework, it strikes me, would be particularly useful for forming new bone. One of the great dangers of a simple periosteal detachment operation is that the future bone is not sufficiently bulky and strong. By supplying a solid framework of this kind we would avoid this, and the formation of bone would proceed within it just as well as in the spaces of cartilage or the meshes of a fibrous tissue. Bone is nothing more than a fibrous tissue modified by being impregnated by calcareous and other salts. The particular elements which go to form bone are nothing more than connective tissue corpuscles, and by supplying a framework of the above nature for these to ramify within, bone might be grown to an almost unlimited extent. The spongy framework, I should think, although I have not as yet had any practical experience in the matter, would be rather too yielding, and would be liable, when infiltrated with bone elements, to contract. Whether the formation of bone would commence early enough to prevent this I do not know. It is quite possible that it might.

"Wherever it is applied, it must be always remembered that the sponge or other framework must be employed merely for the purpose of filling a vacancy, otherwise it will cause great inflammation and the efforts at organization will not proceed. My experiments so far have shown me that, if thrust between two portions of a muscle, for instance, without a portion of the muscle being excised, organization does not proceed nearly so equally as when a piece of tissue is removed and the sponge merely takes its place. The reason is obvious. If thrust between the muscles of a part it will, especially when it gets softened by the juices of the tissues, tend to swell, and, by pressing on neighboring blood-vessels, will interrupt the circulation within them and so induce an inflammation. Where it merely fills a vacancy, however, the case is very different, and organization will then follow. Before being applied it should always be rendered antiseptic, and, of course, this specially holds good of its application to a fresh wound.

"Every one will admit that nothing is more conducive to putridity in a wound than a septic sponge, while, if applied in an aseptic, or rather antiseptic, condition, and dressed with the view of retaining it so, it can be kept, as shown in one of my recorded experiments, perfectly free of putrefaction through a period of several months.

"So far as I see at present the method of 'sponge-grafting' seems excellently suited for growing new tissue where that is insufficient to cover a part or to allow of stretching, but whether it may not have a wider range of application remains for future experience to demonstrate. The only objection which I perceive to its application is the somewhat long time required to organize it. During the first ten days I found that a part of a sponge placed in the abdomen had organized from an eighth to a quarter of an inch, but it always happens that one part organizes quicker than another, and hence, although in a large wound one part may thoroughly organize in, say, a month, other parts of the same sponge require longer. I cannot see, however, what objection there would be to the patient going about, if this were practicable, after the sponge had once become fixed. On the contrary, I should think that this might actually, in certain cases,

exert a beneficial influence upon the organizing powers of the tissues."

MODERN LITHOTRITY.

Dr. Bigelow's paper appeared in the *London Lancet* soon after (September 21th) his exemplification of the new operation before the International Congress. It presents the various improvements which he has devised in the construction of the instruments since his first demonstration of the leading principle of the new method, namely, the tolerance of the bladder to instruments, and its intolerance of fragments. An abstract would hardly do justice to the paper, the value of which is dependent upon details which are of the greatest service to the operator who hopes to do a successful lithotripsy.

The latest achievement of Dr. Bigelow in this direction is the removal of a calculus, weighing 1380 grains, at a single sitting of one hour and fifty-five minutes. The patient experienced immediate relief from the distressing tenesmus which had tormented him for nearly four years, and recovered without a bad symptom. The bladder was so completely emptied that at a subsequent washing, one week after, only a minute fragment was found, weighing two grains. The writer has copied from the hospital records the temperature of the patient as showing how little the system may be disturbed by this operation. Before the operation the temperature was 100° F. The operation was done on the 17th day of November; during the ten succeeding days the temperature was: (1) 102° F.; (2) 101°; (3) 99.5°; (4) 99.5; (5) 99.4°; (6) 99.2°; (7) 98.8°; (8) 99°; (9) 98.8°; (10) 98.8°.

SUPRAPUBIC LITHOTOMY.¹

Langenbuch, of Berlin, advocates this method in preference to all others in removing stone, claiming that the risk of wounding the peritonæum is not so great as is supposed, and that the antiseptic method is applicable, whereas, in perineal lithotomies it is hardly possible to carry out the details of that method vigorously, in consequence of the anus being so near the wound. Of four hundred and seventy-eight cases of suprapubic lithotomy, collected by Dr. Dulles, only thirteen were complicated by a wounded peritonæum, three of which were fatal. The author showed that a stone weighing more than two ounces could be extracted with less risk by the high than by the perineal method. The comparative advantages of perineal and suprapubic lithotomy are considered by the author, who states that urinary infiltration of connective tissue it is pointed out is a danger common to both operations, which, however, in the high operation can be prevented. The danger of this infiltration when it has occurred is much less after the high than after the perineal operation, since the epicyclic is more accessible and less confined than the periprostatic and circumrectal connective tissue, can be more readily incised and disinfected, and as it is not connected with any large venous plexus is less likely through its decomposition to set up general septic infection. In the high operation the incisions can be made carefully and precisely, and through structures that are freely exposed to view, and there is no necessity for forcible laceration and contusion of connective tissues and other soft parts. It may be said the author suggests

¹ W. Smith, *London Medical Record*. *Archiv für klin. Chir.* Band xxvi., 1881.

that it is as difficult to set up urinary infiltration after the high operation as it is to prevent such infiltration after lithotomy by the perineum.

For the removal of a large stone — one with a maximum diameter of about two inches — the safest proceeding, Lauenbuch thinks, is the high operation performed in two stages and under strict antiseptic conditions. To meet the case of a monster stone, measuring from four to seven inches in diameter, the extraction of which in the second stage of the high operation would probably cause much laceration of the recently healed superficial parts, and also of the peritoneal fold, he proposes a complicated proceeding. In the first stage, the anterior surface of the bladder is freed to some extent of its layer of peritoneum, and a plastic operation is performed on this membrane. In the second stage — that of extraction performed after an interval of from five to eight days — elaborate preparations are taken to disinfect the bladder.

INJURIES TO THE HEAD.

Dr. Macewen draws the following conclusions from the study of an interesting series of head injuries, and reports them in the *London Lancet* for October 1st.

"In head cases, where convulsions are likely to occur, it is of importance, as Dr. Robertson (Glasgow) has pointed out, to have an intelligent observer in constant attendance, as the record of the first indications of the impending convulsion and the parts affected by them is of great use as a guide to localization. At a variable time after the commencement of the attack, the convulsions, in many instances, become general, and then the indication as to the special localization are lost. Cases II. and III. illustrate this point. In both the seizure was at first limited, and pointed to the localization, and in both the convulsions afterwards became general, losing all special significance. Again, a symptomatic appearance may occur during or after a convulsion, which, if noticed and recorded, may aid the surgeon in his diagnosis. This is exemplified by the aphasic condition which came on in Case IV. after the convulsions, and which lasted only a short time. Had it escaped notice the particular part of the frontal lobe, which was the seat of the abscess, could not have been made out. A careful record of temperature is of great service in indicating the approach of convulsions.

"In each of the cases noted above, the convulsions were preceded by a rapid rise of temperature. The rectal temperature was taken every three hours, until it began to rise, when it was noted every hour, until it again descended to normal. In this way the careful record of the temperature gave those in attendance a forewarning and prepared them for what was likely to ensue. The first case mentioned shows that a portion of bone destitute of pericranium may be shifted from one part of the skull to another and remain in that position, apparently alive, and uniting with the skull, form an osseous plate over the trephine aperture.

"The first three instances illustrate the perfect immunity from inflammatory products which attend aseptic trephining. When the skull can be opened, the cerebral coverings incised, and the brain exposed without fear of inflammatory mischief, trephining ought to be employed, when the localizing of the brain pressure is established. Besides operating in traumatic cases, trephining is justifiable in idiopathic cases, such as, for instance, tumor of the dura mater."

Hospital Practice and Clinical Memoranda.

A CASE OF BURNING FROM THE EXPLOSION OF A MORTAR SHELL, FOLLOWED BY INFLAMMATION OF THE TIBIA.

SURGICAL REMINISCENCES OF THE WAR. NO. 2.

BY GEORGE HOLMES BIXBY, M. D.

TWO OPERATIONS FOR THE REMOVAL OF DISEASED BONE, AT AN INTERVAL OF A YEAR; ABSCESS OF THE HEAD OF THE TIBIA AFTER THIRTEEN YEARS OF PERFECT HEALTH; OPERATION AND RECOVERY.

C. S., an ex-soldier, consulted me for the relief of a chronic affection of the right tibia.

Eleven months before, at the siege of Petersburg, in Virginia, while sitting in the trenches, apparently out of harm's way, a mortar shell exploded in such close proximity to his person that the anterior portion of the right tibial region was subjected to an intense heat, which he compared to a scald from boiling water. On exposing the parts, the limb was found deeply discolored and apparently in a charred condition. Deep-seated inflammation and extensive sloughing of the soft parts rapidly succeeded.

After a stay of three months in the hospital the ulcer healed, with the exception of a space the size of a twenty-five cent piece, which resisted all treatment. His general health being well nigh restored, he was sent home to complete the cure. A few weeks subsequent to his return, he came under my observation. Two weeks previously, without any apparent cause, he was seized with a severe chill, and almost immediately afterward by an intolerable boring pain along the shaft of the tibia.

On inspection, signs of general oedema of the right limb, and a decided difference in the size of the two limbs, were plainly observable. An indolent ulcer occupied a space near the middle portion of the bone, which on closer inspection proved to be the opening of a sinus, leading into the cavity of the bone. A thorough exploration resulted in the removal of a number of fragments of dead bone. There was an immediate cessation of the pain, the process of repair proceeded without interruption, with a corresponding improvement in the general health, and in due time he was able to be about with the aid of crutches.

Twelve months later, when apparently in the enjoyment of fair health, there suddenly ensued a similar set of symptoms, to those of a year before, namely, severe protracted chill followed by boring pain in the tibial region. On this occasion a small ulcer occupied a point at the lower angle of the now consolidated cicatrix. As before, the sinus led to the cavity of the bone, at the fundus of which detached fragments were easily detected. A single opening with a small trephine proved to be too small to admit of their removal, and not until an opening nearly four inches long had been made was it possible to raise up the sequestrum, four inches in length, and no larger than an ordinary knitting needle.

The cavity was unsparingly freed of every vestige of suspected tissue, little regard being paid to preservation of the periosteum. Again, as before, the work of repair went on admirably, and in about three months the opening caused by the trephine and chisel had been

entirely filled up with normal tissue. In less than six months after the operation he was fully restored to health, threw away his crutches, and zealously resumed his duties as a mason.

In May, 1880, after a lapse of thirteen years, I was unexpectedly summoned to the bedside of my old patient. Until within a few weeks during this long period he had enjoyed the most perfect health. Shortly after, having been subjected to several weeks of extraordinary physical exertion, he was suddenly seized with a most violent and protracted chill, succeeded quickly by a boring, tearing pain in the head of the tibia.

I found the patient somewhat emaciated, with a dry tongue, injected conjunctivæ, but with a full, slow, unirritable pulse. Hot fomentations, opiates, locally, hypodermically, and internally applied, failed to afford permanent relief. The symptoms above referred to were at once recognized as the result of the protracted use of opium and not as typhoidal, and at once excluded as a bar to any immediate surgical interference. The history of the case, both remote and recent, the characteristic pain caused by pent-up matter, referable directly and distinctly to the head of the bone, convinced me that I had to do with an abscess of that part.

Putting him thoroughly under the effects of ether, I proceeded to explore the head of the tibia with a small-sized trephine. I had hardly reached the depth of a third of an inch when a gush of fetid pus most satisfactorily confirmed the diagnosis. The walls of the large suppurating cavity, containing at least two ounces of pus, were now carefully freed of every vestige of diseased tissue.

On recovery from the anæsthetic it was found that the enemy had been routed, for not the slightest amount of the old pain remained. The process of repair again went on as usual, and at the end of four months he was able to resume all his ordinary duties. The use of cod-liver oil during the winter months for years to come was strictly enjoined.

A CASE OF DEATH FROM EXHAUSTION FOLLOWING EXCESSIVE HÆMORRHAGE DURING LABOR.

BY W. F. BRICHIN, M. D., HARV.

Mrs. S., aged thirty-two, eight months and a half advanced in pregnancy with her sixth child, nothing unusual ever having occurred in her previous labors excepting that they were very tedious, but not sufficiently so to necessitate the use of instruments.

On the 24th of November she was "taken flowing" while in the act of putting down a carpet. This was at about two p. m.; at three I was called, found her on a lounge in severe pain, shivering, her feet and hands cold, and feeling very weak. On examination I found that the neck was not wholly obliterated, the womb dilated to the size of a silver dollar, and the patient flowing freely, the color of the flow being very dark. I could not discover anything to indicate placenta previa. I then ordered her to bed, and after a few hours, the os having dilated considerably more, I gave her a dose of fluid extract of ergot, which checked the flow so long as the effect of it continued. After waiting a few hours longer I ruptured the membranes, thinking that this might hasten labor and control the hæmorrhage. My anticipations were realized for

a while, and then it commenced again. She now began to complain of severe pains in her head, arms, and legs. I now suggested the use of forceps, which was strenuously opposed by the husband, who said she "had always got through without the aid of instruments." After explaining the case to him he consented, she at the same time saying "something must be done." At eleven p. m. I applied the forceps, and delivered her about 11.45 (without ether) of a dead child, weighing about ten pounds. I then removed the placenta, and passed my hand over the abdomen, and found the womb had a "doughy feeling." I then passed my hand into the womb, and found it filled with clots, which I removed, the womb contracting down firmly. I then gave her a dose of ergot, morphia, and whiskey, and remained with her until half past one a. m. During the first hour after delivery she threw her hands and body around almost incessantly, saying "it was impossible for her to remain quiet, she felt so weak and peculiar." When I left her, at half past one a. m., she felt quite comfortable and sleepy; the pulse was weak but steady, and the womb firmly contracted. At three a. m. she again became restless, and before I could be summoned she threw up her hands, gasped a few times, and died.

In this case I am unable to say from whence the hæmorrhage came, but in all probability it came from the fundus, as the flow was very dark at first. The administration of ergot at the time I did might be open to criticism, but in this case it did certainly control the hæmorrhage while its effects continued, and likewise there was an arrest after the rupture of the membranes.

The only thing to be regretted in the case, I think, is that the forceps were not applied as soon as the strength began to fail.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

M. H. RICHARDSON, M. D., SECRETARY.

RÖTHELN.

At the meeting of October 17, 1881, Dr. JONES read a paper on rötheln, which is published on page 607 of this number of the JOURNAL.

Dr. C. H. WILLIAMS asked how one could distinguish rötheln from a light case of scarlatina in which the symptoms may be very mild.

Dr. JONES replied that the disease would not suggest scarlatina at all. The eruption is very different, being in scarlatina diffused. In all cases of rötheln he had seen there were blank spaces unaffected by any rash.

Dr. A. T. CABOT said that he understood the reader to say that a second attack of measles is very rare. This last year during the prevailing epidemic of measles a second attack was very common. Sometimes even there were three. He thought that the second attack might assume a very light form, differing from the true measles just as varioloid differs from variola.

Dr. JONES thought that the disease presented a type entirely new and different from the ordinary measles.

Dr. BRODGETT said, with regard to the confounding German measles with scarlatina, that he could recall three cases of so-called German measles in this city which were treated as such. At the end of the fourth

day the symptoms of the disease had disappeared, but the patients did not recover. They died at the end of a certain time with symptoms of nephritis and other phenomena of scarlatina. It was therefore thought that the original disease was probably scarlet fever; Dr. Blodgett thought it easy to make a mistake in diagnosis between a light case of scarlatina and the disease called *rötheln*.

In reply to Dr. Wells, Dr. JONES said that there were three cases during one week, one after the other, in one family. In other families there was no contagion, the cases being isolated.

Dr. HAVEN thought the profession in Boston too much inclined to decide this question of a specific exanthem from their own experience alone, which in most instances consisted of only a few sporadic cases; a judgment based upon these must be imperfect, but if we take a broader view of the subject and grant, as seems but fair, the accuracy of observations in Germany — where the disease, if it exist at all, occurs in epidemics — it seems as though an affirmative answer was inevitable. Men with the experience of Gerhardt, Steiner, Vogel, and many others of less note as authorities in pediatrics, flatly affirm the dicta of contagion and immunity spoken of by the reader. In the face of this positive testimony that such a disease *does* exist, negative evidence that it has not been present in a certain few cases, or that these may have been a second attack of measles, has little bearing on the question, Is there a specific exanthem *rötheln*?

Dr. Haven thought Dr. Jones's cases differed from most reported as *rötheln*, in the absence of catarrhal symptoms; these are usually present, lighter than in measles, but well marked and developing either simultaneously with or at the most twelve hours before the eruption; this being one of the principal points of differential diagnosis, as even in the lightest cases of measles the prodromal stage is normal — three days. There have been several epidemics reported in this country of late, and also abroad, where the lung complications were very severe, a fatal result following the extension of the catarrhal trouble in the lungs.

Dr. EDGERLY remarked that cases had been very common in Cambridge which differed both from scarlatina and from measles. In these cases one thing that struck him was that the patients were not so sick as the symptoms would seem to warrant. The general characteristics of this disease were similar to those described by this reader. The child would be found one day exhibiting the eruption; the next day would be better, and on the third would be well. There was one symptom which he remarked so often that it seemed to him characteristic of the disease, and that was swelling of the glands of the neck. It was in fact always present. After his attention was called to it he used it as a distinguishing mark of the diseases, so that finally, if such swelling occurred he at once suspected the disease might be German measles, and generally found it so.

Dr. J. B. AYER agreed with Dr. Cabot, that the repetition of measles in the same patient is very common. He knew of three such cases. Last March he had seen a number of cases which were of great interest to him. Within a few days of each other twenty-one children were taken sick. Among them was one very severe case of measles. Conjunctivæ were very much inflamed. Fever was high, and the patient needed much attention. Two others were cases of measles of

a lighter type. The remaining eighteen were very mild. In twelve to forty hours the eruption had disappeared. Generally in about twenty-four. There was no treatment required. One of these patients went to Martha's Vineyard, where she had a second attack of measles. The eighteen mild cases were not like ordinary cases of roseola, measles, or scarlatina.

Dr. C. H. WILLIAMS asked whether the reader had noticed in the cases of *rötheln* any want of power in the accommodation of the eyes after convalescence.

Dr. JONES replied that in two or three of his cases there had been complaint of weakness after recovery.

Dr. WILLIAMS then stated that after an attack of ordinary measles such a condition was sometimes met with and might be very persistent, he called the attention of the members to the need of great care in the use of the eyes after and especially during an attack of measles.

In reply to Dr. Williams, Dr. HAVEN said that an ophthalmic surgeon of wide experience had stated to him, last winter, that he had been struck by the absence of any severe ocular trouble subsequent to second attacks of measles so common in this last epidemic; that although the subsequent difficulty did not seem to depend on the severity of the disease in the primary attack, it often being marked in the mildest cases, in the second attack it was altogether absent. This tended to confirm the suspicions of the speaker that many cases of second attacks of measles were in reality *rötheln*, and that there had been the two coexisting epidemics.

CANCER OF THE LIVER.

Dr. H. E. MARION reported the case.

J. L., died October 15, 1881, aged seventy-one years, four months. American; farmer. Always used alcoholic stimulants. Always enjoyed good health until within the past two years, when he began to complain of severe, burning pain in right hypochondriac region, recurring at intervals and with more or less severity. Loss of flesh has been gradual; during the past six, and particularly the past three, months, it has been very marked. No disturbance of bowels until recently; has suffered from diarrhoea. Hands and feet swollen most of the time lately; no œdema in any other part of the body. Said never to have been yellow or jaundiced, but lately family have noticed that his complexion was of a pale straw color. Never acknowledged that he was a sick man nor consented to have a physician, remarking at one time, "if he had a doctor he should not live two days" (he lived fourteen hours).

I saw him for the first time on the evening of October 14th, when I learned the foregoing history: —

On examination I found marked emaciation; extremely feeble thread-like pulse; no cardiac murmurs; hepatic dullness extending from just below right nipple to 12 cm. below ribs, and to left nearly on level with umbilicus; of an irregular nodular feel, nodules of unequal size; just below xiphoid cartilage, in median line, was a tumor as large as a hen's egg, immovable and non-fluctuating. An indistinct murmur was to be heard over this region. This tumor was first noticed about six months ago. Complaints of nothing but diarrhoea, which is very exhausting, and of which he wished to be relieved. Hands and feet swollen; mind clear. I directed that urine be saved for examination, and gave him —

Machinery accidents	5
Boiler explosions	12
Asphyxia by smoke	3
Asphyxia by food or vomitus in windpipe	3
Run over	8
Burns	4
Shooting	2
Explosion of nitro-glycerine	1
Blows on the head	2
Hanging	1
Fall from carriage	1
Poisoning by tartar emetic	2
Poisoning by arsenic	2
Poisoning by elixir of opium	1
Cause not stated	1
There were also by overlaying (infants)	3
Instrumental labor (infants)	4

Deaths by "violence" (the act of another) were as follows:—

By poison (arsenic)	2
By pistol-shot	3
By pistol-shot and strangulation	1
By blows on the head	1
By criminal abortion	1
By cause unknown	2
By infanticide	7

Suicidal deaths:—

By hanging	22
By shooting	10
By drowning	7
By cutting throat	2
By leaping from a window	1
By leaping upon railroad	1
Poison	12
Morphia or laudanum	5
Paris green	3
Aqua ammoniac	1
Prussic acid	1
Cyanide of potassium	1

Deaths from natural causes:—

Heart disease	58
Apoplexy	22
Alcoholism	20
Pneumonia	10
Phthisis and hæmoptysis	11
Pulmonary congestion	4
Œdema of lungs	3
Bronchitis	2
Nephritis	4
Aneurism	2
Peritonitis	3
Convulsions	3
Epilepsy	2
Old age, with exposure or destitution	7
Cholera morbus	2
Puerperal fever	2
Post-partum hæmorrhage	1
Embolism, acute rheumatism, insanity, scarlatina, hæmorrhage into pancreas, congestion of brain, disease of spleen, syncope, paralysis, measles, neglect, and debility, each	1
Skeleton found, cause of death unknown	1
Causes not stated or unknown	5

Infantile group from natural causes:—

Still-birth	16
Premature birth	13
Cholera infantum	7
Convulsions	5
Cyanosis	2
Marasmus	2
Exposure, hydrocephalus, bronchitis, defective development, and congenital malformation, each	1
Cause not stated	10

The Executive Board desire to call the attention of the members of the Society to this clause in the second section of the By-Laws: "Every member shall forward to the Corresponding Secretary a report, as full and complete as possible, of each case which shall

receive his official attention." While many members fulfill this duty with conscientious exactness, giving to the Society reports of their work, which are models of medico-legal excellence, there are also many who are content with furnishing but a single line of detail. While reports of the latter description may possess a certain value as contributions to the statistical tables of the Society's Transactions, it is needless to add that they contribute little to the general fund of medico-legal science.

Our reports are annually increasing in value, and have already been consulted by medical gentlemen in search of material for illustration of medico-legal subjects.

During the year the work of filing and indexing the reports of cases has been completed up to the beginning of the present year, the result of the work making nine volumes, containing detailed reports of 1602 cases.

The last year being the national census year, we are enabled to present an estimate of the whole number of medical examinations throughout the commonwealth for a single year. This is based upon the returns already made by medical examiners representing a majority of the population. The value of statistics is greatly enhanced as the numbers of population are increased from which such statistics are compiled. For example, in one small town of 700 inhabitants, there were three suicides in one year; it would be far from correct, however, to infer from this fact that there had been 7600 suicides in Massachusetts in a year. It is not safe to compile statistics on a basis of 1000, or 10,000, or even 100,000 people. We may, however, form estimates from a million inhabitants with a tolerable assurance of reaching a uniform result under like conditions. Massachusetts contained in 1880 a population of 1,783,086. For the same year forty-one medical examiners rendered reports to this Society, representing districts containing a population of 1,312,031, leaving other districts containing 471,055 inhabitants from which no reports were returned. In order to present an approximate estimate which shall be as nearly correct as possible, it must be remembered that the medical examiners who have reported their annual work represent a dense population, mainly inhabiting the cities and large towns of the Commonwealth. The remainder who have not reported, with but few exceptions, represent a sparse population. In the latter districts the ratio of sudden, violent, or suspicious deaths is less than that in the cities and large towns. No inflexible rule can, however, be stated. The various items enumerated in our annual reports are affected by the comparative density of population in a somewhat different ratio. Thus, the ratio of railroad accidents and other casualties is much greater in or near the cities and large towns where railroads converge and steam-boilers, factories, mills, and dram-shops abound. On the other hand, the ratio of suicides is affected in a much smaller degree by density of population. Upon careful examination of these and of minor causes, affecting the population of different districts, we find that an addition of about twenty per cent. should be made to the total number¹ of reported views followed by autopsy, of inquests held, of fatal railroad accidents, and of other fatal accidents; and of ten per cent. to the total number of views, of deaths from natural causes, and of suicides as reported.

¹ See summary in first section of Report.

The following table represents the estimated returns from the whole State, and is probably not far from correct: ¹—

Estimated whole number of views made in all districts	1145
Estimated whole number of autopsies made in all districts	249
Estimated whole number of inquests	215
Estimated whole number of deaths from natural causes	422
Estimated whole number of railroad accidents	149
Estimated whole number of other accidents	301
Estimated whole number of suicides	138

In compliance with a vote of the Society, the Executive Board have during the past year investigated the subject of comparative expense of the coroner and the medical examiner systems in Massachusetts.

While it is impossible to present an exact statement of the expenses under the old and the new laws, the results obtained from the replies of county treasurers are favorable in the aggregate to the Medical Examiner Law of 1877.

Certain points in this investigation require explanation before presenting a tabular summary. The proceedings attendant upon an inquest are necessarily of a two-fold nature, medical and legal. Under the old law both offices were combined in one individual, the coroner first viewing the body in person, together with his jury, and then sitting in the character of a magistrate and hearing the evidence.

The bill of expense of this two-fold proceeding was also summed up in one paper, and the entire sum paid to the coroner, to be distributed by him to the various persons entitled to fees, including the jury, the witnesses, the constable, the scribe, the surgeon, the chemist, etc.

Under the present law the proceedings attendant upon an inquest are divided between the medical examiner and a district or municipal justice. Hence the bill of expenses is also naturally divided, the medical examiner rendering an account only of that portion of the work which is strictly his, and the clerk of the court or trial justice also rendering his portion of the expense upon a separate paper. This division of the expense is rendered doubly necessary by the fact, that, while under the old law an inquest usually followed quickly after the official view of the body (often within twenty-four hours, and almost invariably within a week), on the contrary, under the present law, a considerable delay is usual between the view or medical examination and the inquest, — often from one to six months elapses, — and the medical examiner's account may be sent in and settled before the inquest takes place.

Unfortunately for this investigation, while it is an easy matter to obtain an exact statement of the medical examiners' expenses, each county treasurer having kept these as a separate item, on the other hand, the court expenses of inquests (consisting mainly of constable and witness fees) are in some counties mingled with the criminal expenses of the same courts in such a manner that it is impossible to separate them. We have, however, obtained from county officers an average estimate of the cost of inquests, and this is quite uniform for those counties which have not rendered a separate and exact return of this item. The average

cost in those counties, with the exception of Suffolk, is about \$14.50 for the legal part of an inquest; in Suffolk County the average cost of inquests in the courts under the new law has been only \$7.26.

For the purpose of convenience, the expenses of two periods of three years each under the old and the new laws are shown in our report. The two half years of 1877 (the new act took effect July 1, 1877) are not considered, since the introduction of that year would render liable a confusion of accounts in some county reports.

The period from January 1, 1874, to December 31, 1876, is selected under the old law, as being the nearest available period in point of time and extent of population; under the new law, the years 1878, 1879, and 1880 are selected as being the only three complete years for which accounts have yet been rendered.

The following table is necessarily somewhat incomplete. It shows the comparative expenses of the two periods selected as fully as possible from the replies received from all counties. The result is favorable to the medical examiner law of 1877, for the reasons which will be stated: —

Counties.	Population, 1880.	Amount paid for Coroner's Inquests and Views in 1874, '75, and '76.	Paid for Medical Examiner's Fees in 1878, '79, and '80.	Paid for Inquests in the Courts in 1878, '79, and '80.
Barnstable .	31,945	\$912.38	\$311.20	\$178.84
Berkshire .	69,049	1,384.00	675.23	297.25
Bristol . .	139,121	3,108.47	1,887.49	—
Dukes . .	4,305	246.26	131.80	—
Essex . .	244,640	6,263.86	3,457.94 ²	—
Franklin .	36,000	496.00	826.68	—
Hampden .	104,117	3,041.47	3,111.13	—
Hampshire .	47,235	1,772.79	790.60	—
Middlesex .	317,951	7,002.10	5,212.99	—
Nantucket .	8,726	32.90	52.21	—
Norfolk . .	964,62	2,108.85	2,698.09	—
Plymouth .	74,024	894.20	551.70	169.55
Suffolk . .	387,626	28,828.63	20,276.26	1,620.26
Worcester .	226,885	4,878.42	1,451.45	1,224.97
State ³ . .	—	2,741.71	5,741.17	—
Total . .	1,783,086	\$63,712.04	\$17,175.94	\$3,490.87

The figures given in the first three columns of the foregoing table are matters of record, as are also those in the last column, so far as presented. In the case of those counties from which no answers could be obtained to complete the record in the fourth column an estimate is given, based upon the reported work of medical examiners for the past three years, combined with the replies of county treasurers. It cannot be far from the truth. These estimated inquests number 265, and their aggregate cost, at \$14.50 each (the average, as mentioned above, for counties other than Suffolk), was \$3842.50. Adding this sum to the totals of the last two columns in the table, we have a grand total of \$51,509.31 as the whole expense of inquests and medical examinations in Massachusetts, during the three years 1878, 1879, and 1880. This sum is much less than the total expense for similar service under the coroner laws during the three years 1874, 1875, and

² Costs of inquests in the courts are included in this sum, but not separately reported.

³ These amounts were paid from the State Treasury for inquests, medical examinations, etc., on the bodies of strangers having no known legal settlement in this Commonwealth.

¹ See report of two columns in this estimate; reference is made to the report of the Massachusetts Reg. Stat. in Report (1880), pages 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

1876, the difference in favor of the Medical Examiner Statute being \$9202.73.

A favorable point to be noted in the foregoing tabular summary, is the difference in population of the two periods selected for comparison. Between the middle years of each period of three years (1875 and 1879) the State had gained over 100,000 inhabitants.¹ Had the population remained the same, the difference in absolute expense would have been considerably greater than is shown by the table.

The chief reason for the diminution in expense, appears to be the abolition of the coroner's jury. Under the old law, a jury of six men was requisite for every inquest, their fees being \$1.25 each per day, and mileage. An inquest often continued for several days; a single day's pay for a jury was \$8.22, but since an inquest often continued two or more days, the average pay of a coroner's jury may be safely stated as high as \$12.

As an illustration of this change in consequence of the abolition of the jury, we are permitted to give the following abstract of a statement, submitted by a medical examiner, who was also a coroner, and has kept an accurate account of all expenses under each régime.

Amount paid by county treasurer in all cases occurring in a district containing about 9500 people in 1874, 1875, and 1876, \$296.57; of this sum, \$86.10 was paid for jurors' fees.

Amount paid by county treasurer in same district for all cases, in 1878, 1879, and 1880 (population about 10,000), \$238.75.

The amount of medico-legal work done in the latter period was somewhat greater than in the former.

Another reason for a lessening of expense is found in the diminution in the number of inquests, if we may judge from the returns of the only counties which have given a definite statement upon this point. In the counties of Plymouth, Norfolk, and Essex, in 1874, 1875, and 1876 there were 124 inquests. In 1878, 1879, and 1880 there were only 75 inquests in the same counties. The same general fact is true of other counties, although definite figures are not given. It would be safe, however, to estimate the decrease in the number of inquests, throughout the State, as at least 33 per cent, since the passage of the new law. The reasons for this change may be discovered in the appointment, to fill the offices formerly held by coroners, of men whose education necessarily fits them for the work which they are expected to perform. Under the old law, a man found dead, even without the least suspicion of violence, as in a simple case of heart disease, or apoplexy, would in all probability be reported to the village coroner, provided the most common hypostatic marks of post-mortem discoloration were noticed by some bystander, such marks being often interpreted by the popular mind as significant of a violent death. Hence the coroner sets in motion the cumbrous machinery of his office. In the first place he sends for a constable. The constable summons a jury. The witnesses come next, and last of all the nearest physician is summoned, whose evidence satisfies the assembly that the man died a natural death.

Under the working of the present law, the order of procedure is reversed. The medical officer first views the body, and in a case like that just referred to, simply reports it as a view, with a charge of \$4.00 and mile-

age. If, however, he believes there is a reasonable suspicion of violence, as revealed by the evidence shown him from an external examination of the body, and upon personal inquiry of the necessary witnesses, and also by an autopsy if that be found requisite, the case is reported to the proper authorities for inquest.

Under the old law, so far as can be learned, the proportion of inquests to cases of all sorts (views and inquests) was at least as high as 40 per cent.

Under the statute of 1877, the proportion of inquests to views of all sorts has been not more than 22 per cent.

The number of autopsies in proportion to the population, has been somewhat increased since the abolition of the old statute, but by no means sufficiently to counterbalance the diminution in expense caused by the abolition of the jury. A reason for this increase is also found in the appointment of officers who have an intelligent appreciation of the prerequisites to a medical examination in cases of violent or suspicious death. Cases have occurred in this Commonwealth in former years, and occasionally occur in neighboring States, in which criminals go unpunished through the neglect of a coroner to order a thorough examination, before the usual post-mortem changes interfere with a correct interpretation of the lesions present at the time of death.

The tests to which the Medical Examiner Law of Massachusetts has been subjected during the past four years of its operation have thus far shown it to be less expensive, less liable to the perpetration of fraud, and more efficient than the Coroner Laws which it has superseded. We trust that its successful operation in Massachusetts will soon lead to its introduction throughout other States of the Union.

PROCEEDINGS OF THE MONTHLY PHARMACEUTICAL MEETING OF THE MASSACHUSETTS COLLEGE OF PHARMACY.

B. F. DAVENPORT, M. D., REGISTRAR.

AT the regular meeting of December 13, 1881, DR. DAVENPORT spoke of the zealous labor of Charles Rice, Ph. D., chairman of the committee on the revision and publication of the United States Pharmacopœia, and of such points in regard to the new revision as had already been settled by the action of the convention which met at Washington in May, 1880, and also by the committee of revision since then.

PROF. G. F. H. MARKOE spoke on several matters of detail in the work of the revision.

MR. W. W. BARTLET thought that it was unfortunate that the convention had voted to omit all mention of doses from the Pharmacopœia, as apothecaries are thus left without an official standard for judging of the doses safe to be dispensed.

PROF. J. F. BARCOCK argued that pharmacists acted against their own self-interests in allowing the public to consider them as assuming any responsibility for the correctness of the doses given in the physicians' recipes which they dispensed. They should allow that to rest entirely with the physician, where it truly belonged, the pharmacist's responsibility ending with ascertaining the true intent of the prescriber, and then in dispensing in strict conformity thereto.

DR. F. H. WILLIAMS thought that a pharmacist

¹ State census of 1875, 1,651,652. National census of 1880, 1,783,086.

should vary in no particular from dispensing all recipes just as they were written, but that in all cases where there was any doubt as to what was the real intent of the prescriber, he should spare neither time nor trouble in removing the doubt by a personal communication with the physician before dispensing.

Dr. EDW. M. BUCKINGHAM said that these cases of doubt could be very much decreased in number if there was some agreed upon conventional sign to be always used by physicians when they wrote for any unusual dose, which would signify to the apothecary that it was an unusually large dose that was really intended. This is the use of the exclamation point in the German Pharmacopœia.

Mr. H. W. LINCOLN offered the objection to this simple sign that physicians would acquire the habit of attaching it to all of their recipes, which would be the same as saying "my recipes are always correct." Moreover, this is such a simple sign as to be very liable to be carelessly made, and thus may be overlooked, or, on the other hand, thought to have been intended to be made when really it was not.

For this difficulty Dr. DAVENPORT proposed the use of the word sign (*sic*), as being something already in conventional use with the desired-for significance. This being a word, yet a very short one, and, moreover, being inclosed as a parenthesis, could not very well be mistaken for anything else.

Dr. F. H. BROWN thought that one of the best safeguards for the physician against errors in prescription writing was for him to use recipe blanks bound with stubs, as in bank-check books. Here, in copying the recipe upon the stub for preservation, any error in the writing would probably be discovered.

Mr. S. A. D. SHEPARD thought that the custom of the one who had put up the recipe repeating it from memory to another who at the same time was reading the recipe itself, was the best safeguard on the part of the pharmacist against any error in dispensing, for that the one repeating from memory would certainly say what he had actually done rather than what he ought to have done. A more general, thorough professional education of all apothecaries, after having received the advantages of a high school education, was what the great recent progress in pharmaceutical science imperatively demanded. This was the sphere of action which the Massachusetts College of Pharmacy was now so creditably filling, and he expressed a strong desire that all physicians should fully appreciate this fact, and do their best to aid therein.

It is very much for the professional interest of pharmacists to be able to discern of, and be held responsible for, the quality of all the drugs dispensed by them, while it is very undesirable to assume any responsibility in regard to the doses prescribed by the physician.

The other already settled points in the new revision, such as the exclusive use of parts by weight in the formulae, the use of metrical weights and measures, etc., were severally discussed, and most generally approved of by all.

The College extends its most cordial invitation to all interested in pharmacy or its collateral pursuits to be present at, and to take an active part in, these meetings, which are held on the evenings of the second Friday of each month, at the College Hall, No. 1151 Washington Street, Boston.

Recent Literature.

A Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D. Philadelphia: Henry C. Lea's Son & Co. 1881.

We take pleasure in noticing the fifth edition of Professor Smith's Treatise on the Diseases of Infancy and Childhood.

A valuable chapter on Artificial Feeding has been incorporated in the text, and new articles on Constipation and on Strumous Ophthalmia. The chapter on Rachitis has been increased, especially that portion devoted to the ætiology of the disease. The entire article on pleuritis has been rewritten, and the anatomical characters of the disease and its treatment carefully revised.

The binding of the book is in excellent taste, and there are over one hundred additional pages in the work.
R.

A CASE OF INJURY TO THE SKULL.

[In connection with the case of fracture of the skull, published to-day, we insert a letter clipped from the *Lancet* detailing a case exceedingly interesting in this connection, with the editor's comments thereon.]

"A gentleman, four years ago, proceeding at a rapid pace, tripped and fell heavily from the top to the bottom of a flight of stone steps, receiving a deep wound over the left external angular process of the frontal bone. He was picked up unconscious, and remained in a semi-conscious state for four days, when he was able to be removed to his home from the hospital to which he was at first conveyed. On his return home he again lapsed into a semi-conscious state, but again recovered gradually. At this time he was informed that there had been no fracture of the skull. However, since the accident he has been completely deaf on the right side, and there is a constant dropping of a perfectly clear, watery fluid from the left nasal cavity, twenty to thirty drops falling in the minute, and this without any cessation. If he hold himself with the head well thrown back the flow is diminished, as when in bed, and *vice versa*, a stooping posture increases it. There is no increased lachrymal secretion, I may mention, observable, and the patient himself says that the flow appears to him to come "from the inner side and behind the eye." Local astringents have been tried without any effect. Besides the extreme discomfort it occasions, it prevents him from following his profession almost entirely. If any of your readers could inform me of or suggest any remedy likely to prove of benefit they would much oblige."

This case presents features of great interest; the fluid discharge is either cerebro-spinal fluid draining through a fracture in the cribriform plate of the ethmoid bone, in which case it will be found to contain a minute trace of sugar, or it is a watery fluid excreted from the lining of the nose or one of its adjoining cavities. Such a case was described by Sir James Paget in the *Clinical Society's Transactions*, where after death a polypus was found in the antrum. This specimen is now in the Hunterian Museum. We trust "Surgeon" will have some of the fluid collected and analyzed, and report the result. The deafness evidently indicates some serious nerve lesion. — Ed. L.

Medical and Surgical Journal.

THURSDAY, DECEMBER 29, 1881.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, Boston. Price, 15 cents a number: \$5.00 a year, including postage.

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies likewise for sale, by the undersigned, to whom remittances by mail should be sent by money order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,

No. 4 PARK STREET, BOSTON, MASS.

ANNUS MEDICUS.

It has been for many years the custom of the JOURNAL to review at the close of the year the doings of the medical world for the preceding twelve months. 1881 has not been marked by any startling discoveries, though scientists have been busy, and many matters have been discussed which promise progress for the future, and lines of study previously entered upon have been diligently followed.

Perhaps the most striking and important event of the medical year is Pasteur's further contribution towards the solution of the problem of the existence of specific organized causes of diseases, in the publication of his discovery of the virus of (*charbon*) splenic fever. Advancing in the line of work which he so successfully opened last year by the separation of the micro-organisms of chicken cholera, by the production of a modified virus culture protecting through inoculation against the original poison, he has succeeded in discovering the conditions of life of the micro-organisms constituting the poison of splenic fever, in directing their development according to a prearranged plan in such a way as to reduce their activity to any desired degree; in short, in making with certainty, at pleasure, of a deadly organism one which is benign, and which will by inoculation confer immunity against the effects of the other. These pretensions are now supported by a large number of confirmatory experiments performed by a variety of competent investigators. These recent investigations of Pasteur form a contribution at once to scientific and preventive medicine of great immediate and of incalculable prospective value and application. It is a difficult but pleasing task to direct the imagination to the position of a future generation when these initiatory labors shall have been carried forward to what even now seems must be their inevitable conclusions. No more pregnant communication was submitted to the International Medical Congress than that of Pasteur on Vaccination in Relation to Chicken Cholera and Splenic Fever.

The action of anæsthetics has been carefully studied and reported upon by a committee of the British Medical Society.

The nature of the diphtheritic contagium has undergone special study at the hands of Drs. H. C. Wood and Formad. The complete results obtained have not yet been published, but Dr. Wood has stated that the membranes produced in the trachea of rabbits, either by pieces of diphtheritic deposit or by irritants

of sufficient strength, were identical both with each other and with the original membrane, grossly and microscopically, that is, there was nothing specific in it; that the micrococci are the poison itself or the carriers or producers of it; that the power of rapid growth was not specific of diphtheritic micrococci, nor is there any specific distinction between these and those usually found along the digestive tract; that conditions outside the body favor the development of inert into active and virulent micrococci which are then capable of generating the disease in a tender throat.

The most widely interesting event of the year has been, perhaps, the assembling of the International Medical Congress in London, where distinguished honors were bestowed upon our countryman, Dr. Billings, and where one of the most interesting demonstrations was that of Professor Bigelow of his advance in the treatment of stone in the bladder, an advance which most sensibly modifies the methods of the severest of his critics.

A subject which was widely discussed at the Congress and elsewhere during the year has been the question of the propriety of vivisection, which has given rise to a large number of most excited addresses and journal articles.

In operative surgery extirpation of the stomach, as performed by Billroth, has not been followed by such success as was originally anticipated, the majority of the cases terminating fatally in a short time; they are not without results, however, so far as their influence upon surgery in general is concerned.

The use of antiseptics still continues almost as vigorous as ever, although there is an increasing tendency to dispense with many of the details formerly deemed most essential, and to rely for the success of the operation more upon drainage and cleanliness. Both in Germany and England many of the best operators have discarded the spray, claiming better results than when it was employed. The classic carbolic acid has lost some devotees, notably in Germany, where just at the present time iodoform is having an extended trial, used in the same manner as carbolic acid in gauze and dressings, and also in the treatment of cold abscesses and large suppurating surfaces. The frequency of carbolic poisoning has, with some operators, been a sufficient reason for abandoning it entirely as an antiseptic.

Death has been no less busy than usual, and his arrows have struck many a shining mark.

NECROLOGY.**AMERICA.**

George Alexander Otis, died in Washington, February 23d. At the opening of the late war he was in practice in Springfield, Mass., he joined the volunteer service and for meritorious conduct was soon appointed surgeon with the rank of major. In 1864 he was appointed chief of the surgical division of the Army Medical Museum, and bringing to his work interest in surgery and personal devotion he has pro-

duced in the surgical volumes of the History of the War, the most complete and valuable records of their kind.

Isaac Ray, died at Philadelphia March 31st. The first few years of his medical life were spent in private practice, but very soon he assumed the position of superintendent of the Maine State Hospital for the Insane, and it is in connection with this branch of medicine that his name is best known. The Butler Hospital at Providence was built under his personal supervision, and for twenty-one years he was superintendent, resigning in 1867 on account of his health. His work on Medical Jurisprudence in Insanity, published in 1838, is quoted as an authority to-day. Mental Hygiene, published in 1863, is a more popular book. Besides these he furnished many articles for journals, and his reports, while superintendent, are of very great value.

Richard O. Cowling, died at Louisville, Ky., April 2d. He was founder and editor of the *Louisville Medical News*, surgeon-general of the Kentucky State Militia, and professor of surgery in the University of Louisville.

H. Lenox Hodge, died at Philadelphia June 10th. Demonstrator of anatomy at the University of Pennsylvania, and surgeon to several hospitals, he was known rather as a successful practitioner than as an author.

Max Herzog, died in New York April 5th. He was founder of the German Hospital in New York, and one of the visiting physicians to the Mount Sinai Hospital.

Greenville Dowell, died at Galveston, Texas, June 9th. He was professor of surgery in Galveston Medical College and editor of the *Texas Medical Journal*, also the author of treatises on Yellow Fever and Malaria, and of various journal articles.

E. M. Wright, died at Chattanooga, Tenn., January 6th. He had been a member of the State Board of Health, and formerly one of the inspectors of the National Board. Was the Republican candidate for governor of his State in 1878.

George Ford, died January 7th. For over thirty years connected with the State Emigrant Refuge Hospital on Ward Island.

Dr. James P. White, of Buffalo, N. Y., died September 28th, aged seventy-one. He was President of the Medical Department of the University of Buffalo, of which he was one of the founders, and was the first professor to give clinical lectures on midwifery in this country.

Dr. Joel Pomeroy, died September 15th, aged fifty-six, of disease contracted during the war. He was the surgeon of General Garfield's regiment.

Dr. J. Gaspard Ribaud, died October 19th. Was professor of anatomy in the Montreal School of Medicine and Surgery.

Allston W. Whitney, of West Newton, died November 11th. At the opening of the war he entered the service of the United States as surgeon of the Thirtieth Massachusetts Regiment. He was a prisoner in Libby Prison for six months, and while there was

sentenced, with several other officers, to be shot in retaliation for several rebels executed by the Federals.

ENGLAND.

Andrew Wood, M. D., etc., Edinburgh, died January 25th. Distinguished especially as a consultant, his contributions to medical literature were very few, the best known being a report of experiments upon the prophylactic action of belladonna in scarlet fever. He was connected with many hospitals and a prominent figure in the Oxford Council.

William Rutherford Sanders, M. D., etc., died at Edinburgh, February 18th. Professor of Pathology and Clinical Medicine in the University of Edinburgh, he enjoyed a wide reputation as a lecturer and clinical teacher, but produced very little written work. In his consulting practice he had scarcely an equal.

George Rolleston, M. D., died June 16th. Li-acre Professor of Physiology at Oxford since 1860, he was one of the foremost figures among professors of biological science, and contributed to the literature of that subject *Forms of Animal Life*, a book of wide repute. At the last meeting of the Massachusetts Medical Society he was elected an honorary member.

I. B. Davis, one of the widest known of British cultivators of physical anthropology. His *Crania Britannica*, published in 1865, is unique of its kind. The vast collection of skulls in the Museum of Physicians and Surgeons at London were donated by him.

Mr. James Lake, F. R. C. S., died on August 14th, aged 82. He was consulting surgeon to the London Hospital.

Alfred H. McClintock, M. D., LL.D., F. R. C. S. I., aged 60, died October 21st. A distinguished obstetric physician, ex-Master of the Rotunda Lying-in Hospital, ex-President of the Royal College of Surgeons of Ireland and of the Pathological Society of Dublin.

Dr. Thomas Hayden, of Dublin, died October 30th. Author of the well-known work on *The Diseases of the Heart and Aorta*.

Dr. David Foulis of Glasgow, died October 24th, of diphtheria which followed two operations done on the same day. He was rapidly rising to eminence as a consultant in throat diseases. His removal of the larynx in 1878 attracted great attention.

FRANCE.

Maximilien Paul Émile Littré, died at Paris June 2d, in his 81st year. Only the first few years of his medical life were spent in practice, his taste inclining rather to the literary than to the practical side of medicine. He was the author of many journal articles of merit. His most extensive work and the best known of his medical productions is the complete edition of *Hippocrates' Works*, with copious notes. His dictionary of the French language is the greatest of his literary achievements, and has, in giving him so much fame as a lexicographer and philologist, obscured his merits as a medical writer. He secured a seat in the Academy after a long controversy with Bishop Dupanloup.

Maurice Reynaud, died at Paris January 29th. Especially known as a historical and medical writer. His thesis on *Les Médecins au Temps de Molière* has passed through many editions. He was a valuable contributor to the *Dictionnaire de Médecine* and to various journals, a member of the Academy, and chosen to deliver the French address at the International Congress.

Gustave Chantreuil, died at Paris June 30th. Although a very young man he was the possessor of a large obstetric practice and an associate of Tarnier in the production of a new treatise on Obstetrics. He was the translator of the works of Simpson, and author of many minor articles on gynecology and obstetrics.

Professor Jean Bouillaud, aged 86, died October 29th. The first to give positive proof of the connection between cardiac disease and rheumatism. Professor of Clinical Medicine at La Charité for a long series of years, and unsurpassed as a clinical teacher.

GERMANY.

Joseph Skoda, died at Vienna June 13th, in his 77th year. Almost the last of those distinguished men who made Vienna famous in medicine. Early in his career an assistant of Rokitansky, he later devoted himself to the study of auscultation, in 1833 being appointed second physician to the Allgemeines Krankenhaus in Vienna. In 1835 he began his practical courses of study, and in 1846 was appointed Professor of Clinical Medicine, holding the position until eight years ago, when ill health compelled him to resign. He was a teacher rather than a writer, having published nothing but short articles since 1839, when his *Abhandlung Über Percussion und Auscultation* was written; a work of exceedingly great merit and the foundation of many of our theories of to-day. Few men have accomplished as much for the advancement of medicine by their personal efforts as Skoda. He was the patron of Hebra and induced him to make a specialty of dermatology. He determined the abandonment of Latin as the language of medical lectures at Vienna in 1848. His merits were no less recognized by his countrymen than by foreigners, a gold medal being struck to commemorate his seventieth birthday.

Richard Herschl, died May 26th at the age of 56. At first the assistant of Rokitansky, he subsequently filled the chair of Professor of Anatomy and Pathology at Olmütz and Cracow, being called to Vienna in 1875 as the successor of Rokitansky. In 1855 he published a *Compendium of Pathological Anatomy*, but since then has written only for journals.

Ludwig Waldenberg, died at Berlin April 14th. He was editor of the *Berliner Wochenschrift* and Professor Extraordinary of Medicine at the Berlin University. He contributed several works on the respiratory and circulatory system.

Max Perls, died at Giessen May 15th. Professor of Pathological Anatomy and Director of the University of Giessen, he was the author in 1879 of an *Allgemeine Pathologie*.

Dr. Wilhelm Busch, aged 55, Professor of Surgery in the University of Bonn.

Dr. Otto Spiegelberg, Professor of Midwifery and Director of the Obstetric Clinic in the University of Breslau, died August 10th, aged 52. In 1858 he published his first work, *A Compendium of Midwifery*. He was, in conjunction with Dr. Credé of Leipsic, editor of the *Archiv für Gynécologie*, and about five years ago he published a large Text-book of Midwifery.

MEMBERS OF MASSACHUSETTS MEDICAL SOCIETY.

Ebenezer Alden, died at Randolph in his ninety-third year. The oldest member of the Massachusetts Medical Society, his whole life was passed in practice in his native town. Outside of his medical duties he was well known from his interest in various educational institutions and the honorable position he filled on their boards of government. He was a prominent member also of the Massachusetts Historical Society. His ancestors on both sides were lineal descendants of John Alden.

Jeremiah Spofford. The senior member of the Essex North District Medical Society. He passed sixty-seven years in active practice in Groveland, Mass.

Amasa D. Bacon, of Sharon, March 29th, seventy-four.

John Bacon, of Boston, November 28th.

Arthur Clifford, of New Bedford, March 11th, twenty-eight.

C. T. Collins, of Great Barrington, April 10th, sixty.

Geo. Cahill, of Salem, January 27th.

John B. Chace, of Taunton, August, sixty-five.

Thos. B. Curtis, of Boston, December 11th, thirty-nine.

Henry Ferre, of Dalton, July 31st, seventy-nine.

Caleb C. Field, of Leominster, May 5th, seventy-three.

Geo. W. Garland, of Lawrence, May 5th, sixty-eight.

Jas. Hyndman, of Boston, May 6th, sixty-two.

Daniel Harwood, of Dorchester, October 2d, eighty.

W. H. Kimball, of Andover, September 30th, sixty-one.

E. G. Kelley, of Newquay, Eng., September 13th, sixty-eight.

D. H. Lovejoy, of Boston, February 28th, forty-two.

J. L. Lothrop, of Somerville, April 1, sixty-seven.

Wm. Mason, of Charlestown, March 18th, seventy-five.

Thos. Meekins, of Williamsburg, August 5th, eighty-four.

Erasmus D. Miller, of Dorchester, July 5th, sixty-seven.

Michael McCarthy, of East Boston, October 30th, thirty-eight.

Geo. A. Otis, of Washington, February 23d, fifty.

Daniel Perley, of Lynn, February, seventy-six.

Dana B. Putnam, of Boston, February 11th, fifty-five.

Wm. S. Pattee, of Quincy, September 18th, fifty-seven.

Edward Reynolds, of Boston, December 25th, eighty-eight.

Henry M. Saville, of New York, January 11th, forty-seven.

Joshua Tucker, of Boston, November 7th, eighty-one.

Allston W. Whitney, of West Newton, November 11th, fifty-two.

MEDICAL NOTES.

— In the death of Dr. Edward Reynolds, which occurred a few days since at the ripe age of eighty-eight years, the Massachusetts Medical Society loses one of its oldest members, and almost the last remaining link between the profession of Boston to-day and of the early part of this century is severed. The next JOURNAL will contain some account of Dr. Reynolds' life.

— The daily papers announce the death of Dr. I. I. Hayes, famous for his Arctic journeys, on the first of which he accompanied Dr. Kane as Surgeon of the expedition.

— The total number of lunatics in the county and borough asylums in England and Wales on the 1st of January last, as we observe in the *British Medical Journal*, was 41,335, consisting of 230 males and 309 females of the private class, and 18,427 males and 22,389 females who were paupers. The aggregate recoveries, as compared with the total admissions (deducting transfers), were in the proportion of 37.7 per cent. for males and 43.8 per cent. females, or 40.8 per cent. for both sexes. The mortality for the year, calculated on the average daily numbers resident, was 9.50 for both sexes. It is worthy of notice that so low a death-rate has not been shown since 1859. There were 4,198 deaths amongst the 50,175 inmates of all descriptions of lunatic asylums, twenty of which were caused by suicide. Post-mortem examinations were in 1,656 only of these deaths, which shows a falling off much to be regretted.

— Horse flesh is said to be largely used in the manufacture of German sausages.

CHICAGO.

— Within a few weeks two patients have died in Chicago from the effects of chloroform administered for the purpose of having teeth extracted. The last case occurred December 20th. The patient was in a dentist's chair, and a physician administered the anæsthetic. Thirty minutes were required to anæsthetize the patient, and from an ounce and a half to two ounces of chloroform were administered. The patient became cyanosed and ceased to breathe after two or three teeth had been extracted. He was a man about forty years old, and was supposed to be healthy, although neither the dentist nor physician had ever seen him before or even knew his name or residence. The patient was in a sitting posture during the anæsthesia and operation.

— A suit has recently been commenced against the Commissioner of Health for damages resulting from his failure to remove a small-pox patient to the pest-house. The patient lived over a store, and his re-

maining, it is alleged, caused serious damage to the business of the merchant, who now asks the commissioner to pay the amount of the injury. The suit is being watched with interest by the public and profession alike. Whether damages are assessed against Dr. DeWolfe or not, there is no doubt that in this particular case as well as many others he has failed or neglected to execute the law. The law is mandatory; it says the Commissioner of Health *shall* cause every case of small-pox, etc., to be removed to the hospital. It leaves him no discretion whatever. But in behalf of the Health Department it may be said that this law, which was passed only a few years ago, has always been exceedingly unpopular with the people *except* when their near neighbors have been stricken with variola—then they are unable to see any injustice in dragging a man from his own house whether he likes it or not, and taking him to the pest-house. Under all other circumstances the law has been loudly denounced. So, in making removals under the law, the department has always met more or less opposition; but by the good sense and discretion of the medical inspectors and health officers as well, such removals have generally been made without open resistance and often with the free consent and desire of the patients. Thus, the present epidemic finds the city with a pest-house too small. A small addition is now being made to the building which, it is hoped, will enable all patients to be accommodated who cannot be kept at their homes. In several weeks, if not months past, it has been physically impossible for the law to have been executed. Most people who have taken the time to look into the matter believe that the Health Department has managed this whole business very well indeed.

Miscellany.

LETTER FROM LEIPZIG.

MR. EDITOR.— I have thought that a short account of what one can see at the clinics and lectures here in Leipzig might not be uninteresting.

The surgical clinic is unusually good. The hospital being arranged in pavilions, the patients can be carried into the class-room without removing them from their beds; in this way all can see, and the confusion resulting from a clinic in the ward is avoided. The patients thus brought before the class are discussed by Professor Thiersch and the student to whom the case is assigned. If it is a case for operation, the operation is performed after the discussion, and all its various stages described. At one of these exercises, Professor Thiersch removed a uterus—malignant disease—by Schröder's method, of Berlin; beyond a slight attack of peritonitis, the recovery was uninterrupted. A few days later he removed a uterus—fibro-myoma—by abdominal incision, all the customary antiseptic precautions being observed. The case was not a favorable one. The tumor removed weighed fifteen pounds, and the entire structure of the uterus was involved in its growth. The patient died on the second day after the operation. I have also seen Professor Thiersch operate for stone according to Dr. Bigelow's method; the evacuating catheter used was not as large as is recom-

mended. The results were favorable in both the cases I saw. Iodoform is used very extensively as a dressing in all the minor operations. Chloroform is the only anæsthetic used.

Professor Wagner's clinic is very interesting and instructive. He usually devotes each day to a special class of cases, demonstrating diseases of the chest one day, on another day abdominal diseases, on another diseases of the nervous system, the more simple cases being shown during the first part of the semester. Typhoid fever has been demonstrated in all its stages, and I have seen two cases of "laryngeal phthisis." This exercise is conducted in the same manner as the surgical clinic, and usually five or six cases are discussed every morning, in regard to both diagnosis and treatment.

All the autopsies are held in the presence of the students, and in this way one can examine the viscera of the fatal cases which he has seen treated at the hospital. These pathological specimens are demonstrated in detail by Professor Cohnheim.

The opportunities for studying anatomy here are unsurpassed. The lectures by Professor His are beautifully illustrated by drawings on the blackboard, and by preparations, most of which are passed round the class during the exercise, which is held in the afternoon. As it is often dark before the lecture is finished one would find it very difficult to see the demonstrations on the subject, were it not for an electric light which is used to obviate this difficulty. It is carefully shaded, and a very strong light is thrown on the demonstrator's table.

There are at the present time between one hundred and fifty and one hundred and seventy-five men at work in the dissecting-rooms, and one can infer from this that there is no scarcity of anatomical material in Leipzig. The rooms are light and well ventilated, and Professor His and his assistant devote every morning to the dissecting-room. Each dissector has an opportunity of obtaining a long gown from the janitor, in which he can dissect; he also has a box assigned him, and can have his knives sharpened every evening, for a nominal sum, for the whole semester.

I have endeavored to speak of some of the advantages that are offered here. I think if it were more widely known what good courses there are in Leipzig more men who go abroad to finish their studies would come here. The expenses of living are about one-half of those at Vienna, and the courses are correspondingly cheap.

W. D. H.

LEIPZIG, November 11, 1881.

NATIONAL MEDICAL EXAMINATIONS.

MR. EDITOR.—In your issue of November 3, 1881, appears "A Plea for United States Medical Examinations." The writer very properly states that the plan has been most earnestly advocated before now. Conscientious medical men throughout our country have written and talked about the matter for the last twenty-five years, though unfortunately their ideas have never taken a tangible form.

National medical boards of examiners, consisting of army, navy, and marine hospital surgeons, under the supervision of the National Board of Health, and convened at its discretion in different parts of the country. I think would better insure competent advisers to the people than the plan of your correspondent.

The rigid examinations required for entering either the army, navy, or marine hospital services is a sufficient guarantee that a board drawn from these branches of the public service is fully able to determine the qualifications of a candidate without exterior aid or suggestion.

Congress should be petitioned to empower the Surgeons-general of the aforesaid services to place as many medical officers under orders of the National Board of Health as it may require to organize examining boards in different sections of the Union.

Considering the host of illegitimate dabblers in medicine, it would be best to make these examinations compulsory, and a candidate, upon passing a successful ordeal, should be given a certificate by the examining board, countersigned by the National Board of Health. Of course, such coercive measures would necessitate special legislation, uniform throughout the land, but the discouraging experiences of the past show us that such legislative action will not be easy to obtain.

Medical officers of the Army, Navy, and Marine Hospital service being already in government employ, no special appropriation for their pay would be needed, and Congress would only be called on for a few thousand dollars yearly to defray traveling and sitting expenses of the various boards. HESPERUS.

MEDICAL EXAMINATION IN THE UNITED STATES.

A VERY suggestive paper by W. B. Platt, M. D. Harvard and M. R. C. S. Eng., Baltimore, appears in the Boston Medical and Surgical Journal for November 3d. The multiplicity of medical boards in the States, and the cheap and easy system of medical qualification, are a grief to all respectable medical men. Every State is a law to itself in this great public matter, and the highest medical titles convey little guarantee of adequate education or examination. Dr. Platt suggests that Congress should lay aside fifty thousand dollars per year to institute a United States Examination in the capital of each State, independent of the teachers in each school, the board to consist of ten army and marine hospital surgeons. We are entirely at one with Dr. Platt, as all who wish to see international rivalry and recognition in medical education must be, in wishing to see the establishment of independent and efficient examining boards, in the United States, and an abolition of the scandal of fifty or sixty local boards. We are not quite clear that army and navy surgeons would have the necessary knowledge of detail to make good examiners. This is, however, a question of detail. Dr. Platt makes a great suggestion, which deserves embodiment in Congressional legislation. — *Lancet*.

ONE RESULT OF THE CONGRESS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I imagined that the result of the late International Congress of doctors would have been the unquestioned acceptance by foreigners of British habits and customs, but I regret to say I am disappointed. When I was at Krankenbad the other day, I was astounded by the outrageous ignorance still displayed by German medical men of some eminence. I was dis-

quissing with Herr Krauts, the celebrated physician, the difficult subject of hospital management, and happened to ask him if there were any paying wards for private patients in any of the great *Krankenbad* hospitals. You never saw a man become so furious as Krauts when I put the question. "No, a thousand times no!" he shrieked. "But why not?" I exclaimed. "Hospitals are for the poor!" he shouted. "Yes," said I, "but the rich need charity sometimes. In a large city like *Krankenbad* there are many wealthy people who have no homes, no friends; what are they to do when they are ill?" "Go to bed, and send for me," replied Krauts. "Nothing could be better," I answered; "but how about the nursing? It is not likely that the doctor's orders would be carried out by mercenary and careless attendants." "That is true," said Krauts; "I found a bottle of brandy under the pillow of a noble lord who is suffering from delirium tremens, and also another bottle in his riding-boots. But for all that I will admit no noble lords into a public hospital. Better that the nobility should perish than that the medical profession should be disgraced!" "Who dares to speak of disgrace," I exclaimed hotly, "in the presence of an M. R. C. S., London, and L. S. A. of *Blackfrars*?" "Silentium!" roared Krauts. "I know your English love of gold! *Ich sch' wahrhaftig schon die Zeit*. I mean I know the time of the clock." "What time?" I asked. "The time," said Krauts, "when competition will ruin the great hospitals of London. I shall live to see your omnibuses and your railway stations stuck all over with glaring advertisements. Yes, thus it shall be: 'Here you are! Try St. George's Hospital! Bones skillfully set, and a first-rate diet for seven shillings sixpence a day!' 'Now is your time! Great reduction at St. Bartholomew's! Entirely new set of pulleys for dislocations, four meals a day, and smoking permitted. Charge six shillings eightpence, and no extras!' And there is worse than this," continued Krauts. "Doctor will be pitted against doctor. We shall read: 'Dr. Jones for hernia, always ready at the Middlesex; come quickly!' 'Dr. Smith for tumors at St. Thomas's! Size no object! Omnibuses pass the door every ten minutes!' And women, too, will be made to play their parts upon the stage of the operating theatre. We shall see placards: 'Where's Maria? Head nurse at Guy's, of course!' 'Who is Jemima? Why, the champion poulticee at Bartholomew's!'" "How dare you insinuate the possibility of such a state of things in England!" I exclaimed. "Because," said Krauts, "since I was in London I have carefully read your journals. Is this your English *Standard*?" he continued, as he handed me the following:—

"THE SILVER LINING.

"TO THE EDITOR OF THE STANDARD.

SIR.—In these days of hospital mismanagement, it may be refreshing to chronicle my recent experiences as an invalid in the 'Home' ward of the St. Thomas's Hospital, Westminster.

Having succumbed to severe accidental illness, which baffled my regular medical attendants, I followed a friend's advice, and took up my quarters in this establishment, where, for the small charge of eight shillings per day, I have had medical attendance, skilled nursing, eating and drinking, all of the very best.

"I cannot avoid writing this letter, if only as a sin-

cere thanks-offering to Dr. Edmonds and the management generally. I can only again repeat my gratitude to the attendants, especially to the particular nurse under whose care I was placed. Throughout, everything has been done that could tend to alleviate my sufferings, and I can only strongly urge any one, whether male or female (there are female wards), to at once follow my example should illness occur.

"I may add that a male dresser (formerly a member of the Army Hospital Corps) is always in attendance, and that a sitting-room, with books, etc., is provided. Smoking on the pleasant gallery overlooking the Thames is permitted.

"I am, sir, your obedient servant,

"A LATE PATIENT.

"LONDON, November 17th."

"Krauts, 'I said,' this is only the letter of a patient still weak from an operation—probably trephining." "That is so," replied Krauts; "I can make allowances for patients, but why did the Editor of the *Standard* put it in?"

I could not answer him, so I have written to you, sir, for an explanation.

I am, etc.,

ROBERT SAWYER.

PINK EYE IN HORSES.

MR. EDITOR.—This disease in horses is one of the varieties of catarrhal or influenza colds, so-called, prevalent in this climate among human beings, and springs from the same cause, namely, excessive, over frequent, or otherwise injudicious eating. The custom of working or exercising horses directly after eating; of feeding them directly after hard work, and before they are thoroughly rested; baiting at noon, when both these violations of a natural law are committed, these are the predisposing causes of pink eye, and of most diseases that afflict our horses. The symptoms denominated pink eye are not indicative of dangerous disease, unless feeding is kept up; but if it is, then pneumonia, which is merely an aggravation of the original disease, is very likely to result. Keep the horse quiet, dry, warm, and in a pure atmosphere. The nearer outdoor air the better, and *stop his feed entirely* at the first symptom of disease, and he will speedily recover. As prevention is better than cure, horsemen will do well to heed the hint here given and keep their creatures from contracting this or any other ailment. It has been demonstrated in tens of thousands of cases, in family life, that *two meals* are not only ample for the hardest and most exhausting labors, physical or mental, but altogether best. The same thing has been fully proved in hundreds of instances with horses, and has never in a single instance failed, after a fair trial, to work the best results.

An hour's rest at noon is vastly more restoring to a tired animal, whether horse or man, than a meal of any sort, although the latter may prove more *stimulating*. The morning meal given if possible early enough for partial stomach digestion before the muscular and nervous symptoms are called into active play; the night meal offered long enough after work to ensure a rested condition of the body; a diet liberal enough but *never excessive*, this is the law and gospel of hygienic diet for either man or beast. If it be objected that these conditions cannot always be fully met in this active work-a-day world; I reply: let us meet them as nearly as possible. We can, of course, do no more than this; but we can come nearer the mark on the two-meal sys-

tem than on three. I will add, *in parenthesis*, that the nervous disorder commonly known as "pulling" will yield readily to this principle of treatment. It makes the puller healthy; he is better nourished and therefore less "nervous;" and he will do more rouding, and without excitement, or profuse sweating. He is not made less ambitious by reason of reduced muscular power, but by reason of better digestion and assimilation,—more *nourishment* and less *stimulation*. Horse dealers, or others, whose business or pleasure depends on the plump appearance of their animals, regardless of the size of their muscles, who must have a horse fat if he is not fleshy, for style, may have to take the chances and feed three times a day, but of this I am by no means sure. I have never tried to fatten my horses,

for I long ago learned that fat is disease; but I have always found that if a horse does solid work enough he will be fairly plump if he has two sufficient meals. Muscle is the product of work and food; fat may be laid on by food alone. But for perfect health, and immunity from disease, restriction of exercise must be met by restriction in diet. Horses require more food in cold than in warm weather, if performing the same labor. In case of a warm spell in winter I reduce their feed, more or less, according to circumstances, as surely as I do the amount of fuel consumed. I also adopt the same principle in my own diet. The result is, that neither my animals nor myself are ever for one moment sick. Very truly yours,

C. E. PAGE, M. D.

BIDDEFORD, ME., December, 1881.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 17, 1881.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Diarrhoeal Diseases.
New York.....	1,206,590	748	322	27.40	17.51	9.89	1.60	1.07
Philadelphia.....	846,984	339	76	15.04	—	4.42	3.54	—
Brooklyn.....	566,689	269	102	21.93	13.75	11.89	1.11	2.60
Chicago.....	503,304	238	119	32.35	13.86	9.66	7.14	1.68
Boston.....	362,335	160	52	11.25	16.25	5.62	1.87	1.87
St. Louis.....	350,522	—	—	—	—	—	—	—
Baltimore.....	332,190	176	83	21.59	7.95	17.04	.57	.57
Cincinnati.....	255,708	96	21	14.58	18.74	10.41	—	1.04
New Orleans.....	216,140	—	—	—	—	—	—	—
District of Columbia.....	177,638	70	26	14.28	11.42	4.28	5.71	2.85
Pittsburgh.....	156,381	95	31	49.45	7.36	6.31	4.21	—
Buffalo.....	155,137	73	33	27.39	10.96	8.21	—	1.37
Milwaukee.....	115,578	53	19	30.19	3.77	7.55	9.43	1.88
Providence.....	104,850	36	11	8.33	5.55	2.77	5.55	—
New Haven.....	62,882	24	9	8.33	8.33	4.16	8.33	4.16
Charleston.....	49,999	37	—	10.81	2.70	2.70	—	—
Nashville.....	43,461	21	11	9.52	14.28	4.76	—	—
Lowell.....	59,485	28	8	32.14	—	22.42	7.14	3.57
Worcester.....	58,295	17	6	41.17	17.64	17.64	—	5.88
Cambridge.....	52,740	29	6	6.89	3.44	—	6.89	—
Fall River.....	49,006	20	7	10.00	10.00	5.00	—	—
Lawrence.....	39,178	17	7	5.88	23.52	—	—	—
Lynn.....	38,284	11	5	9.09	—	9.09	—	—
Springfield.....	33,340	13	4	15.38	—	—	—	—
Salem.....	27,598	9	3	22.22	—	11.11	—	—
New Bedford.....	26,875	12	—	8.33	—	—	—	—
Somerville.....	24,985	6	4	16.66	50.00	16.66	—	—
Holyoke.....	21,851	14	3	42.86	14.28	—	7.14	—
Chelsea.....	21,785	—	—	—	—	—	—	—
Taunton.....	21,213	10	2	30.00	—	20.00	—	—
Gloucester.....	19,329	6	—	—	—	—	—	—
Haverhill.....	18,475	3	—	33.33	33.33	—	—	—
Newton.....	16,995	—	—	—	—	—	—	—
Newburyport.....	13,537	4	1	25.00	25.00	25.00	—	—
Fitchburg.....	12,495	5	1	—	—	—	—	—
Twenty-four Massachusetts towns..	191,009	62	14	19.35	11.29	12.90	—	1.61

Deaths reported 2701 (no reports from St. Louis and New Orleans): 986 under five years of age: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhoeal diseases, whooping-cough, erysipelas, and fevers) 617, consumption 395, lung diseases 316, diphtheria and croup 240, small-pox 92, scarlet fever 102, typhoid fever 68, diarrhoeal diseases 32, whooping-cough 25, malarial fevers 23, measles 18, cerebro-spinal meningitis 11, erysipelas eight, puerperal fever five. From small-pox, Pittsburgh 30, Chicago 25, Philadelphia 16, New York 12, Holyoke five, Cincinnati two, Baltimore, and New Bedford one each. From measles, New York 12, Pittsburgh and Buffalo two each, Chicago and Milwaukee one each. From scarlet fever, New York 58, Brooklyn 13, Buffalo 11, Philadelphia five, Pittsburgh four, Baltimore three, Milwaukee two, Springfield two, Cincinnati, Charleston, Worcester, and Salem one each. From cerebro-spinal meningitis, New York two, Worcester two, Philadelphia, Boston, Baltimore, Pittsburgh, Milwaukee, Lawrence, and Haverhill one each. From diphtheria and croup, New York 74, Brooklyn 32, Baltimore 30, Chicago 23, Philadelphia 15, Cincinnati 10, Boston nine, Buffalo six, Pittsburgh six, Lowell six, Milwaukee four, District of Columbia three, Worcester three, Taunton, Brockton, Attleborough, and Quincy two each, Providence, New Haven, Charleston, Nashville, Fall River, Lynn, Salem, Somerville, Newburyport, Waltham, and Spencer one each. From whooping-cough, New York 12, Philadelphia, Brooklyn, Chicago, and Boston two each, District of Columbia, Fall River, Taunton, Attleborough, and Holliston one each. From erysipelas, New York two, Chicago two, Brooklyn, Charleston, Nashville, and Westfield one each. From typhoid fever, Chicago 17, New York 12, Philadelphia 12, Milwaukee five, District of Columbia four, Pittsburgh four, Brooklyn and Boston three each, Providence, Lowell, and Cambridge

two each, Baltimore and Holyoke one each. From *malaria fevers*, New York 12, Brooklyn seven, Chicago two, Milwaukee and Charleston one each. From *puerperal fever*, New York, Brooklyn, Chicago, Baltimore, and Milwaukee one each. One hundred and four cases of small-pox were reported in Pittsburgh, 38 in Cincinnati, nine in Brooklyn, seven in Buffalo, four in Baltimore, one in District of Columbia, one in Lawrence.

Diphtheria 31, scarlet fever four, in Boston; diphtheria 12, scarlet fever five, in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,070,200 (population of the State 1,783,086), the total death-rate for the week was 20.69, against 21.61 and 19.80 for the previous two weeks.

For the week ending November 26th in 149 German cities and towns, with an estimated population of 7,798,351, the death-rate was 23.1. Deaths reported 3463; under five 1555; pulmonary consumption 475; acute diseases of the respiratory organs 286, diphtheria and croup 200, scarlet fever 120, diarrhoeal diseases 113, whooping-cough 50, typhoid fever 47, measles and röteln 43, puerperal fever 20, small-pox (Königsberg, Dresden, Aachen two) four, typhus fever (Königsberg, Stettin, Thorn, Tilsit) four. The death-rates ranged from 9.4 in Karlsruhe to 36.7 in Augsburg; Königsberg 28; Breslau 24.6; Munich 26.2; Dresden 21.5; Berlin 23.6; Leipzig 25.4; Hamburg 21.6; Hannover 19; Bremen 15.1; Cologne 23.4; Frankfurt 16.7; Strasburg 23.1.

For the week ending November 19th in the 20 English cities, with an estimated population of 7,608,775, the death-rate was 20.6. Deaths reported 3000; acute diseases of the respiratory organs (London) 345, scarlet fever 142, measles 97, whooping-cough 83, fever 74, diarrhoea 55, diphtheria 26, small-pox (London 13) 15. The death-rates ranged from 17.2 in Norwich to 27.6 in Hull; Leeds 17.8; Bristol 17.9; Sheffield 18.6; Birmingham

ham 19.1; London 19.5; Manchester 23.4; Liverpool 26.7. In Edinburgh 21; Glasgow 22.9; Dublin 21.2.

For the week ending November 26th deaths reported 3161; acute diseases of the respiratory organs (London) 382, scarlet fever 150, measles 118, whooping-cough 80, fever 75, diphtheria 36, diarrhoea 34, small-pox (London 20) 22. The death-rates ranged from 13.1 in Wolverhampton to 30.6 in Hull; Leeds 15.8; Sheffield 18.6; Bristol 19.1; Birmingham 21.4; London 21.8; Manchester 22.5; Liverpool 28.2. In Edinburgh 21.4; Glasgow 20.8; Dublin 29.1.

For the week ending December 3d deaths reported 3005; acute diseases of the respiratory organs (London) 336, scarlet fever 126, measles 106, whooping-cough 91, fever 60, diphtheria 33, small-pox (London 28) 31, diarrhoea 28. The death-rates ranged from 15.1 in Wolverhampton to 29.6 in Manchester; Birmingham 17.5; Bristol 18.6; Sheffield 19.4; London 19.9; Leeds 21.7; Liverpool 24.7. In Edinburgh 15.7; Glasgow 19.9; Dublin 24.5.

For the week ending November 12th in the 21 chief towns of Switzerland, population 479,934, there were 32 deaths from pulmonary consumption, acute diseases of respiratory organs 25, diarrhoeal diseases 13, diphtheria and croup 12, puerperal fever two, typhoid fever and small-pox one each. The death-rates were, Geneva 17.5; Zurich 16.2; Basle 16.7; Berne 25.8.

For the week ending November 26th there were 27 deaths each from pulmonary consumption and acute diseases of the respiratory organs, diphtheria and croup 16, diarrhoeal diseases 15, whooping-cough six, typhoid fever, small pox, and puerperal fever one each. The death-rates were Geneva 25; Zurich 24.4; Basle 19.3; Berne 30.4.

The meteorological record for the week ending December 17th in Boston, was as follows:—

Date.		Barom-eter.		Thermom-eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.			
		Mean.		Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
December, 1881																					
Sun.,	11	30.571	21	32	10	80	43	73	65	W	NW	W	9	6	6	C	C	C	—	—	—
Mon.,	12	30.438	37	48	21	62	65	86	71	S	S	SW	6	14	17	F	O	R	—	—	—
Tues.,	13	30.096	53	59	42	93	72	74	79	W	SW	SW	10	14	20	O	F	C	—	—	—
Wed.,	14	29.905	55	66	41	75	81	97	85	SW	SW	NW	19	20	14	O	O	R	—	—	—
Thurs.,	15	30.306	26	42	19	100	64	70	78	NW	NW	NW	18	16	16	S	O	C	—	—	—
Fri.,	16	30.585	20	28	12	80	51	73	68	NW	W	S	12	6	7	C	C	C	—	—	—
Sat.,	17	30.303	36	47	20	81	45	64	63	SW	SW	SW	13	8	10	C	F	C	—	—	—
Means, the week.		30.315	35.3	66	10				72.9											17.40	.53

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; X., clearing.

HARRISON EATON, M. D.

HARRISON EATON, M. D., aged sixty-eight years, died at his residence at Thornton's Ferry, Merrimack, N. H., on the 19th ult. Dr. Eaton was an educated, skillful, and conscientious physician, and commanded the confidence and respect of all who knew him. He was repeatedly chosen to important offices, political and professional, which he filled with ability. A diligent student, he kept himself fully informed of the advances made in the different departments of his profession. He was a subscriber and constant reader of the Boston Medical and Surgical Journal during his long professional life, a period of more than forty years. Dr. Eaton was a graduate of the Berkshire Medical Institution.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 17, 1881 TO DECEMBER 23, 1881.

ALEXANDER, R. H., major and surgeon. The leave of absence granted him in S. O. 215, September 19, 1881, from A. G. O., extended one month. S. O. 285, A. G. O., December 17, 1881.

MURPHY, THOMAS J. C., first lieutenant and assistant surgeon. Having completed the duties assigned him under S. O. 248, No-

vember 3, 1881, from A. G. O., will report in person to the Surgeon-General, U. S. Army. S. O. 238, A. G. O., December 15, 1881.

APPOINTMENTS.—Dr. Thomas Dwight has been appointed by the Governor and Council on the Board of Trustees of the State Reformatory Schools *vice* Mr. Flatly, resigned.

Dr. George B. Shattuck has been appointed a visiting physician, and Dr. Charles F. Folsom physician to out-patients, at the Boston City Hospital.

The Board of Health have appointed Dr. John H. McCollom, for many years Assistant City Physician, to be City Physician, and Dr. Morton Prince to be Assistant City Physician.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting of the Society will be held on Monday evening, January 2d, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Marion. Subject, Two Cases of Empyema.

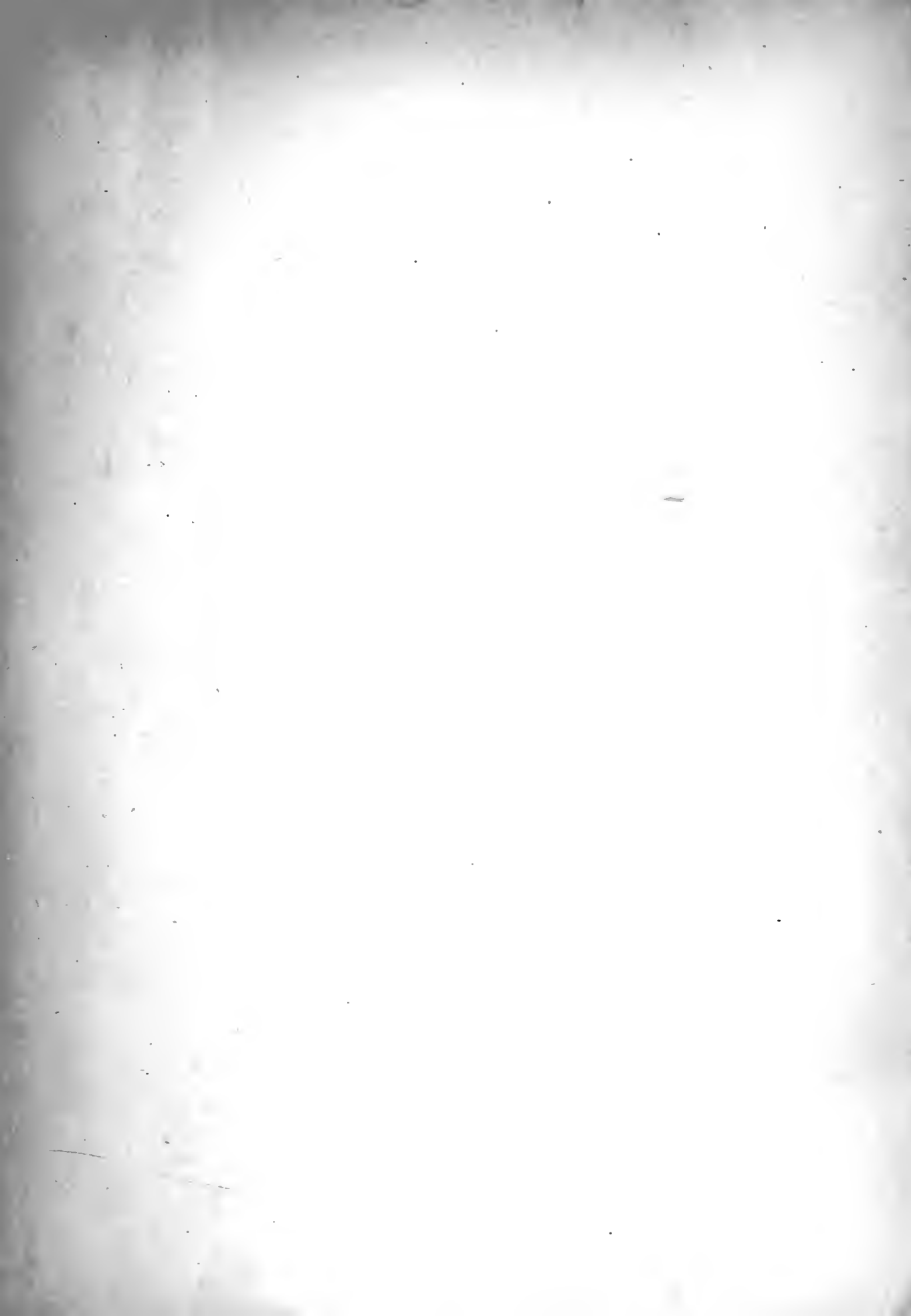
M. H. RICHARDSON, M. D., *Secretary*.

GYNCEOLOGICAL SOCIETY OF BOSTON.—The fifteenth annual meeting will be held at the Medical Library Rooms, on the first Tuesday of January, at four o'clock p. m. Address by the President, William G. Wheeler, M. D. Election of officers etc.

HENRY M. FIELD, M. D., *Secretary*.









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